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August 12, 2024

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Remedial Action Report
Southern Impoundment
San Jacinto River Waste Pits Superfund Site
Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment, EPA Region 6, CERCLA Docket No. 06-05-21

Dear Ms. Hunt:

GHD Services Inc. (GHD), on behalf of International Paper Company (Respondent), submits to the United States Environmental Protection Agency (EPA) this *Remedial Action Report* (RA Report) for the Southern Impoundment of the San Jacinto River Waste Pits Site in Harris County, Texas (Site). This RA Report was prepared pursuant to the requirements of the Unilateral Administrative Order (UAO) for Remedial Action (RA) of the Southern Impoundment, EPA Region 6, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Docket No. 06-05-21 (Order[1]).

This RA Report was prepared to document the activities related to the Remedial Action (RA) at the Site. The RA was conducted at the Site from November 9, 2022, to May 2, 2024. Pursuant to the UAO, this RA Report is submitted 90 days after the completion of the Pre-Final Inspection, which was conducted on May 14, 2024.

100003941

[1] EPA, 2021. *Unilateral Administrative Order for Remedial Action*. U.S. EPA Region 6, CERCLA Docket. No. 06 05 21. In the matter of: San Jacinto Waste Pits Superfund Site Southern Impoundment, Harris County, Texas. International Paper Company, Respondent. August 2021.

Should you have any questions or require additional information regarding this submittal, please contact GHD at (713) 734-3090.

Regards

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CM/kdn/3

Encl: Remedial Action Report

Copy to: Katie Delbecq, Texas Commission on Environmental Quality (TCEQ)
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Remedial Action Report

Southern Impoundment
San Jacinto River Waste Pits Site

International Paper Company

August 12, 2024

The Power of Commitment

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1. Introduction

GHD Services Inc. (GHD), on behalf of International Paper Company (Respondent), submits to the United States Environmental Protection Agency (EPA) this *Remedial Action Report* (RA Report). This report documents the activities related to the Remedial Action (RA) at the Southern Impoundment of the San Jacinto River Waste Pits Site in Harris County, Texas (Work Site).

The Work Site is located in Harris County, Texas, east of the City of Houston, between two unincorporated areas known as Channelview and Highlands. The Southern Impoundment is approximately 20 acres and is located on a small peninsula that extends south of Interstate Highway 10. A vicinity map is presented on Figure 1.

The RA was conducted and this RA Report was prepared pursuant to the Unilateral Administrative Order (UAO) for RA of the Southern Impoundment, EPA Region 6, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Docket No. 06-05-21 (Order) (EPA, 2021b).

The Respondent contracted GHD to perform construction of the RA (RA Construction) as both the Engineer of Record (EOR) and the Remedial Contractor (RC). RA Construction began on November 9, 2022, and was completed on May 2, 2024. This RA Report documents the RA Construction work completed at the Work Site pursuant to the Remedial Design (RD) and the UAO.

1.1 Site History and Background

The Southern Impoundment consists of an impoundment built in the mid-1960s and used during that time period for disposal of solid and liquid pulp and paper mill material. Other waste, reportedly disposed of by third parties after 1972, include fragments of glass and ceramic, asphalt shingles, brass pipe fitting, plastic, tires, and wood were also identified through subsurface activities on the Southern Impoundment. The entire peninsula south of I-10 was subject to continuous and significant modification from the early 1970s through the 1980s. The primary hazardous substances identified within the Southern Impoundment are polychlorinated dibenzo-p-dioxins (PCDDs), including 2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD) and polychlorinated dibenzofurans (PCDFs) (for the purposes of this RA Report, the term “dioxins” will refer to all PCDDs and PCDFs).

The Southern Impoundment encompasses two parcels owned by Musgrove Towing Service Inc. (Musgrove), a parcel owned by Kirby Inland Marine, L.P. (Kirby), a parcel owned by Kirby on which Market Street is located (Market Street Property), and a parcel owned by NM CVRB, L.P. and occupied by Glendale Boat Works (Glendale Boat Works Property). Figure 2 provides a boundary map for the Southern Impoundment. Additional background information regarding the Southern Impoundment is contained in the Remedial Investigation Report (RI Report; Integral and Anchor QEA, 2013b).

The remedy selected by the EPA in the Record of Decision (ROD) (EPA, 2017) for the Southern Impoundment is described as follows:

– This remedial action involves excavation and replacement of soil in the Southern Impoundment that is greater than the clean-up level. Soil would be removed within these areas to a depth of 10 feet below grade. Implementation of this RA would require dewatering (groundwater lowering) to allow excavation of impacted soil in relatively dry conditions and may need to be timed to try to avoid high water and periods when storms are most likely. Excavated soil would be further dewatered, as necessary, and potentially treated to eliminate free liquids prior to transporting it for disposal. Effluent from excavation and subsequent dewatering would need to be handled appropriately, potentially including treatment prior to disposal. Excavated soil would be disposed of at an existing permitted landfill, the excavation would be backfilled with imported soil, and vegetation would be re-established. An existing building (an elevated frame structure) and a concrete slab would need to be demolished and removed prior to excavating the underlying soil. These features would be replaced as necessary.

1.2 Remedial Action Objectives and Cleanup Level

The Remedial Action Objectives (RAOs) for the Site, as identified in the ROD, included:

- **RAO 1**: Prevent releases of dioxins and furans above clean-up levels from the former waste impoundments to sediments and surface water of the San Jacinto River.
- **RAO 2**: Reduce human exposure to dioxins and furans from ingestion of fish by remediating sediments to appropriate clean-up levels.
- **RAO 3**: Reduce human exposure to dioxins and furans from direct contact with or ingestion of paper mill waste, soil, and sediment by remediating affected media to appropriate clean-up levels.
- **RAO 4**: Reduce exposures of benthic invertebrates, birds, and mammals to paper mill waste derived dioxins and furans by remediating affected media to appropriate clean-up levels.

The risk-based clean-up level for the Southern Impoundment was also set forth in the ROD:

- Dioxin in paper mill waste material and soil in the Southern Impoundment - 240 nanograms per kilogram (ng/kg) 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (TCDD) toxicity equivalents for mammals ($TEQ_{DF,M}$) (Southern Impoundment construction worker). This risk-based clean-up standard was based on exposure of a future construction worker to constituents of potential concern (COPCs) in surface and subsurface soils, as detailed in the Baseline Human Health Risk Assessment (BHHRA; Integral and Anchor QEA, 2013a). This clean-up level was applicable to the upper 10 feet of the Work Site.

For purposes of the RD, it was assumed that a hypothetical future construction worker would be exposed to a mixture consisting of all soils within the upper 10 feet, and not solely to a given soil horizon. In communications and discussions with the EPA, the EPA confirmed that the clean-up level of 240 ng/kg TCDD $TEQ_{DF,M}$ outlined in the ROD is a depth-weighted average (DWA) concentration based on the concentration applicable to the soil volume in each depth interval over the upper 10 feet of the subsurface.

1.3 Previous Investigations and Development of RD

Initial subsurface investigations of the Southern Impoundment were completed in March 2011 and May 2012 as part of the Remedial Investigation (RI) to characterize soil chemistry for dioxins. A summary and results of these investigations are included in the RI Report (Integral and Anchor QEA, 2013b) that was submitted to the EPA on May 23, 2013. Pre-Design Investigations (PDIs) were completed after the ROD was issued and as part of the development of the RD for the Southern Impoundment. The purpose of the PDIs was to delineate and refine the areas and volume of Southern Impoundment waste material requiring excavation based on the soil clean-up level outlined in the ROD, as described in Section 1.2. The First Phase PDI (PDI-1) activities in the Southern Impoundment were completed in November 2018, in accordance with the First Phase Pre-Design Investigation Work Plan (Integral and Anchor QEA, 2018a), dated August 24, 2018, and approved by the EPA on September 12, 2018 (EPA, 2018b), and the Addendum to the First Phase Pre-Design Investigation Work Plan, dated October 18, 2018 (Integral and Anchor QEA, 2018b). PDI-1 activities included subsurface sampling for chemistry and waste characterization, and geotechnical sampling.

The Second Phase PDI (PDI-2) fieldwork on the Southern Impoundment took place from September 3 through December 11, 2019, in accordance with the Final Second Phase Pre-Design Investigation Work Plan (GHD, 2019), dated June 3, 2019, and approved by the EPA on August 8, 2019 (EPA, 2019). PDI-2 activities included the collection of additional chemistry, waste characterization and geotechnical samples, topographic and utility surveys, and a treatability study.

Based on the results from the RI and PDI events, the Southern Impoundment 100% RD divided the Southern Impoundment into four distinct excavation areas with the following designations: Northeast (NE) Excavation Area, North Central (NC) Excavation Area, South Central (SC) Excavation Area, and Southwest (SW) Excavation Area. It also proposed a pre-construction field sampling event be conducted to define the excavation limits that would be determined by the DWA clean-up level.

The Final 100% Remedial Design-Southern Impoundment (Amended April 2021) (Southern Impoundment 100% RD) was submitted to the EPA on April 19, 2021 (GHD, 2021a), and was approved by the EPA on May 7, 2021 (EPA, 2021a). The Southern Impoundment 100% RD included as Appendix C a Pre-Construction Field Sampling Plan (PCFSP). The Southern Impoundment 100% RD was prepared pursuant to Administrative Settlement Agreement and Order on Consent for Remedial Design (AOC), Docket No. 06 02 18, with an effective date of April 11, 2018 (EPA, 2018a).

The Respondent submitted a Remedial Action Work Plan (RAWP) to the EPA on October 14, 2021 (GHD, 2021b), which was conditionally approved by the EPA on November 5, 2021 (EPA, 2021c). As part of the RAWP, the PCFSP that was part of the approved Southern Impoundment 100% RD was updated and included as Appendix A to the RAWP. A revised RAWP (Revised RAWP) was submitted to the EPA on November 26, 2021 (GHD, 2021c), in response to the EPA's comments and was conditionally approved by the EPA on August 11, 2022 (EPA, 2022c).

The PCFSP was implemented from November 2021 through February 2022. Data from that event refined the extent and volume of material to be removed during the RA. A summary of the PCFSP fieldwork and the associated design modifications made based on the results are included in the Addendum to the Final 100% Remedial Design-Southern Impoundment (Amended April 2021) (100% RD Addendum), which was submitted to the EPA on June 2, 2022 (GHD, 2022a), and approved with modifications by the EPA on August 11, 2022 (EPA, 2022c). The 100% RD Addendum was prepared pursuant to the requirements of the Order (EPA, 2021b). For the purposes of this RA Report, the term "RD" will refer to the combination of the Southern Impoundment 100% RD and the 100% RD Addendum.

The RD was developed in a collaborative manner between the EPA, the Respondent, and GHD and is based on attainment of the risk-based clean-up level for the Southern Impoundment established in the ROD, using a DWA.

The RD process, as provided for in the AOC, included the use of a Technical Working Group (TWG) to provide technical expertise in the development and evaluation of the RD plans. The TWG considered the PDIs, treatability, and the RD elements represented in the Southern Impoundment 100% RD. The TWG consisted of representatives from the EPA, Texas Commission on Environmental Quality (TCEQ), United States Army Corps of Engineers (USACE), GHD, and other technical subject matter experts as needed. As detailed in the Southern Impoundment 100% RD and 100% RD Addendum, the sample results for all borings from the RI, PDI-1, PDI-2, and PCFSP were evaluated against the soil cleanup value of 240 ng/kg TCDD $TEQ_{DF,M}$ DWA. Based on the results from these investigations, a zone of impact was then defined for each polygon, consisting of one or more 2-foot vertical intervals, to be removed during excavation. The horizontal and vertical excavation limits, as defined in the approved RD, were based on the combined results from the RI, PDI-1, PDI-2, and PCFSP to generate Thiessen polygons. These polygons were represented by approximate areas of one-half acre or less, each corresponding to data from one boring, but further defined through additional sampling as part of the PCFSP. The polygon areas were grouped into the four distinct excavation areas within the Southern Impoundment described above. The excavation limits for each of the polygons and the required excavation depths are shown on Figures 3A through 3D, respectively. Figure 3A through 3D also show locations of the bottom and sidewall samples used to define the excavation limits.

2. Basis of Remedial Action

Based on the ROD and the RD, and modifications to the RD made by the EPA during the RA, the main components of the Southern Impoundment RA included the following:

– Excavation and replacement of soils in the Southern Impoundment to a maximum depth of 10 feet below grade in locations at which soil in the upper 10 feet exceeds the cleanup level on a DWA basis. Excavated soil was disposed of off-site at a permitted landfill, the excavation was backfilled with clean imported soil, and vegetation at the surface was re-established.
– Pre-construction confirmation sampling prior to excavation activities was used to define the vertical and horizontal extents of impacted material (the bottom and sidewall of the excavations), provide refined delineation of the

volume of overburden available for reuse (prior to the decision not to reuse any of the excavated materials), and provide additional waste characterization data.

– Design and installation of a bulkhead along approximately 280 linear feet in the southwest corner of the Southern Impoundment to enable excavation of impacted material up to the shoreline.
– Characterization, transportation, and off-site disposal of impacted material excavated during the RA.
– Treatment and discharge of contact water that accumulated in open excavations during the RA work.
– Demolition and later replacement of a cover structure and a concrete slab.

Other considerations incorporated into the remedial action activities included the following:

– Utilization of permitted commercial disposal facility for off-site disposal of removed material.
– Management of wastewater from active remediation areas via minimization of direct contact with the exposed excavations and capture and treatment of contact water in an on-site batch treatment system following the substantive requirements of an individual Texas Pollutant Discharge Elimination System (TPDES) permit.
– Identification of backfill sources that meet the EPA's screening standards and geotechnical criteria.
– Placement and compaction of backfill to meet geotechnical criteria.
– Implementation and maintenance of traffic controls.
– Identification, monitoring, and enforcement of health and safety requirements (e.g., Occupational Safety and Health Administration (OSHA), construction industry and manufacturers' standards) for the Work Site.
– Notification of appropriate City, County, and State regulators of the remedial action and obtaining required permits or permit equivalencies.

2.1 Remedial Action Deliverables

2.1.1 Supporting Deliverables

The 100% RD Addendum presented the design criteria and a description of the Southern Impoundment RA. Detailed descriptions of the tasks associated with the RA were included as the following attachments to the 100% RD Addendum.

– Site-Wide Monitoring Plan (SWMP)
  - The SWMP described the framework for monitoring to prevent the potential spread of dust generated during the RA Construction and the monitoring of the best management practices (BMPs) in the Construction Stormwater Pollution Prevention Plan (SWPPP) to manage stormwater runoff.
– Construction SWPPP and Air Monitoring Plan (AMP), as part of the SWMP
  - The Construction SWPPP was developed for implementation of control measures for stormwater runoff from the Work Site to prevent degradation of water quality in nearby receiving streams. The SWPPP achieved this by specifying BMPs for preventing or controlling erosion and sedimentation associated with construction activities.
  - The AMP detailed the air monitoring procedures during the RA, including the development of site-specific action levels protective of potential exposures to dust generated during the RA Construction and the methods for monitoring airborne dust. The AMP was developed to assist in protecting the health and safety of personnel working at the Work Site and off-site personnel working in the surrounding industrial area.
– Emergency Response Plan (ERP)
  - The ERP was developed to plan for potential emergencies that could occur during operations associated with the RA.
– Field Sampling Plan (FSP)

- The FSP described the procedures for sampling of treated water from the wastewater treatment system, sampling of impacted material for purposes of waste characterization, and sampling of imported backfill that was used to fill excavations during implementation of the RA. It outlined procedures for collection of samples consistent with the sample design.

– Quality Assurance Project Plan (QAPP)
  - The QAPP described quality assurance activities as part of the RA.
– Transportation and Off-Site Disposal Plan (TODP)
  - The TODP provided the procedures for management and loading of impacted material during the RA, which was disposed of off-site, the transportation routes for off-site shipments from the Work Site, and measures to be implemented, if needed, to protect communities that may be affected by the shipments. It also addressed the management of other wastes generated during implementation of the RA.
– Health and Safety Plan (HASP)
  - The HASP was developed to provide guidelines and establish procedures for reducing and controlling hazard exposure to the public, property, and personnel.

After selection of the RA Contractor, these supporting deliverables were updated and submitted to EPA on October 25, 2022 (GHD, 2022c), and approved with modifications on January 6, 2023 (EPA, 2023a).

2.1.2 High-Water Preparedness Plan (HWPP)

A HWPP was also prepared in connection with the EPA's December 23, 2022 decision to impose a construction completion date for the RA, as described in Section 4.1.1. The HWPP was submitted to the EPA on April 21, 2023 (GHD, 2023e), and approved with modifications on May 26, 2023 (EPA, 2023f). Following receipt of the EPA's modifications, a revised HWPP was later submitted to the EPA on July 28, 2023 (GHD, 2023k), and approved with modifications on September 13, 2023 (EPA, 2023h). The HWPP was developed by GHD to supplement the ERP and GHD's Construction SWPPP and detailed actions to be taken during and in anticipation of high-water events and flooding during the RA at the Work Site. The HWPP was prepared as a precautionary measure to address conditions under which Respondent would conduct excavation activities outside the original excavation season planned in the RD in order to meet the construction completion date set by the EPA.

2.1.3 Traffic Control Plan

A Traffic Control Plan was also completed in addition to the documents required by the ROD. The Traffic Control Plan was submitted to the Harris County Office of the County Engineer on March 3, 2023 (GHD, 2023c), and approved on March 7, 2023 (Harris County, 2023). The Traffic Control Plan was developed in connection with RA activities occurring at the Work Site with the potential to impact vehicle traffic on portions of Market Street located on a County right-of-way. In addition, procedures were implemented with respect to Work Site activities that impacted the private roadway (Market Street), in order to maintain a safe, uniform flow of traffic and minimize disruptions to operations of the businesses along Market Street.

2.1.4 Shoreline Deliverable

The Southern Impoundment Remedial Action Southwest Excavation Area Shoreline Deliverable was submitted to the EPA on April 21, 2023 (GHD, 2023f). This deliverable summarized the evaluation of the long-term bank stability of the San Jacinto River shoreline in the SW Excavation Area following excavation activities. In the 100% RD Addendum, a sheet pile wall was designed to support the removal of impacted soils to a depth of up to 10 feet below existing grade along the shoreline in the SW Excavation Area. The design intent was for the sheet pile wall to be installed at the edge of water (shoreline), as defined by the topographic and hydrographic survey conducted by Morrison Surveying, Inc. (Morrison) between July and August 2019. As part of the RA, a supplemental hydrographic survey was conducted by Morrison on April 11, 2023, to support excavation planning in the SW Excavation Area and provide additional detail of the San Jacinto River bottom surface. GHD evaluated the April 11, 2023, hydrographic survey data and prepared

cross sections at various locations perpendicular to the sheet pile wall to further understand the relationship between the shoreline, excavation, and sheet pile wall. GHD's design drawing cross sections and evaluation of the hydrographic survey data were provided in the April 21, 2023 submittal to the EPA (GHD, 2023f).

EPA responded to the April 21, 2023 deliverable in a letter dated June 8, 2023 (EPA, 2023g), in which the EPA requested enhanced bank stabilization in the southwest portion of the Work Site along the area where a temporary bulkhead would be utilized to remove waste.

On August 28, 2023, the Respondent submitted a revised design deliverable to the EPA that incorporated additional survey data, a revised sheet pile wall alignment, and the following bank stabilization measures (GHD, 2023l):

– Construction of a rip rap embankment as part of backfilling and site restoration across the length of the SW Excavation Area that would require soil removal to the toe of slope.
– The placed backfill would be graded at approximately 3:1 slope and covered by geotextile, and approximately 24 inches of rip rap. Soil would be placed within the rip rap void spaces to allow vegetation to re-establish.
– The top of the rip rap slope would be seeded with grasses to provide further stabilization of the top of slope.

The deliverables related to the SW Excavation Area Shoreline are included in Appendix A.

2.1.5 Monthly Reporting and Recurring Calls with EPA

GHD submitted monthly progress reports (Monthly Reports) to the EPA in accordance with the UAO. The Monthly Reports summarized both the RA activities that took place during the reporting period and those that were projected to take place during the six-week period following the reporting period.

Pursuant to Appendix B, Section 3, Subsection 3.2.b of the Statement of Work attached to the Order, at minimum monthly conference calls were to be held between the Respondent, GHD, and the EPA to discuss the ongoing activities and the planned upcoming work. During on-site RA Construction work, these conference calls were often conducted on a more frequent basis, often weekly.

2.1.6 Weather Delay Correspondence

Pursuant to Section XIV of the UAO, GHD provided notifications to the EPA in the event of any delays in the RA Construction work due to weather as follows:

– Notification by telephone and email to the EPA Project Coordinator within 48 hours after Respondent first knew or should have known that a delay might occur.
– Formal written notification, within seven days after notifying EPA by telephone and email of an event, that fully described the nature of the delay, the anticipated duration of the delay, any justification for the delay, all actions taken to prevent or minimize the delay or effect of the delay, and any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of the Order.

Throughout the RA Construction, GHD submitted a total of 16 formal weather delay notifications to the EPA, totaling 40.5 weather delay days. These delay submissions were also summarized and documented in Monthly Reports.

2.2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs for the Southern Impoundment RA were categorized into three types:

– Chemical-Specific ARARs: Chemical-specific ARARs include health- or risk-based numeric limits or methods that establish the acceptable amount or concentration of a chemical that may be found in or discharged to the environment.
– Location-Specific ARARs: Location-specific ARARs include limits on allowable concentrations or on activities associated with hazardous substances solely because they occur in special locations.

– Action-Specific ARARs: Action-specific ARARs include technology- or activity-based requirements or limitations on actions involving the management of hazardous waste.

The applicable regulatory requirements along with project-specific comments that explain how these regulations apply to the project, and how the Respondent would demonstrate compliance with the regulations are summarized in Table 11 of the 100% RD Addendum. The 100% RD Addendum addressed each of the ARARs identified in the ROD and certain additional ARARs applicable to the Southern Impoundment 100% RD.

The following sections provide more detail regarding compliance during implementation of the RA with the ARARs for Waste Management, Contact Water Treatment and Discharge, and Stormwater Management and Compliance with Section 401 and Section 404 of the Clean Water Act, and coordination with Harris County for the site restoration activities.

2.2.1 Waste Characterization

The applicable requirements for waste management activities at the Work Site are contained in the Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management regulations and the Texas Industrial Solid Waste and Municipal Hazardous Waste regulations.

Soil and waste removed from the Work Site during the RA required management in accordance with the waste characterization testing outlined in the Southern Impoundment 100% RD and the 100% RD Addendum. During the PDI-1 and PDI-2, samples of the waste material were collected and analyzed for RCRA parameters for waste characterization. The waste characterization testing conducted during the PDI-1 and PDI-2 defined the waste material as a Texas Class II non-hazardous waste. EPA concurred that the waste material is non-hazardous waste in a letter to GHD dated November 19, 2020 (EPA, 2020b).

To supplement the PDI-1 and PDI-2 waste characterization data, six additional discrete samples for waste characterization were collected during the PCFSP fieldwork to confirm the previous waste classification and to establish waste profiles with the permitted disposal facility. These locations targeted intervals of known high dioxin concentrations. The samples were analyzed for the four RCRA hazardous waste characteristics per EPA required test methodology in 40 Code of Federal Regulations (CFR) Part 261. The results indicated that the waste is non-hazardous and could be disposed off-site at a RCRA Subtitle D landfill. The Respondent complied with the Off-Site Rule, as established in the National Contingency Plan (NCP), at 40 CFR 300.440. The SOW required a prior determination that a proposed Disposal Facility is acceptable before shipping any hazardous substances, pollutants, or contaminants to it. Two disposal facilities were initially identified to receive the non-hazardous wastes from the Site: the Golden Triangle Landfill in Beaumont, Texas, operated by Republic Services (Republic), and the Seabreeze Landfill in Angleton, Texas, operated by Waste Connections Inc. The Respondent confirmed with the EPA Region 6 RCRA Enforcement Officer that the selected disposal facilities were able to receive CERCLA waste in email correspondence dated June 1, 2022 (EPA, 2022a), and June 9, 2022 (EPA, 2022b), and further confirmed in email correspondence dated October 24, 2022 (EPA, 2022d). Ultimately the non-hazardous waste was only shipped to the Republic landfill.

Additionally, composite samples of the PCFSP investigation-derived waste (IDW) were collected, in accordance with Texas non-hazardous industrial solid waste regulations (Texas Administrative Code [TAC] 335.505-506) to further refine the non-hazardous classification and determine whether any of the IDW needed to be classified as Class I rather than Class II. One composite sample was collected from the IDW from each of the four excavation areas and analyzed for leachable concentrations of the constituents listed below using the Toxicity Characteristic Leaching Procedure (TCLP). The results indicated that the IDW was non-hazardous and below the Class I non-hazardous disposal limits listed in TAC 335.505-506 and shown in Table 2.1 below; therefore, it could be disposed of as Class II non-hazardous waste.

Table 2.1 Waste Disposal Criteria

Analyte	Units	Class I/Class II Limit (Based on TCLP analysis)
TCLP Dioxins/Furans		
2,3,7,8-TCDD	mg/L	0.005
1,2,3,7,8-PeCDD	mg/L	0.01
1,2,3,4,7,8-HxCDD	mg/L	0.05
1,2,3,6,7,8-HxCDD	mg/L	0.05
1,2,3,7,8,9-HxCDD	mg/L	0.05
2,3,7,8-TCDF	mg/L	0.05
1,2,3,7,8-PeCDF	mg/L	0.10
2,3,4,7,8-PeCDF	mg/L	0.01
1,2,3,4,7,8-HxCDF	mg/L	0.05
1,2,3,6,7,8-HxCDF	mg/L	0.05
1,2,3,7,8,9-HxCDF	mg/L	0.05
TCLP Metals		
Antimony	mg/L	1
Arsenic	mg/L	1.8
Barium	mg/L	100
Beryllium	mg/L	0.08
Cadmium	mg/L	0.5
Chromium	mg/L	5
Lead	mg/L	1.5
Mercury	mg/L	0.2
Nickel	mg/L	70
Selenium	mg/L	1
Silver	mg/L	5
Total Petroleum Hydrocarbons (TPH)		**Class I/Class II Limit (Based on total analysis)**
TPH	mg/kg	1,500
Notes: mg/L - milligrams per liter mg/kg - milligrams per kilogram		

Based on the previous waste characterization sampling outlined in the Southern Impoundment 100% RD and the results from the PCFSP fieldwork, which were included in the 100% RD Addendum and approved by EPA with comments on August 11, 2022 (EPA, 2022c), a determination was made that impacted material excavated during the RA would be managed and profiled as a Texas Class II non-hazardous waste, unless additional waste characterization sampling proved otherwise.

Prior to the start of RA Construction, GHD coordinated with the selected disposal facility to develop a plan and procedures to confirm that the impacted material to be excavated and transported conformed to the Class II non-hazardous waste classification. During the RA, and in advance of shipping material to the disposal facility, additional waste characterization samples were collected to confirm that the material to be transported conformed to the

established approved nonhazardous waste profile for the disposal facility. Additional details related to the RA waste characterization sampling is included in Section 3.1.1.

2.2.2 Contact Water Treatment and Discharge

With respect to treated surface water discharge from the Work Site, compliance with the substantive requirements of the Clean Water Act (CWA), the Texas Surface Water Quality Standards (TSWQS), and the National and Texas Pollutant Discharge Elimination System (NPDES and TPDES) were required. Contact water that was generated during the RA Construction (i.e., pore water, perched surface runoff, stormwater accumulation, equipment decontamination water, and water within the bulkhead that comes into contact with waste material) was to be treated and discharged to the San Jacinto River (Segment, 1005) from a discharge point located west of the Water Treatment System (WTS) at the Work Site.

Table 2.2 below presents a summary of the analysis type and minimum frequency of sampling. Effluent samples were collected from the compliance sampling point and analyzed prior to discharge.

Table 2.2 Contact Water Sample Analysis and Frequency

Parameter	Minimum Frequency of Measurement	Standard Analytical TAT (business days) (1)	Sample Type
Flow	Daily	--	Instantaneous
pH	Once per week	--	Grab
TSS	Twice per week	3-5 days	Composite
Metals	Once per week	3-5 days	Composite
Dioxins/Furans	Once per week	3-5 days	Composite

(1) Flow rate and pH data will be collected on-site using real-time in-line monitors.

TCEQ water quality-based effluent limits (WQBEL) for all parameters except dioxins/furans using TCEQ TexTox menu # 5 for bay or wide tidal river were calculated and considered for the water treatment design to ensure compliance with the ARARs.

The EPA made the determination regarding the ARAR for compliance with the TSWQS for dioxins/furans based on the substantive requirements of the state's regulation for surface water discharge. As detailed in e-mail correspondence dated February 18, 2020 (EPA, 2020a), and set forth in the RD, EPA "determined that compliance with the TSWQS ARAR will be attained as follows:

– The state surface water quality standard for Dioxins/Furans is 7.97 x 10-8 micrograms per liter (µg/L) [0.0797 picograms per liter {pg/L}] (as TCDD equivalents).
– Compliance with the TSWQS will be determined using the minimum level of the EPA-approved Method (1613B), cited in 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), in sampling of surface water discharges during the Site remedial action.
– If an effluent sample analyzed for dioxin is below the minimum level using the EPA-approved method, the sample result would be identified as non-detect and the discharge would be determined to be in compliance with the ARAR.
    - The Minimum Level (ML) for each analyte is defined as the level at which the entire analytical system must give a recognizable signal and acceptable calibration point. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and clean-up procedures have been employed. This approach is consistent with the state's guidance and other permits issued by the TCEQ."

2.2.3 Stormwater Management

Stormwater was managed by implementation of best management practices as required by the SWPPP and TXR150000 (General Permit) for construction sites associated with construction activity. To meet the substantive requirements of the General Permit, a Notice of Intent was not required to be filed with the TCEQ. However, GHD prepared an updated Construction SWPPP as part of the SWMP and submitted it to EPA for review after the PCFSP was completed and according to the Supplemental Deliverables Update Schedule (GHD, 2022c). The SWPPP included BMPs to minimize erosion and entrainment of sediments in stormwater runoff to ensure compliance with the TPDES and NPDES ARARs.

The SWPPP was located at the Work Site and was accessible by all personnel at the Work Site. It was updated in the field as needed to reflect any changes at the Work Site during construction. SWPPP inspections were conducted once every 14 days and within 24 hours of a 0.5-inch or greater rainfall event. Documentation of the SWPPP inspections is included in Appendix B.

Section 3.5 provides additional discussion of water management activities.

2.2.4 USACE NWP 38 Applicability

Section 401 of the CWA requires Water Quality Certification of projects that involve discharge of dredge/fill that would impact waters of the United States (U.S.) or wetlands. Additionally, Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Activities in waters of the U.S. regulated under this program include fill for development, water resource projects (such as, dams and levees), infrastructure development (such as, highways and airports) and mining projects.

The bulkhead that was installed in the Southern Impoundment was considered “fill material”; therefore, the substantive requirements of Sections 401 and 404 applied to the project, specifically the requirements of USACE Nationwide Permit 38 (NWP-38) for Clean-Up of Hazardous and Toxic Waste. NWP-38 authorizes hazardous or toxic waste clean-up activities that are performed, ordered, or sponsored by a legal or regulatory authority.

As required by NWP-38, a desktop and on-site biological assessment for the Southern Impoundment was completed and submitted to the USACE on November 4, 2022 (GHD, 2022d), to provide a technical basis to determine to what extent (if any) the proposed RA Construction may affect threatened, endangered, proposed, or candidate species. From this assessment, it was found that only two species were potentially present in or near the Work Site, but with implementation of conservation measures to ensure that the construction activities avoid and/or minimize potential impacts to water quality, it was anticipated that the RA Construction would not adversely affect Essential Fish Habitat (EFH).

The USACE responded to the submittal via email correspondence dated September 14, 2023 (USACE, 2023), in which the USACE stated that activities undertaken on a CERCLA site by authority of CERCLA as approved or required by EPA, are not required to obtain permits under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

3. Remediation Activities

The following sections describe the remediation that was completed in accordance with the RD, the RAWP, and other requirements described above. A photo log documenting various activities during the RA is provided in Appendix C.

3.1 Pre-construction Activities

Pre-construction activities included, but were not limited to, the following:

– Waste characterization

– Identifying and testing of backfill and topsoil sources
– Communications with neighboring businesses and other stakeholders

3.1.1 Pre-Construction Waste Confirmation Testing

The applicable requirements for waste management activities at the Work Site are contained in the RCRA Hazardous Waste Management regulations and the Texas Industrial Solid Waste and Municipal Hazardous Waste regulations, as discussed in Section 2.2.1. During the RA and prior to shipping excavated material to a disposal facility, waste characterization samples were collected to confirm that the generated material conformed to the approved nonhazardous waste profile(s) for the disposal facility.

A sampling grid was established across the limits of the excavation that divided the areas to be excavated into 26 individual waste confirmation grid areas that each represented between 1,100 cubic yards (cy) and 3,000 cy of impacted material to be removed. Three borings were advanced in each grid area. Figures 4A through 4C show the pre-construction waste confirmation sampling grids. A sample was collected from each boring to represent the vertical profile of impacted material that would be removed for disposal. The three samples were then homogenized into a single composite sample for each of the 26 grid areas.

The 26 composite samples were analyzed for TPH and selected constituents included in Title 30 of the TAC Chapter 335, Subchapter R (Waste Classification) Appendix 1, Table 1 for Class I Non-Hazardous Industrial Waste (see Table 2.1 in Section 2.2.1) using the following methods:

– TCLP / Dioxins and Furans - EPA SW-846 Method 1311 / EPA Method 1613B
– TCLP Metals - EPA SW-846 Methods 1311 / 6010C
– TCLP Mercury - EPA SW-846 Methods 1311 / 7470A
– TPH - TNRCC Method 1005

Waste confirmation sampling was completed by the EOR. Sampling began on December 1, 2022, and was completed on December 8, 2022. Analytical data collected from the waste characterization samples are summarized in Table 1, and the laboratory analytical reports and data verification summaries are included in Appendix D and Appendix E, respectively.

Based on the waste characterization results collected during the RA and described in Section 2.2.1 and the pre-construction confirmation testing, the impacted material was classified and managed as a Texas Class II non-hazardous waste, with the exception of the material from Grid #12, which was classified and managed as a Texas Class I non-hazardous waste due to the elevated concentration of TPH. Impacted soil that was excavated and other solid waste were disposed of off-site at the Republic landfill, which was permitted to accept both Texas Class I and Texas Class II waste. The Republic waste profiles that were established for the different waste streams are described below in this section.

Class II Non-Hazardous Impacted Material

– Republic Non-Hazardous Industrial Class II Waste Profile No. 5120226963

This profile was established for the Class II non-hazardous impacted soil that was excavated. The impacted soil was solidified, as necessary, to remove free liquids prior to disposal. Any impacted debris and vegetation were also disposed of under this profile. Impacted debris included materials that may have contacted the waste including, but not limited to, miscellaneous wood, concrete, metal, trash, discarded treatment filters, sand and liners from the WTS, and discarded personal protective equipment (PPE).

Non-impacted debris and vegetation was included under this profile rather than segregated from the impacted material. It was therefore managed and disposed of in the same manner as the impacted soil, debris, and vegetation described above.

Class I Non-Hazardous Impacted Soil

– Republic Non-Hazardous Industrial Class I Waste Profile No. 5120231675

This profile was established for the impacted soil from Grid #12 that was characterized as Class I non-hazardous waste due to the elevated concentrations of TPH.

Spent Carbon

– Republic Non-Hazardous Industrial Class II Waste Profile No. 51202316732

This profile was established for the spent carbon from the WTS.

Tires

– Republic Profile No. 5120233285

This profile was established for the tires excavated at the Work Site during the excavation activities.

Contact Water

– Republic Profile No. 51202315957

This profile was established for the water generated from decontamination of equipment that came into contact with the impacted soil after the WTS was dismantled during demobilization.

Copies of the waste profiles are provided in Appendix F.

3.1.2 Backfill and Topsoil Sources

During the pre-construction activities, sources of the fill material were sampled and tested according to the design specifications as described below:

– Testing and Analysis of Coarse Aggregate
  - Grain Size: 1 sample per 1,000 cy of aggregate
  - Chemical Analysis: 1 sample per source
– Testing and Analysis of Common Fill
  - Particle Size: One sample per 2,500 cy of material
  - Soil Classification: One sample per 2,500 cy of material
  - Chemical Analysis: 1 sample per source
– Testing and Analysis of Topsoil
  - Particle Size: 1 sample per 2,500 cy, or portion thereof, of topsoil.
  - pH: 1 sample per 2,500 cy, or portion thereof, of topsoil.
  - Organic Matter: 1 sample per 2,500 cy, or portion thereof, of topsoil.
  - Phosphorus, potassium, calcium, and magnesium: 1 sample per 2,500 cy, or portion thereof, of topsoil.
  - Chemical Analysis: 1 sample per source

Each source of aggregate, clay, sand, and topsoil was tested for Target Analyte List (TAL) metals, hexavalent chromium, cyanide, Target Compound List (TCL) volatiles, TCL semi-volatiles, TCL pesticides, polychlorinated biphenyls (PCBs), herbicides, dioxin/furans, and TPH. The analytical results were compared to the EPA Regional Screening Levels (RSL) for residential soil (EPA RSL Table, November 2021). Samples were collected from the borrow source on November 21, 2022, and the topsoil sample was collected on July 7, 2023. All results were below the EPA RSLs, with the exception of the arsenic concentration (5.3 mg/kg) and the lead concentration (10.5 mg/kg) in the clay common fill. Both of these concentrations were lower than the Texas median background levels for arsenic and lead (5.9 mg/kg and 15 mg/kg, respectively). GHD notified EPA of the sampling results via a weekly conference call, email correspondence, and in the Monthly Report for December 2022. Additional sampling for arsenic was conducted as described below in Section 3.1.2.1.

The topsoil source was also tested for soil type and nutrients to evaluate whether the material was suitable to grow and sustain vegetation, which included analyses for pH, phosphorus, potassium, calcium, and magnesium. The analytical results were compared to the EPA RSLs for residential soil. All results were below these standards, and the topsoil source was approved for use.

The November 2022 and July 2023 testing results for these backfill and topsoil sources are provided in Table 2 and Table 3, and the laboratory analytical reports and data verification summaries are included in Appendix D and Appendix E, respectively.

3.1.2.1 Metals Sampling of Fill Material

Following the November 2022 sampling of the borrow sources, EPA (via email correspondence dated February 23, 2023) requested additional sampling of the backfill that had been imported to the Work Site and staged for future use. GHD collected 24 additional samples from approximately 3,000 cy of the on-site backfill material. Sample locations were randomized vertically and laterally within the stockpiled backfill. These samples were analyzed for the metals listed in Table 4, by EPA SW-846 Method 6010. Arsenic concentrations ranged from 2.6 mg/kg to 38.1 mg/kg, with an average arsenic concentration of 5.87 mg/kg. The results for all but one sample were below 9 mg/kg. The on-site backfill sampling results are provided in Table 4, and the laboratory analytical reports and data verification summaries are included in Appendix D and Appendix E, respectively.

In addition, GHD identified a primary and a secondary off-site backfill source. During a site visit on February 28, 2023, EPA accompanied GHD to inspect the primary backfill source, and it was agreed that additional sampling of the off-site backfill source would be conducted. On March 1, 2023, a total of 60 representative samples from the primary off-site backfill source were collected at 2 to 4 feet below ground surface (ft bgs), 4 to 6 ft bgs, and 6 to 8 ft bgs and analyzed for the metals listed in Table 5, by EPA SW-846 Method 6010. The off-site backfill source sampling on March 1, 2023, was conducted in accordance with the Off-Site Backfill Sampling Plan that GHD submitted to the EPA (GHD, 2023b). An additional 20 representative samples were collected on March 7, 2023, at additional depth intervals from the primary backfill source, as directed by EPA in comments via email correspondence based on EPA's review of the Off-Site Backfill Sampling Plan (EPA, 2023b); these samples included ten additional samples from 0 to 2 ft bgs, five samples from 8 to 10 ft bgs, and five samples from 10 to 12 ft bgs. The analytical results were compared to the EPA RSLs for residential soil. The off-site backfill sampling results are provided in Table 5, and the laboratory analytical reports and data verification summaries are included in Appendix D and Appendix E, respectively.

The backfill source was also tested for geotechnical properties including percent passing No. 200 sieve, Atterberg Limits, and Standard Proctor to classify the material in accordance with the Unified Soil Classification System and to determine the moisture-density relationship for compaction. The geotechnical test results are included in Appendix G.

A preliminary sample was collected from the secondary off-site backfill source, but since the primary source was approved for use, the secondary backfill source was not needed.

EPA reviewed the on-site and off-site backfill sampling results and determined via email correspondence dated March 21, 2023 (EPA, 2023b), that (1) arsenic was not a constituent of concern and does not drive the risk at the Work Site, and (2) an appropriate risk-based standard for arsenic in the backfill material was 30 mg/kg based on Incremental Lifetime Cancer Risk (ILCR) of 0.00001. All the off-site backfill sampling results from the primary source were below 30 mg/kg, and the primary off-site backfill source was approved for use. EPA also calculated 95% Upper Confidence Limits (UCLs) from the on-site and off-Site backfill sampling results, which were 8.33 mg/kg and 5.17 mg/kg, respectively. Since the UCL values were below 30 mg/kg, the on-site and off-site backfill material were approved for use.

3.1.3 Soil Re-Use as Backfill

The excavation approach in the RD included the option of temporarily stockpiling and re-using a portion of the overburden material as backfill. During the PCFSP fieldwork, soils that could potentially be placed back into the various excavations were sampled for dioxin and furan concentrations to identify overburden that could be used as backfill and meet the 240 ng/kg TCDD $TEQ_{DF,M}$ clean-up level on a DWA. From the PCFSP sampling results, it was

assumed that approximately 28,800 cy of overburden material would be temporarily stockpiled and then re-used as backfill. However, due to the excessive amount of debris encountered in the overburden soil, it was not re-used as backfill during the RA Construction and was shipped off-site for disposal as a Class II non-hazardous waste.

3.1.4 Stakeholder Relations

Due to the potential for odors, noise, dust, and truck traffic, great care went into the project planning to best mitigate impacts to adjoining businesses and other stakeholders. The activities undertaken included the following:

- ***Identifying Key Stakeholders****:* A list was developed that identified local officials and nearby businesses along Market Street.
- ***Conducting Outreach****:* Before remediation work began, a meeting was conducted on October 18, 2022, with EPA, GHD, and local first responders to describe the remediation, including providing details on the nature of the work to be performed and any potential disruptions; the project's estimated schedule; emergency response procedures; and plans/safeguards being employed to minimize impacts from the project. During the RA, regular communication regarding work activities, schedules, any potential delays/disruptions, high water/flooding preparedness, and traffic control considerations were provided to adjoining properties throughout the project, and stakeholders were encouraged to contact GHD with any questions and/or concerns during the work.

  EPA also conducted community meetings, including on November 3, 2022, and December 5, 2022, in which the status of the RA was discussed.

3.2 Mobilization and Site Preparation for Construction

Due to the limited area and large space required to install the WTS, laydown yard, and hauling truck roads, the remedial action was divided into two phases, hereafter referred to as Phase 1 and Phase 2. During Phase 1, the WTS was constructed over the SW Excavation Area and the waste handling areas, and contractor offices were constructed over the SC Excavation Area while GHD completed remedial excavation of the NE and NC Excavation Areas, as well as approximately 30% of the SC Excavation Area. After Phase 1 was completed, excavation activities were halted as the WTS, waste handling areas and contractor offices were relocated to the Phase 2 locations within the already-remediated NC Excavation Area. Once the WTS was operational in the Phase 2 location, remedial excavation resumed until excavation of the SC and SW Excavation Areas had been completed. The site layouts for Phase 1 and Phase 2 are shown on Figure 5 and Figure 6, respectively.

3.2.1 Site Preparation Activities

The RC commenced the RA Construction at the Work Site on November 9, 2022. Initial Work Site preparations included demolishing the pre-existing concrete pad, mowing tall standing grass throughout the Work Site, and cutting large trees and brush in areas where work facilities would be constructed. The concrete and brush debris were loaded onto trucks and transported to the Republic landfill for disposal as Class II non-hazardous waste.

Once clearing work had been completed, the office trailers were mobilized to the Work Site and set up at the locations shown on Figure 5. Diesel generators to power the office trailers were mobilized and staged within polyethylene spill containment berms.

The RC installed stormwater control features throughout the Work Site as required by the Construction SWPPP. Silt fencing was installed around planned excavation areas (Appendix C, Photo 1). Additionally, hay bales were installed at regular intervals along the ditch on the west side of Market Street, up to the 90-degree turn westward that brings Market Street parallel to I-10. Temporary fencing was installed along the western boundary of the Work Site to limit access (Appendix C, Photo 2).

A gravel U-Loop road was installed around the contractor offices and laydown areas for haul trucks, as shown on Figure 5. Trucks would enter the Work Site at the Southern U-Loop road entrance on Market Street. Liners were then placed in the trucks by RC workers who were positioned on scaffolding. The trucks would then head to the loading

zone adjacent to the impacted material stockpile area, and once loaded, would then depart the Work Site from the Northern U-Loop road entrance. Prior to departure, the EOR weighed outgoing trucks and completed manifesting for each load.

3.2.2 Asbestos Removal and Building Demolition

In the southwest corner of the Work Site, an approximate 1,300 square foot (sq ft) building and a concrete slab (approximately 10,000 sq ft) were demolished and removed prior to excavation work in that location. The building and concrete pad were situated within the footprint of the Phase 1 WTS layout and needed to be demolished before the WTS pad could be installed. Prior to demolition, the building was inspected and sampled by the EOR to identify potential asbestos-containing materials and to collect samples of various material for analysis and evaluation of asbestos content. Asbestos was found in the floor matting and mastic material.

ARC Abatement Inc., a licensed asbestos abatement contractor, completed abatement and removal activities for the asbestos material identified in the building, including off-site disposal to the Waste Management Atascocita Landfill in Humble, TX (Appendix C, Photo 3). Documentation related to the asbestos inspection and abatement is included in Appendix H.

The RC and EOR completed an inspection of the building to verify all asbestos material had been removed on December 15, 2022 (Appendix C, Photo 4).

Once verification was complete, the RC demolished the building using an excavator (Appendix C, Photo 5). Structural support poles were cut at ground surface. All waste generated during the demolition of the building and pad was disposed off-site as Class II non-hazardous waste under Republic Profile No. 5120226963.

3.2.3 Berms and Stockpile Areas

Once waste confirmation sampling was complete, the RC installed the secondary containment features for impacted material stockpile areas, imported clean fill stockpile areas, and the WTS, as shown on Figure 5. All fill material was imported from the Smart Materials, Inc., in Beach City, Texas, borrow source that was sampled and tested as described in Section 3.1.2.

Weather events significantly impeded this stage of construction. Impacts from rainstorms limited heavy equipment use and delayed the import of fill material. The RC attempted to minimize the time lost due to wet conditions.

Approximately 12,000 cy of general clean fill material was used to construct the WTS pad and surrounding berms (Appendix C, Photo 6). Two sumps were installed in the center of the WTS pad, with one-degree slopes to the east and west of the sumps. Accumulated rainfall within the pad was pumped directly into the primary influent tank from the two sumps for treatment.

On January 26, 2023, earthwork operations for the WTS pad were completed, and a liner contractor mobilized to the Work Site to begin lining the WTS pad, two sumps, and the surrounding earthen berms with high-density polyethylene (HDPE) liner (Appendix C, Photo 7). The HDPE liner was tied in at the top of the earthen berm and covered the entirety of the WTS pad. An outfall pipe was installed on the west end of the WTS pad, with an HDPE boot welded directly to the pipe to prevent leakage (Appendix C, Photo 8). Liner installation was completed on January 30, 2023.

Once the RC and EOR inspected and approved the HDPE liner, six inches of sand was imported and spread throughout WTS pad to provide a workable substrate for the WTS tanks and solids removal system (SRS) trailer (Appendix C, Photo 9).

3.2.4 Water Treatment System Installation

On February 4, 2023, a wastewater treatment supply contractor (Rain for Rent) mobilized to the Work Site to begin installation of four lake tanks for the WTS (Appendix C, Photos 10 and 11). Each lake tanks was 12 ft high, 50 ft in diameter, with a maximum capacity of 600,000 gallons. Three of the lake tanks were designated as effluent tanks and the fourth lake tank was designated an influent tank. A HDPE liner was used to line each tank. After installation, a total

of 480,000 gallons (120,000 gallons in each tank) of clean water was imported to provide ballast weight to hold the liner in place and prevent potential tearing. Installation of the four lake tanks was completed on February 8, 2023.

On February 3, 2023, Evoqua mobilized to the Work Site to begin installing the remaining components of the WTS (Appendix C, Photo 12). These included the SRS trailer, granular active carbon (GAC) units, one clarifier, two sets of bag filters, two dewatering boxes, and piping from the influent tank through the treatment steps, and to the effluent tanks.

The WTS was fully installed on February 13, 2023. The EOR and Evoqua conducted a two-day “shakedown” of the WTS to ensure all pumps, inline flow, pH, and turbidity meters, and power systems were operational (Appendix C, Photo 13). The clean ballast water was circulated from the influent tank through the WTS system and back into the influent tank during the shakedown process.

During the WTS installation process, double-walled HDPE pipe was welded on-site (Appendix C, Photo 14). The main pipeline running north to south along Market Street and into the influent tank was a double walled HDPE pipe (6-inch HDPE pipe inside of a 10-inch HDPE pipe). The pipeline was reduced to slightly smaller double-walled HDPE pipe (4-inch HDPE pipe inside of 8-inch HDPE pipe) when branching off Market Street to the impacted material stockpile areas adjacent to the NE and NC Excavation Areas as depicted on Figure 5 (Appendix C, Photo 15).

3.3 Excavation and Backfill Activities

The excavations were completed using track-mounted excavators equipped with a Global Positioning System (GPS) allowing the operator to have precise, real-time grade control. After achieving the design excavation limits, a third-party surveyor (Morrison Surveying Inc. [MSI]) confirmed the final excavation elevations based on a survey grid system. Section 3.3.1 provides additional details describing the survey confirmation procedures. Appendix I provides drawings of the final excavation surfaces for each of the areas, which were prepared and stamped by the third-party surveyor.

Excavations were backfilled immediately upon verification by MSI that excavation depths met the design limits as described in Section 3.3.1. All backfill material was sourced from the location discussed in Section 3.1.2. The backfill sources were tested every 2,500 cy of imported fill material for geotechnical properties including particle size (ASTM D6913/D6913M and D7928) and soil classification (ASTM D2487). The geotechnical test results for the backfill are included in Appendix G.

Standing water at the bottom of the excavation was pumped to the WTS influent tank as necessary prior to backfill. To prevent recontamination of clean backfill material by adjacent impacted material, the RC placed a plastic liner off the sidewall of the excavation (Appendix C, Photo 16). The liner was hung from ground surface and reached the bottom of the excavation and was weighed down at the surface using sandbags. Clean backfill material was placed within the excavated area and compacted until reaching the liner (Appendix C, Photo 17). The RC then backfilled the excavation to a level approximate to the original surface elevation. Upon completion of the excavation, the backfilled surface was graded to promote proper drainage throughout the Work Site. Site restoration is discussed in Section 3.7.

As discussed in Section 1.2, the target DWA values for the upper 10 ft of soils at the Southern Impoundment is 240 ng/kg TCDD $TEQ_{DF,M}$. The target DWA values in the RD were calculated assuming overburden reuse in some areas and imported backfill material free of dioxins. The post-excavation DWA calculations were completed for each polygon based on the surveyed excavation elevations with a backfill dioxin/furans concentration of 0.457 ng/kg, which is the concentration from the November 2022 sampling of imported backfill. The pre-excavation and post-excavation DWA values for the polygons are provided in Tables 6 through 9.

3.3.1 Survey Confirmation Procedures

The pre-construction topographic information surveyed (coordinates and elevations) was used to create electronic files of the excavation surfaces. The RC utilized excavators with built-in GPS grade-control equipment, giving the operator real-time information on the depth of the excavator bucket. The excavation and overburden surfaces were loaded into the GPS system, which was installed and calibrated by the GPS manufacturer (Trimble Inc.).

A confirmation survey grid at 25-foot centers, defining the design excavation elevation at each point, was established across each polygon; additional survey points were added at intersection points of two or more polygons that were not on the 25-foot grid. When intersecting polygons had different design excavation depths, the excavation depth at the intersection was defined as the deeper of the two polygons.

The polygons were identified and tracked by excavation area and were identified with the applicable prefix of either NE, NC, SC, or SW. Figures 7A and 7B show the excavation polygons for Phase 1 and Phase 2 of the work. A total of 1,344 survey points were used to verify the excavation surfaces. The RC subcontracted MSI to independently verify and record the bottom extent of the excavation at each grid point. After the operator reached the design excavation depths based on the grade control equipment, MSI surveyed the elevations at each grid point. MSI affixed a prism mounted on a rod to the tip of the excavator bucket. The excavator operator would then position the bucket on top of the excavation floor and MSI would confirm the coordinate location of the survey rod tip and record the elevation. This method was chosen because it did not require personnel to enter the excavation and provided real time data that allowed for additional excavation if the required elevations were not achieved and immediate backfilling if the required elevations were achieved. Also, the method was preferable to using a 3D laser scanning system, because accurate readings with such a system could not be obtained if there was standing water in the excavations. The RC, EOR, and MSI tested the procedures multiple times to verify that the surveying process was accurate and reproducible. For each polygon, the EOR and MSI utilized a spreadsheet that defined the required elevations at each grid point so that a decision could be made immediately whether the excavation achieved the design elevation, and the area could be backfilled.

3.3.2 Northeast Excavation Area

Excavation in the NE Excavation Area began on February 20, 2023 (Appendix C, Photo 18). Soon after breaking ground, a significant amount of debris and water was encountered and the RC called a stop work to reassess the situation (Appendix C, Photo 19). Five test pits were then dug in the NE Excavation Area to investigate conditions across the excavation polygons. All five test pits contained significant amounts of debris and water. To proceed with the excavation, localized areas were dewatered by constructing sumps with perforated pipes surrounded by a rock filter (Appendix C, Photo 20). During excavation, the water from the sumps was pumped to the WTS for treatment. Due to the high volume of water, the RC elected to excavate using a “skeleton bucket” (Appendix C, Photo 21). The skeleton bucket’s open design allowed the excavator operator to quickly dewater each bucket of material removed from the ground. Additionally, a large quantity of waste tires was extracted from the NE Excavation Area. Waste tires were segregated (Appendix C, Photo 22) from other material, placed in a separate stockpile and cut up into quarters for later disposal.

CenterPoint Energy (CenterPoint) maintained three power poles located along Market Street within the footprint of the areas required to be excavated. One of the three power poles was located in the NE Excavation Area, with the other two located in the NC and SW Excavation Areas. With respect to the power pole located in the NE Excavation Area, a 20-foot long by 10-foot wide sheet pile wall was placed around the power pole and its guidewires (Appendix C, Photo 23). The sheet pile wall was located within polygons NE-4, NE-5, and NE-6 (Figure 7A). Excavation was completed up to the sheet pile wall. On July 8, 2023, CenterPoint installed a new power pole outside of the excavation limit and transferred the power line to the new pole. After the original power pole was cut down, the RC removed the sheet pile wall and excavated the remaining impacted material and removed the remaining portion of the cut power pole.

Excavation polygons NE-1 and NE-5 included impacted material adjacent to Market Street. Excavation slopes of two horizontal to one vertical (2:1) were cut from Market Street following the design drawings to maintain the integrity of the road. In all other areas in the NE Excavation Area, the RC was able to achieve nearly vertical wall cuts at the boundary of the excavation area, eliminating the need to excavate material outside of the defined limits.

A total of 12,393 cy of impacted material was excavated and transported offsite from the NE Excavation Area and replaced with clean backfill. Due to heavy debris identified throughout the entirety of the excavation footprint, no overburden material was designated as being appropriate for reuse (Appendix C, Photo 24). MSI collected

104 confirmation survey measurements for the NE Excavation Area. Appendix I provides stamped drawings of the final excavation surface prepared by MSI.

The excavation depths are shown on Figure 8A for each of the 104 survey points within the NE Excavation Area. The calculated DWAs for each polygon are shown in Table 6. The calculated DWAs do not include the excavation slopes along Market Street. The design excavation depths were achieved at each grid location and the calculated DWA values are all below the 240 ng/kg TCDD $TEQ_{DF,M}$ remediation criteria.

3.3.2.1 Northeast Excavation Area Contact Water Release

On March 20, 2023, a pump used for dewatering the excavation in the NE Excavation Area was turned on, and approximately 100 gallons of water was released to the ground from a valve on the water conveyance piping south of the impacted material stockpile. The location at which the release occurred was approximately 15 ft by 65 ft and within the Work Site boundaries.

Immediately upon discovery of the release, the pump was turned off and the valve was closed. An excavator was used to create a shallow drainage swale to direct the standing water to drain into an existing open excavation. Once water had drained back into the excavation, the water was then pumped to the main water conveyance and to the WTS. An excavator was then used to remove the top layer of soil at the location where the water had previously accumulated (Appendix C, Photo 25). The excavated soil was placed within the impacted material stockpile and later disposed of at Republic as nonhazardous Class II waste. The EPA oversight contractor was on-site at the time and observed the affected area and the subsequent response activities. GHD also provided verbal notification of the release to the EPA that same day.

A calculation was performed to determine whether this event involved a reportable quantity (RQ) of TCDD under the UAO, ERP, or the HASP. The estimated mass of TCDD released was 0.000000018 pounds, which is well below the RQ of 1 pound under 40 CFR 302.4 and the TAC Chapter 327.4.

Per Appendix B, Section 3.3 of the UAO, the Respondent submitted a report regarding the release event to EPA dated March 24, 2023 (GHD, 2023d), and a 30-Day Release Conclusion notification on May 5, 2023 (GHD, 2023g), as requested by the EPA in an e-mail correspondence dated April 18, 2023 (EPA, 2023d). On April 6, 2023, EPA provided the Respondent with a surface soil sampling and analysis plan (SAP) for sampling to assess the area potentially impacted by the release (EPA, 2023c). The requested sampling was implemented by the EOR (Appendix C, Photo 26) during the week of April 24, 2023. EPA collected split samples for independent analysis. The analytical results from the Respondent's sampling were submitted in a report to EPA dated June 16, 2023 (GHD, 2023j). All $TEQ_{DF,M}$ results were below the 240 ng/kg TCDD $TEQ_{DF,M}$ clean-up level. On September 28, 2023, the EPA provided written correspondence containing the analytical results from their split samples collected for independent analysis and requested that its correspondence be incorporated into a subsequent final submittal, which was submitted by the Respondent to the EPA on November 21, 2023 (EPA, 2023i; GHD, 2023m).

Both sets of sampling data confirmed that no further action was needed in the release area, as all sample results were below the clean-up level. Laboratory analytical reports and data verification summaries are included in Appendix D and Appendix E, respectively. All correspondences related to the release event between EPA and the Respondent are included in Appendix J.

Following this event, a program was put into place to systematically check each pipe connection, valve, and locking mechanism on a daily basis to mitigate future releases.

3.3.3 North Central Excavation Area

Excavation in the NC Excavation Area began on March 21, 2023 (Appendix C, Photo 27). The excavation started at the northern end along the Glendale property fence line. The design drawings specified excavation to begin directly adjacent to the Glendale fence line at a 2:1 slope until reaching the target excavation depth. To avoid damage to Glendale property and structures along the fence line, the RC began excavation approximately one foot from the fence

line and cut at a slope steeper than 2:1 to reach the original design toe of slope at the target excavation depth (Appendix C, Photo 28).

Excavation polygons NC-8, NC-30, NC-33, NC-36, and NC-37 were adjacent to Market Street. Similar to the Glendale fence line boundary, the design drawings called for a 2:1 excavation slope beginning adjacent to Market Street to the target excavation depth. To ensure the roadway would not be compromised by excavation activities, the RC began excavation approximately one foot from Market Street. The slope was cut steeper than 2:1 to match the design toe of slope at the target excavation depth. As-built survey points were collected along the Market Street excavation to define the as-built excavation slopes. All other sidewalls of the excavation were generally cut with vertical slopes.

Excavation polygon NC-8 partially abuts both the Glendale fence line and Market Street. The approved design included 2:1 slopes cut along the northern and eastern boundaries of this excavation polygon. Due to the concentrations of dioxins in the northern section of NC-8, the slope was cut more steeply than the design slope to remove as much of the material as could be completed safely. The RC was able to achieve an approximate 1.5:1 slope in this area and, therefore, was able to remove more material than specified in the design.

One CenterPoint power pole was in the NC Excavation Area adjacent to Market Street (within Polygons NC-19, NC-30, and NC-33). A 20-foot long by 10-foot wide sheet pile wall was advanced around the power pole and guidewire to protect the pole during the excavation activities, temporarily leaving the material between the pole and the sheet piles in place. The power pole was relocated on July 8, 2023, and the RC removed the sheet piles at NC-19, NC-30, and NC-33 and completed the excavation near the original location of the power pole.

A total of 51,527 cy of impacted material was excavated and transported offsite from the NC Excavation Area and replaced with clean backfill. Due to the presence of debris, no overburden was suitable for reuse (Appendix C, Photos 29 and 30). MSI collected 437 survey points during the confirmation surveying in the NC Excavation Area. Appendix I provides stamped drawings of the final excavation surface prepared by MSI.

The excavation depths are shown on Figure 8B at each of the 437 survey points in the NC Excavation Area. The calculated DWAs for each polygon are shown on Table 7. The calculated DWAs do not include the excavation slopes adjacent to Glendale and along Market Street. The design excavation depths were achieved at each grid location and the calculated DWA values are all below the 240 ng/kg TCDD $TEQ_{DF,M}$ remediation criteria.

3.3.4 South Central Excavation Area

Excavation in the SC Excavation Area began on July 7, 2023. Excavation polygons SC-1, SC-2, and SC-3a were identified as Class I Industrial Waste during the waste confirmation sampling event described earlier in Section 3.1.1. Material from these locations were stockpiled independently from other impacted material in a temporary bermed area adjacent to the excavation polygons. The Class I Industrial Waste was disposed offsite under Republic Profile No. 512023167.

Once areas containing Class I waste were completed, polygon SC-3b was excavated and backfilled and the RC ceased excavation activities in order to transition the Work Site from Phase 1 to Phase 2 (Appendix C, Photo 31). The WTS was deconstructed and reconstructed over an area of previously remediated property in the NC Excavation Area, as shown on Figure 6. This transition period lasted approximately 3 weeks (Appendix C, Photo 32). Once the WTS was fully operational in the Phase 2 location, excavation and backfilling resumed in the SC Area.

Vertical sidewalls were cut along all excavation boundaries in the SC Excavation Area (Appendix C, Photo 33). Waste tires were again encountered in the overburden in the area. All tires were segregated and quartered for offsite disposal.

A total of 23,461 cy of impacted material was excavated and transported offsite from the SC Excavation Area and backfilled with clean fill. Due to the presence of debris, no overburden was suitable for reuse (Appendix C, Photo 34). MSI collected 285 survey points during the confirmation surveying in the SC Excavation Area. Appendix I provides stamped drawings of the final excavation surface prepared by MSI.

The excavation depths are shown on Figure 8C at each of the 285 survey points in the SC Excavation Area. The calculated DWAs for each polygon are presented in Table 8. The design excavation depths were achieved at each grid location and the calculated DWA values are all below 240 ng/kg TCDD $TEQ_{DF,M}$ remediation criteria.

3.3.5 Southwest Excavation Area

After the SC Area had been completely excavated and backfilled, the RC began excavation in the southeast corner of the SW Excavation Area, along Market Street (Appendix C, Photo 35). Similar to the NC Excavation Area, excavation polygons SW-20, SW-21, SW-22, SW-23, SW-27, SW-26, and SW-30 were located along Market Street. The RC began excavation off-set from Market Street and cut at a slope steeper than 2:1 in order to reach the planned toe of slope elevation at the target excavation depth. Excavation began at SW-26 and moved north to SW-20.

After these excavation polygons were completed, SW-28, SW-29, and SW-30 were excavated. Polygons SW-28, SW-29, and SW-30 were partially located on property owned by Kirby. The chain-link fence at the Kirby property was temporarily removed and then reinstalled following excavation in this area. One drainage culvert was installed at SW-28 and SW-29 prior to backfill to improve drainage in this area (Appendix C, Photo 36). The excavation continued to the northeast until it reached polygon SW-1, adjacent to the southern extent of the SC Excavation Area. Polygons SW-4, SW-5a, and SW-5b were the final polygons to be completed, as they required a sheet pile wall to be installed along the bank of the San Jacinto River, which is discussed further in Section 3.3.5.1.

One CenterPoint power pole was in the SW Excavation Area adjacent to Market Street (within Polygons SW-20 and SW-21). The power pole was relocated outside of the excavation area on June 21, 2023. The RC completed the excavation near the original location of the power pole on August 18, 2023.

A total of 50,582 cy of impacted material was excavated and transported offsite from the SW Excavation Area and replaced with clean backfill. Due to the presence of debris, no overburden was suitable for reuse (Appendix C, Photo 37). MSI collected 518 survey points during the confirmation surveying in the SW Excavation Area. Appendix I provides stamped drawings of the final excavation surface prepared by MSI.

The excavation depths are shown on Figure 8D at each of the 518 survey points in the SW Excavation Area. The calculated DWAs for each polygon are shown on Table 9. The calculated DWAs do not include the excavation slopes along Market Street or between the top of bank and sheet pile wall. The design excavation depths were achieved at each grid location and the calculated DWA values are all below 240 ng/kg TCDD $TEQ_{DF,M}$ remediation criteria.

3.3.5.1 Southwest Shoreline Excavation Area

Excavation polygons SW-4, SW-5a, and SW-5b included a section of intertidal shoreline along the San Jacinto River. Approximately 280 linear feet of a temporary steel sheet-pile bulkhead was installed directly adjacent to the excavation boundary to isolate the excavation from the San Jacinto River (Figure 6).

The RC installed a double-walled silt curtain around the sheet pile wall area on October 13, 2023 (Appendix C, Photos 38 and 39) for the purpose of containing suspended solids generated during sheet pile wall installation/removal and excavation activities. The inner silt curtain was impermeable and extended from the top of water to the mudline. The outer silt curtain was semi-impermeable and extended four feet down from the top of the water column. Sheet pile wall installation began on October 19, 2023 (Appendix C, Photos 40 and 41) and installation was completed on October 29, 2023 (Appendix C, Photo 42).

Remedial excavation resumed on October 30, 2023, in polygon SW-5b. Standing water behind the sheet pile wall was pumped to the WTS prior to excavation. A large volume of debris was encountered in the overburden and waste layers (Appendix C, Photo 43). Pumps ran continuously to keep water levels as low as possible during excavation and backfill. Excavated areas were immediately surveyed and backfilled to block off water from refilling the excavation (Appendix C, Photo 44). On November 2, 2023, the final excavation survey and backfill was completed (Appendix C, Photos 45 and 46). Based on a request from the property owner, the bulkhead was removed after completion of the excavation and the area was restored.

As discussed in Section 2.1.2, the remedial design for the SW Area shoreline was revised to incorporate additional bank stabilization measures (Appendix C, Photos 47 and 48). Site restoration is further discussed in Section 3.7.

3.4 Air Monitoring

Air quality monitoring consisted of real-time air monitoring conducted by GHD using three dust monitors placed at the perimeter of the Work Site, typically upwind, adjacent, and downwind of the RA activities (Appendix C, Photo 49).

Air monitoring was used to monitor total dust concentrations and make adjustments to work practices as necessary to protect workers. The dust monitors provided readings every 60 seconds and automated alarms were sent to the construction superintendent, EOR, and site safety officer when readings above 0.20 milligrams per cubic meter (mg/m^3) were detected. This alarm level was conservatively set at approximately 50% of the threshold of the action level to be protective of workers.

The perimeter air monitoring at these stations started at the beginning of ground disturbance activities and continued until the intrusive activities were complete. The air monitoring results were compared to the Work Site action levels (WSALs) listed below.

Table 3.1 Air Monitoring Work Site Action Levels

Chemical of Interest	Location	Action Level[1]	Duration	Description of Action
Total Dust Concentrations (Total Dust)	On-site near Work Areas and Perimeter of the Work Site	< 0.43 mg/m^3	1-Hour Average	No action required
		> 0.43 mg/m^3	1-Hour Average	Notify the Project Manager, implement dust suppressant and mitigation measures to reduce dust concentrations below the action level.

Notes:

[1]Action levels are based on real-time average concentrations of total dust

[2] mg/m^3 = milligrams per cubic meter

The monitoring results were evaluated by the on-site health and safety officer, and adjustments to operations were made as necessary.

3.5 Water Treatment and Management

An on-site WTS was installed to manage contact water within the excavations during the remediation activities at the Work Site. This included mounded water, groundwater infiltration, stormwater, equipment decontamination water, and miscellaneous contact water. Non-contact stormwater management followed the requirements specified in the SWPPP.

Temporary sumps were constructed using perforated pipe and rock filters to manage the groundwater near the excavation areas in the NE and SW Excavation Areas. The contact surface water was pumped to the on-site treatment system and then treated and discharged as described in Section 2.2.2.

The original design of the WTS included a 600,000-gallon influent tank, three 600,000-gallon effluent tanks, two bag filter units and two 2,000-pound (lb) vessels containing GAC. Two additional bag filter units were added partway through the RA. During Phase 1, it became necessary to convert one of the effluent tanks into an additional influent tank. During Phase 2, the WTS design returned to the initial configuration of one influent tank and three effluent tanks. The design treatment rate for the system was 250 gallons per minute (gpm). All contact water was treated and discharged on a batch basis. After treating a batch and discharging to an effluent tank, the water in the effluent was sampled and analyzed for the discharge parameters listed Table 3.2. Confirmation discharge samples were collected from a compliance sampling point at the end of treatment (Appendix C, Photo 50). All analytical results were sent to EPA for approval prior to batch discharge.

An initial diagnostic water sample was collected on April 27, 2023. The results from this diagnostic sample were evaluated and the water was re-circulated through the water treatment system. The results from the diagnostic water sample are included in Tables 10 and 11.

The subsequent water was sampled and confirmed to meet the discharge criteria and was discharged through an outfall pipe that ran west towards two diffusers at the edge of the San Jacinto River. Each diffuser consisted of a perforated pipe that was surrounded by gravel which slowed the rate of discharge into the river and prevented erosion of the riverbank (Appendix C, Photo 51).

Analytical data collected from the confirmation discharge samples are summarized in Tables 12 and 13, and the laboratory analytical reports and data verification summaries are included in Appendix D and Appendix E, respectively. The compliance samples all met the discharge criteria in Table 3.2 for each batch that was discharged.

The following summarizes the discharge quantities for the discharge events that occurred during the RA Construction.

Table 3.2 Discharge Quantities

Discharge Event	Treated Volume (gallons)	Date of Sample	Date of EPA Concurrence	Date of Discharge
WTS-2	580,000	June 1, 2023	June 20, 2023	June 22, 2023
WTS-3	174,000	June 14, 2023	July 3, 2023	July 5, 2023
WTS-4	263,000	July 20, 2023	August 7, 2023	-- (1)
WTS-5	323,000	November 7, 2023	November 24, 2023	November 28, 2023
WTS-6	23,000	November 16, 2023	November 29, 2023	November 29, 2023

(1) The treated water from WTS-4 was transferred to the new northern (Phase 2) effluent tanks to be used as ballast water. To the extent that it did not evaporate, it would have been discharged during the November 2023 events.

Concurrence from the EPA to discharge treated and sampled effluent was obtained by the Respondent via email correspondence prior to every discharge event. The total volume of water treated on the project was 1,363,000 gallons.

Residual sediments and tank liners from each tank were removed at the end of both Phase 1 and Phase 2 of the work. The sediments and liner from the Phase 1 influent tank that contained Class I non-hazardous water were disposed of as Class I non-hazardous waste. The sediments and liner from the remaining seven tanks (three additional tanks from Phase 1, and four total tanks for Phase 2) were disposed of as Class II non-hazardous waste. Water generated after dismantling of the system was containerized and shipped to Republic under Profile No. 51202316732.

3.6 Waste Management and Disposal

The various waste materials, waste types, and amounts that were disposed of during the RA are shown in the tables below. The wastes disposed of primarily included Class II non-hazardous wastes with a small amount consisting of Class I non-hazardous waste.

3.6.1 Class II Non-Hazardous Wastes

The Class II non-hazardous wastes that were transported and disposed of during the RA are listed in Table 3.3 below. These wastes were primarily transported and disposed of at Republic in Beaumont, Texas, in accordance with the regulations referenced in Section 2.2.1. Copies of the Class II waste profiles and manifests are provided in Appendix F-1 through F-4.

Table 3.3 Class II Non Hazardous Waste Totals

Class II Non-Hazardous Wastes	Amount Removed	Waste Profile No.	Notes
Class II Impacted Soil and Material – Class II Impacted Soil – Concrete and Debris	147,499 tons	Republic Profile No. 5120226963	Non-impacted debris and vegetation was also disposed of under this profile.

Class II Non-Hazardous Wastes	Amount Removed	Waste Profile No.	Notes
– Turbidity Curtain – Sheet Pile Decontamination Pad – Water Treatment System Residual Sediments and Tank Liners (Class II) – Weathered Wood			
Contact Water	99,280 gallons	Republic Profile No. 51202315957	--
Spent Carbon from Water Treatment System	52.23 tons	Republic Profile No. 51202316732	--
Tires	316.97 tons	Republic Profile No. 5120233285	--

3.6.2 Class I Non-Hazardous Waste

The Class I non-hazardous wastes that were transported and disposed of during the RA are listed in Table 3.4 below. The sediments and liner from the Phase 1 influent tank that contained Class I non-hazardous water were disposed of as Class I non-hazardous waste as described in Section 3.5. These wastes were transported and disposed of at the Republic landfill in Beaumont, Texas, in accordance with the regulations referenced in Section 2.2.1. Copies of the Class I waste profile and manifests are provided in Appendix F-5.

Table 3.4 Class I Non-Hazardous Waste Totals

Class I Non-Hazardous Wastes	Amount Removed (tons)	Waste Profile No.
Class I Impacted Soil	5,318	Republic Profile No. 5120231675
Class I Water Treatment System Residual Sediments and Tank Liner	11.1	

3.6.3 Asbestos

Approximately 110 sq ft of asbestos was identified in the floor tiles of the on-site building before demolition. The asbestos was properly abated and managed by ARC Abatement Inc. and disposed of at the Waste Management Atascocita Landfill in Humble, TX. Documentation related to the asbestos inspection, abatement, and disposal is included in Appendix H.

3.7 Site Restoration

After all excavation and backfill work described in Section 3.3 was complete, the RC and MSI conducted a topographic survey of the restored surface. Adjustments to the backfill grade were made based on the survey to ensure that the requisite backfill had been placed and to facilitate positive drainage from the Work Site.

A minimum six-inch cover layer of topsoil was placed on the backfill surface (Appendix C, Photo 52) to re-establish vegetation. The topsoil was previously sampled at the borrow source by the EOR on July 7, 2023 and tested for dioxin and furans, pH (ASTM D4972), Organic Matter (ASTM D2974), Particle Size (ASTM D6913/D6913M and D7928), TPH (TX 1005), Herbicides (SW 846 8151A), Poly-chlorinated Biphenyls (8082A), TCL Pesticides (8081B), TCL Volatiles/Semi-Volatiles (8260B/8270D), cyanide (9010/9012), and TAL Metals (6020D/7471). The topsoil test results are included in Appendix D. GHD confirmed the six-inch thickness was met by conducting an additional site-wide survey after the topsoil was in place and compared the results to the initial survey completed after the backfill was graded.

The shoreline area in the SW Excavation Area was restored as outlined in the August 28, 2023 Shoreline Deliverable submitted to the EPA. Placed backfill was graded at an approximately 3:1 slope and covered with a geotextile and

approximately 24 inches of rip rap. Topsoil was placed over the rip rap to fill void spaces within the rip rap and allow vegetation to re-establish. The top of the rip rap slope was seeded to provide further vegetative stabilization. Two mooring points along the shoreline that were removed during the remedial excavation were replaced with the addition of concrete aprons (Appendix C, Photo 53).

After placement of the topsoil, the areas in which topsoil had been placed was hydroseeded with 40 lb of Bermuda seed, 80 lb of Gulf Annual Rye seed, and 250 lb of 13-13-13 fertilizer per acre.

A replacement concrete pad and elevated frame structure was constructed and installed at the Work Site during restoration activities. The covered structure consists of a pre-engineered metal building approximately 35 ft by 25 ft. The structure was designed to conform to the International Building Code (IBC)-15 with wind loads of 140 miles per hour (mph). The building was founded on spread footings. The covered structure was constructed to replace a building that was demolished during the RA. Documentation related to the design of the building are included in Appendix K.

In addition, a 75-foot by 100-foot by 8-inch thick concrete pad was constructed to replace an existing pad that was removed during the RA. The pad includes footings around the perimeter measuring 16 inches by 16 inches and includes #5 rebar placed 8 inches on center in each direction throughout the pad. Documentation related to the design of the concrete pad are included in Appendix K. It was determined that no permit from Harris County was needed for the building and concrete pad since the project was a Superfund site, as stated via email correspondence from Harris County (Harris County, 2024).

A map showing final restoration surface after backfill placement is provided on Figures 9A through 9D. The eastern portion of the Work Site generally drains to the east towards the drainage adjacent to Market Street and the western portion of the Work Site generally drains to the west toward the water.

3.8 Demobilization

Demobilization consisted of removing all equipment and support facilities from the Work Site, completion of final grading, topsoil placement, and hydroseeding. Demobilization was complete on May 2, 2024.

Vegetative maintenance will continue through September 2024 to ensure a sufficient coverage of grass has established prior to turning over vegetative maintenance to the Owner.

4. Modifications from the RD and Specifications

Modifications to the work as compared to the RD are documented in Section 4.1.1. The modifications listed in Section 4.1.1 were documented in separate correspondence to EPA. Any other changes or clarifications that were submitted to the EOR as Requests for Information (RFIs) during the RA were documented in the Monthly Reports to EPA and are listed in Section 5.1.2.

4.1.1 Modifications Submitted to EPA

During the RA, there were several modifications to the RD, some of which were requested by the EPA. The modifications made during the RA included the following:

– The EPA modified Section 3.1 of the SOW to include a requirement that all on-site RA activities, including but not limited to wastewater treatment operation and testing, waste excavation and disposal, backfilling, Site restoration and seeding, sheet pile wall installation, deconstruction of RA facilities, and demobilization, shall be completed no later than July 31, 2024. EPA also modified the previously approved November to April excavation season to require that excavation not be limited to the previously approved timeframe and stated that excavation can occur throughout the entire year, including during the hurricane season (EPA, 2022e). The Respondent submitted a

response letter on January 25, 2023, in which the Respondent detailed reservations and concerns about the risks associated with extending excavation activities beyond April and into the hurricane season, but committed to work in good faith to meet the July 31, 2024 completion date for on-site activities (GHD, 2023a). The EPA responded in written correspondence dated April 21, 2023, in which the EPA requested that the Respondent prepare a HWPP for the RA Construction (EPA, 2023e). A HWPP was prepared and approved by EPA as set forth in Section 2.1.2.

– The EPA approved a request by the Respondent to use chlorine for algae treatment within the WTS. This request was submitted by the Respondent to the EPA for review on May 17, 2023 (GHD, 2023h). This request was due to extended storage of clean ballast and treated effluent water, which caused algae to form in the WTS tanks. Although the use of chlorine was approved, it was never used. Instead, an aeration pump was added to the influent and effluent tanks to mix the water and limit algae growth.
– There were modifications to the WTS, including the conversion of an unused effluent tank into a second influent tank and the addition of a polishing filter. On May 18, 2023, GHD commenced using a second storage tank as an influent (non-treated) water storage tank. This tank was originally designed and anticipated for use as an effluent (treated water) storage tank; however, the tank was converted to store influent water. This change in operations was made in order to store excess contact water generated during excavation activities due to the large amounts of rainfall received at the Work Site during the prior 2-week period. In addition, the treatment process was enhanced to include the use of 1 micron (µm) polishing filters instead of 50 µm filters, downstream of the GAC, in order to enhance the capture of fine particles. GHD discussed these changes verbally with EPA during weekly progress meetings and later provided written documentation of these changes on June 2, 2023 (GHD, 2023i).
– Additional bank stabilization measures for the SW Excavation Area shoreline following excavation activities were required by the EPA. As described in Section 2.1.2, this modification was requested by the EPA via written correspondence dated June 8, 2023 (EPA, 2023g) following the submittal of the Southern Impoundment Remedial Action Southwest Excavation Area Shoreline Deliverable on April 21, 2023 (GHD, 2023f). The Southwest Excavation Area Shoreline Deliverable summarized the evaluation of the long-term bank stability of the SW Excavation Area shoreline following excavation activities. On August 28, 2023, the Respondent submitted a revised design deliverable to the EPA that incorporated additional survey data, a revised sheet pile wall alignment, and additional bank stabilization measures (GHD, 2023l).

4.1.2 RFIs Documented in Monthly Reports

RFIs issued by the RC to the EOR during the RA are summarized in the table below:

RFI Subject	Description of RFI	Associated Design Item	Date Issued	Date Approved
Tank Farm Secondary Containment Sand Layer	Placement of aggregate in the base of the secondary containment area	Design Drawings Sheet C-44 (Revision 1)	November 16, 2022	December 1, 2022
HDPE Piping SDR Rating	SDR rating of HDPE piping	Design Specifications Section 40 05 33	December 5, 2022	December 6, 2022
HDPE Piping Hydrotest	Hydrotesting pressure for HDPE piping	Design Specifications Section 40 05 13	December 7, 2022	December 7, 2022
HDPE Liner Anchor Trench	Alternate approach for liner anchor trench	Design Drawings Sheet C44, with Markup	January 10, 2023	January 10, 2023
WTS Process Flow Diagram	Change to process flow diagram requested by Evoqua	Design Drawings Sheet P-01	January 30, 2023	January 30, 2023
Geotechnical Backfill	Approval of proposed backfill material	Design Specifications Section 31 23 23	February 27, 2023	March 8, 2023
Weed Control	Approval of mixture to be used for weed control	No Associated Design Item.	May 31, 2023	June 7, 2023

RFI Subject	Description of RFI	Associated Design Item	Date Issued	Date Approved
WTS Configuration	Modification to the WTS configuration	June 2, 2023, Letter to USEPA - Notification of Modifications to the Wastewater Treatment System.	June 28, 2023	June 30, 2023
WTS Containment Liner Installation	Changes for the WTS containment liner installation	Design Drawings Sheet C44.	June 19, 2023	June 22, 2023
Excavation Slopes Along Market Street	Excavation slopes along Market Street	Excavation Slopes	June 16, 2023	June 16, 2023
Rebar Spacing	Change in rebar spacing	Design Drawings Sheet C44 - Detail 15	November 21, 2023	November 21, 2023
Stone Subgrade Preparation	Compaction for stone subgrade	Design Drawings Sheet S-01	December 6, 2023	December 7, 2023
Mooring Point Installation	Installation of mooring points	Design Drawings Sheet S-01	December 13, 2023	December 15, 2023

5. Pre-Final Inspection

The Pre-Final Inspection was conducted by representatives from GHD, the Respondent, EPA, and TCEQ on May 14, 2024, after conclusion of RA Construction activities. In email correspondence dated May 16, 2024, the EPA stated that it had determined that there were no actions at that time warranting a formal punch list or additional site inspection under the UAO (EPA, 2024). EPA noted minor erosion along the southwest shoreline in the area of the rip rap and barge mooring points after a flooding event that occurred just prior to the inspection on May 13, 2024, and stated that revegetation would be needed surrounding the newly constructed concrete pad. However, EPA identified that it expects these items to be remediated and monitored in the normal course of vegetative maintenance.

To address these items, an additional hydroseeding treatment was applied around the newly constructed concrete pad and larger limestone was placed along the southwest shoreline. The erosional areas on the slope and mooring locations were initially filled in with 18-inch to 24-inch granite, and later 3-inch to 5-inch limestone was added on the top of the slope as additional erosion control. These actions were completed during the weeks of June 17, 2024, and July 8, 2024.

6. Institutional Controls

6.1 Institutional Controls Implementation and Assurance Plan (ICIAP)

The ICIAP was submitted to the EPA on September 15, 2022 (GHD, 2022b). The ICIAP described a plan to implement, maintain and monitor institutional controls (ICs). *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites, OSWER 9355.0- 89, EPA/540/R- 09/001 (EPA, 2012a), Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites, OSWER 9200.0-77, EPA/540/R-09/02* (EPA, 2012b), and as applicable, TCEQ guidance, were

considered in developing this ICIAP. A template for the Soil Management Plan (SMP) was attached to the September 2022 ICIAP submittal.

The objectives of the ICIAP are to (1) identify ICs to meet requirements applicable to the Southern Impoundment as referenced in the 2017 ROD (EPA, 2017) and in the Order (EPA, 2021), and (2) establish and document the activities and responsible entities to implement, maintain, enforce, terminate, and/or modify the ICs, as appropriate.

The EPA provided initial comments on the ICIAP and SMP template on May 10, 2024, and also notified the Respondent that ICs would be required on the Glendale property. The Respondent is in the process of preparing for submission to the EPA a revised draft of the ICIAP, a proposed form of an environmental restrictive covenant(s) (ERCs), to be recorded with respect to individual properties (or portions of such properties), and a draft SMP. The Respondent contemplates submitting an addendum to this RA Report with respect to the ICIAP and ICs, which will include recorded copies of the ERCs.

6.2 Soil Management Plan

As noted above in Section 6.1., a SMP template was submitted to the EPA on September 15, 2022 (GHD, 2022b). The EPA provided preliminary comments on the SMP template on May 16, 2024, and a proposed form of the SMP is being prepared and will be submitted to the EPA within the ICIAP.

7. Operation and Maintenance (O&M) Requirements

O&M activities at the Work Site include vegetation maintenance and the repair work identified during the pre-final inspection described in Section 5.0. Hydroseeding was completed on March 30, 2024 (with the exception of small areas of reseeding performed in the SW Excavation Area shoreline area and around the concrete pad). The RC will continue to maintain the vegetative cover for a six-month period after the hydroseeding was completed on March 30, 2024, or through September 30, 2024. After the six-month period, vegetative maintenance will be turned over to the Owner.

8. Conclusions and Path Forward

This RA Report documents that the work was performed in accordance with the Southern Impoundment 100% RD pursuant to the UAO for RA of the Southern Impoundment. Impacted material above the DWA of 240 ng/kg TCDD $TEQ_{DF,M}$ was removed and transported off-site to a permitted disposal facility. Excavated areas were backfilled with clean imported material and revegetated. Based on the documentation provided in this RA Report, and subject to the submission of the addendum with respect to ICs, the Respondent has completed the RA at the Work Site in order to support final site closure.

As stated in the ROD, a statutory review will be conducted within 5 years after initiation of the RA to ensure that the remedy is, or will be, protective of human health and the environment.

9. References

EPA, 1986. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Updates I to V. SW-846. NTIS publication no. PB97-156111 or GPO publication no. 955-001-00000-1. Office of Solid Waste. September 1986 (with all subsequent revisions).

EPA, 2002. RCRA Waste Sampling Draft Technical Guidance - Planning, Implementation, and Assessment. EPA530-D-02-002. Office of Solid Waste. August 2002.

EPA, 2017. Record of Decision, San Jacinto River Waste Pits. Harris County, Texas. EPA ID: TXN000606611. U.S. Environmental Protection Agency, Region 6. Dallas, Texas. October 2017.

EPA, 2018a. Administrative Settlement Agreement and Order on Consent for Remedial Design. U.S. EPA Region 6, CERCLA Docket. No. 06-02-18. In the matter of: San Jacinto Waste Pits Superfund Site, Harris County, Texas. International Paper Company and McGinnes Industrial Maintenance Corporation, Respondents. April 2018.

EPA, 2018b. Letter to C. Patmont, Anchor QEA, regarding approval of First Phase Pre-Design Investigation Work Plan, dated September 12, 2018. U.S. Environmental Protection Agency.

EPA, 2019. Letter to C. Munce, GHD Services Inc., regarding approval of Final Second Phase Pre-Design Investigation Work Plan, dated August 8, 2019. U.S. Environmental Protection Agency.

EPA, 2020a. Baumgarten, Gary, U.S Environmental Protection Agency. “Re: San Jacinto River Waste Pits - Surface Water Quality Standard.” Received by Judy Armour, Nicholas Casten, Katie Delbecq, Satya Dwivedula, Anne Foster, Karl Gustavson, Monica Harris, Ashley Howard, John Meyer, Charles Munce, Brent Sasser, Paul Schroeder, Phillip Slowiak, Janie Smith. February 18, 2020. E-mail.

EPA, 2020b. Letter to C. Munce, GHD Services Inc. regarding the Waste Characterization Evaluation, dated November 19, 2020. U.S. Environmental Protection Agency.

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EPA, 2022a. Shannon, Wilkin, U.S Environmental Protection Agency. “Re: Question on CERCLA approved disposal facility - Republic Golden Triangle.” Received by Wells Richard. June 1, 2022. E-mail.

EPA, 2022b. Shannon, Wilkin, U.S Environmental Protection Agency. “Re: Question on CERCLA approved disposal facility - Republic Golden Triangle.” Received by Wells Richard. June 9, 2022. E-mail.

EPA, 2022c. Letter to Charles W. Munce, GHD Services Inc. regarding approval of Addendum to the Final 100% Remedial Design-Southern Impoundment (Amended April 2021), dated August 11, 2022. U.S. Environmental Protection Agency.

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EPA, 2023c. Poulos, Lauren, U.S Environmental Protection Agency. “SJRWP SI Contact Water Release Surface Soil Sampling and Analysis Plan.” Received by Charles Munce, Wells Richard, and Brent Sasser. April 6, 2023. E-mail.

EPA, 2023d. Poulos, Lauren, U.S Environmental Protection Agency. “30 Day Report Post-Release as per UAO.” Received by Charles Munce, Wells Richard, and Brent Sasser. April 18, 2023. E-mail.

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EPA, 2023f. Letter to Charles W. Munce, GHD Services Inc. regarding approval of Southern Impoundment High-Water Preparedness Plan, dated May 26, 2023. U.S. Environmental Protection Agency.

EPA, 2023g. Letter to Charles W. Munce, GHD Services Inc. regarding Southern Impoundment Remedial Action Southwest Excavation Area Shoreline Deliverable, dated June 8, 2023. U.S. Environmental Protection Agency.

EPA, 2023h. Letter to Charles W. Munce, GHD Services Inc. regarding approval of Southern Impoundment Revised High-Water Preparedness Plan, dated September 13, 2023. U.S. Environmental Protection Agency.

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GHD, 2022c. Southern Impoundment Remedial Action Updated Supporting Deliverables Following Remedial Contractor Selection, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. October 25, 2022.

GHD, 2022d. Nationwide Permit 38 Applicability Review, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and United States Army Corps of Engineers, Galveston District. November 4, 2022.

GHD, 2023a. Response to December 23, 2022 EPA Letter, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. January 25, 2023.

GHD, 2023b. Off-Site Backfill Sampling Plan, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. March 2, 2023.

GHD, 2023c. Smith, Janie, GHD Services Inc. “Re: ROW Signage for EPA Superfund Site Work - Channelview TX.” Received by Kristian Heighway, Jeffrey Bi, Vence Salvato, and Wells Richard. March 6, 2023. E-mail.

GHD, 2023d. Release Notification, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. March 24, 2023.

GHD, 2023e. Southern Impoundment High-Water Preparedness Plan, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. April 21, 2023.

GHD, 2023f. Southwest Excavation Area Shoreline Deliverable, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. April 21, 2023.

GHD, 2023g. 30-Day Release Conclusion Notification, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. May 5, 2023.

GHD, 2023h. Request for United States Environmental Protection Agency (USEPA) Review - Use of Chlorine for Algae Treatment, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. May 17, 2023.

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GHD, 2023k. Southern Impoundment Revised High-Water Preparedness Plan, San Jacinto River Waste Pits Superfund Site. Prepared for International Paper Company and U.S. Environmental Protection Agency, Region 6. July 28, 2023.

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Integral and Anchor QEA, 2018a. *First Phase Pre-Design Investigation Work Plan*, San Jacinto River Waste Pits Superfund Site. Prepared for McGinnes Industrial Maintenance Corporation, International Paper Company, and U.S. Environmental Protection Agency, Region 6. August 2018.

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USACE, 2023. Bader, Brian, United States Army Corps of Engineers. “Re: Submittal for Permitting Determination: San Jacinto Waste Pits Superfund Project.” Received by Kevin Janni. September 14, 2023. E-mail.

10. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Regards,

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Table 1

RA Construction – Waste Characterization
Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Regulatory Limits[1]	Grid-1 12599404-120122-S-MTK-WC-1 12/01/2022	Grid-1 12599404-120622-S-MTK-WC-1 12/06/2022	Grid-2 12599404-120122-S-MTK-WC-2 12/01/2022	Grid-2 12599404-120622-S-MTK-WC-2 12/06/2022	Grid-3 12599404-120722-S-MTK-WC-3 12/07/2022	Grid-4 12599404-120822-S-MTK-WC-4 12/08/2022	Grid-5 12599404-120822-S-MTK-WC-5 12/08/2022	Grid-6 12599404-120722-S-MTK-WC-6 12/07/2022	Grid-7 12599404-120822-S-MTK-WC-7 12/08/2022	Grid-8 12599404-120822-S-MTK-WC-8 12/08/2022
TCLP-Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	NA	2370	--	29.8 J	--	11.5 J	8.32 J	7.88 J	4.2 U	7.59 U	21.6 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	NA	1380	--	41.1 U	--	31.1 J	84.8 J	89	18.9 J	18.6 U	41.5 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	NA	66.6	--	1.38 U	--	1.24 U	7.88 J	1.26 U	1.52 U	2.56 U	4.86 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	NA	91.3	--	2.36 J	--	1.9 U	10.4 J	2.94 U	2.15 U	4.86 U	5.21 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	NA	8.62 J	--	1.51 U	--	1.35 U	2 U	1.59 U	1.8 U	3.18 U	6.12 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	12.1 U	--	1.54 U	--	1.91 U	1.92 U	2.12 U	2.06 U	3.51 U	4.27 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	4.46 U	--	1.83 U	--	2.33 U	3.38 U	2.89 U	2.79 U	5.28 U	4.76 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	5.39 J	--	1.75 U	--	1.66 U	1.83 U	1.94 U	2.05 U	3.49 U	4.47 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	5.16 U	--	1.94 U	--	2.39 U	3.44 U	2.77 U	2.74 U	4.57 U	4.46 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	4.12 U	--	2.01 U	--	2 U	1.97 U	2.19 U	2.36 U	3.61 U	4.94 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	4.57 U	--	1.74 U	--	2.19 U	2.61 U	2.55 U	2.54 U	4.4 U	4.33 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	100,000,000	11.5 J	--	1.6 U	--	2.45 U	2.99 U	2.58 U	2.55 U	3.89 U	4.41 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	10,000,000	3.28 U	--	2.39 U	--	3.64 U	4.07 U	4.44 U	3.36 U	6.36 U	5.54 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	NA	3.6 U	--	1.62 U	--	1.95 U	2.04 U	2.18 U	2.49 U	3.47 U	4.76 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	10,000,000	10.5 J	--	1.57 U	--	2.17 U	2.73 U	2.4 U	2.39 U	3.88 U	4.08 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	50,000,000	411	--	7.01	--	12.6 J	7.39 J	8.11 U	9.91 J	9.06 U	13.4 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	5,000,000	128	--	3.25 U	--	6.52 U	6.11 U	6.2 U	6.99 U	9.84 U	6.5 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	NA	140 J	--	1.44 UJ	--	1.29 UJ	7.88 J	1.42 UJ	1.65 UJ	2.84 UJ	5.44 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	NA	222 J	--	6.96 J	--	2.53 J	19.3 J	5.82 J	2.15 UJ	4.86 UJ	5.21 UJ
Total hexachlorodibenzofuran (HxCDF)	pg/L	NA	50.7 J	--	1.72 UJ	--	1.87 UJ	1.94 UJ	2.11 UJ	2.23 UJ	3.52 UJ	4.6 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	NA	19.1 J	--	1.83 UJ	--	2.3 UJ	3.12 UJ	2.73 UJ	2.68 UJ	4.73 UJ	4.51 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	NA	30.4 J	--	1.59 UJ	--	2.31 UJ	2.86 UJ	2.49 UJ	2.47 UJ	3.88 UJ	4.24 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	NA	3.28 UJ	--	2.39 UJ	--	3.64 UJ	4.07 UJ	4.44 UJ	3.36 UJ	6.36 UJ	5.54 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	NA	790 J	--	7.01 J	--	12.6 J	7.39 J	8.11 UJ	9.91 J	9.06 UJ	13.4 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	NA	139 J	--	3.25 UJ	--	6.52 UJ	6.11 UJ	6.2 UJ	6.99 UJ	9.84 UJ	6.5 UJ
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L		176 J	--	0.734 J	--	1.27 J	0.950 J	0.0291 J	0.997 J	0	1.36 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L		179 J	--	4.46 J	--	7.46 J	7.36 J	7.01 J	7.45 J	10.7 J	9.74 J
TCLP-Metals												
Antimony	mg/L	1.0	0.0047 U	--	0.0047 U	--	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	1.8	0.0028 U	--	0.0028 U	--	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	100	0.70	--	0.79	--	0.59	0.63	0.21	0.36	0.47	0.56
Beryllium	mg/L	0.08	0.0021	--	0.00050 U	--	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.5	0.0067	--	0.0010 U	--	0.0046	0.0063	0.018	0.0056	0.0063	0.0054
Chromium	mg/L	5.0	0.0020 U	--	0.0020 U	--	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	1.5	0.16	--	0.0018 U	--	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Mercury	mg/L	0.2	0.000095 U	--	0.000095 U	--	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	70	0.030	--	0.048	--	0.023	0.026 J	0.0017 U	0.029	0.030 J	0.029 J
Selenium	mg/L	1.0	0.0049 U	--	0.0049 U	--	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	5.0	0.0019 U	--	0.0019 U	--	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	NA	0.0018 U	--	0.0018 U	--	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Total Petroleum Hydrocarbons (TPH)												
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	NA	--	20 UJ	--	17 UJ	18 UJ	13 UJ	13 UJ	18 UJ	13 UJ	13 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	NA	--	20 UJ	--	17 UJ	18 UJ	13 UJ	13 UJ	18 UJ	13 UJ	13 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	NA	--	20 UJ	--	17 UJ	18 UJ	13 UJ	13 UJ	18 UJ	13 UJ	13 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	1500	--	20 UJ	--	17 UJ	18 UJ	13 UJ	13 UJ	18 UJ	13 UJ	13 UJ
General Chemistry												
Percent solids	%		--	61.5	--	74.7	68.2	--	--	70.5	--	--

Table 1

RA Construction – Waste Characterization
Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Regulatory Limits[1]	Grid-9 12599404-120722-S-MTK-WC-9 12/07/2022	Grid-10 12599404-120822-S-MTK-WC-10 12/08/2022	Grid-11 12599404-120722-S-MTK-WC-11 12/07/2022	Grid-12 12599404-120722-S-MTK-WC-12 12/07/2022	Grid-13 12599404-120622-S-MTK-WC-13 12/06/2022	Grid-14 12599404-120622-S-MTK-WC-14 12/06/2022	Grid-15 12599404-120622-S-MTK-WC-15 12/06/2022	Grid-16 12599404-120622-S-MTK-WC-16 12/06/2022	Grid-17 12599404-120522-S-MTK-WC-17 12/05/2022	Grid-18 12599404-120522-S-MTK-WC-18 12/05/2022
TCLP-Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	NA	3.63 U	5.48 U	535	9.74 J	2.93 U	94.6 J	3.73 U	3.03 U	2.79 U	12.3 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	NA	80.7	27.2 J	3000	140	38.9 J	158 J	18.2 J	224	2.93 U	47.7 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	NA	1.04 U	2.19 U	56.1	0.897 U	1.67 U	6.96 J	1.64 U	0.976 U	1.19 U	1.84 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	NA	3.54 J	3.05 U	129	4.87 J	3 U	16.4 J	2.2 U	2.42 U	1.52 J	2.1 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	NA	1.03 U	2.82 U	11 J	1.07 U	1.73 U	2.09 U	2.4 U	1.16 U	1.42 U	2.16 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	1.3 U	1.78 U	90	1.37 U	2.11 U	3.99 J	2.12 U	1.55 U	1.71 U	1.97 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	2.97 U	2.74 U	2.19 U	2.29 U	4.25 U	3.67 U	2.71 U	3.54 U	2.14 U	2.7 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	1.2 U	1.85 U	25 J	1.38 U	1.89 U	1.91 U	1.8 U	1.51 U	1.52 U	1.93 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	3.08 U	2.73 U	2.14 U	2.29 U	3.95 U	3.76 U	2.56 U	3.62 U	2.16 U	3.21 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	1.38 U	1.82 U	2.42 U	1.48 U	2.34 U	2.12 U	2.05 U	1.81 U	2.01 U	2.26 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	2.86 U	2.55 U	2.08 U	2.02 U	3.33 U	3.2 U	2.35 U	2.94 U	2.23 U	3.12 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	100,000,000	1.75 U	2.33 U	37.3	2.14 U	2.53 U	3.09 U	2.09 U	2.77 U	1.91 U	1.98 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	10,000,000	2.92 U	3.29 U	4.97 U	3.08 U	3.52 U	3.49 U	4.44 U	4.12 U	2.09 U	3.42 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	NA	1.34 U	2.09 U	2.75 U	1.36 U	2.12 U	2.31 U	1.99 U	1.55 U	1.78 U	2.02 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	10,000,000	1.71 U	2.21 U	23.9 J	2.12 U	2.71 U	2.97 U	2 U	2.76 U	1.8 U	1.9 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	50,000,000	6.23 J	9.66	456	17.3 J	7.46 U	51.1	8.53 U	7.36 U	4.06 J	28.4 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	5,000,000	5.68 U	4.41 U	128	4.99 U	6.82 U	11.4 J	6.4 U	6.14 U	3.34 U	6.63 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	NA	1.04 UJ	2.47 UJ	113 J	2.07 J	1.7 UJ	12.4 J	1.98 UJ	1.06 UJ	1.3 UJ	1.98 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	NA	7.05 J	3.05 UJ	262 J	12.6 J	3 UJ	42.4 J	2.2 UJ	2.42 UJ	1.52 J	5.52 J
Total hexachlorodibenzofuran (HxCDF)	pg/L	NA	1.3 UJ	1.89 UJ	148 J	1.4 UJ	2.11 UJ	3.99 J	1.98 UJ	1.59 UJ	1.74 UJ	2.04 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	NA	2.96 UJ	2.66 UJ	27.9 J	2.19 UJ	3.82 UJ	3.53 UJ	2.53 UJ	3.35 UJ	2.17 UJ	3 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	NA	1.73 UJ	2.27 UJ	92.1 J	2.13 UJ	2.62 UJ	3.03 UJ	2.05 UJ	2.76 UJ	1.85 UJ	1.94 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	NA	2.92 UJ	3.29 UJ	4.97 UJ	3.08 UJ	3.52 UJ	3.49 UJ	4.44 UJ	4.12 UJ	2.09 UJ	3.42 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	NA	6.23 J	9.66 J	944 J	27 J	7.46 UJ	69.6 J	8.53 UJ	7.36 UJ	4.06 J	40.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	NA	5.68 UJ	4.41 UJ	128 J	4.99 UJ	6.82 UJ	11.4 J	6.4 UJ	6.14 UJ	3.34 UJ	6.63 UJ
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L		0.683 J	0.974 J	196 J	1.82 J	0.0117 J	17.2 J	0.00546 J	0.0672 J	0.421 J	2.86 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L		5.98 J	6.01 J	199 J	6.83 J	7.03 J	20.3 J	6.99 J	6.87 J	4.13 J	9.09 J
TCLP-Metals												
Antimony	mg/L	1.0	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.024 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	1.8	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.014 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	100	1.2	0.44	0.76	2.2	1.1	0.66	0.21	0.75	1.1	1.0
Beryllium	mg/L	0.08	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.5	0.0010 U	0.018	0.0010 U	0.0055	0.0041	0.0050 U	0.0050 U	0.016	0.012	0.0010 U
Chromium	mg/L	5.0	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.024	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	1.5	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.16	0.0090 U	0.0018 U	0.0018 U	0.0018 U
Mercury	mg/L	0.2	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.00046	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	70	0.017	0.0017 U	0.032	0.064	0.091	0.065	0.061	0.15	0.051	0.024
Selenium	mg/L	1.0	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.025 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	5.0	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0095 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	NA	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Total Petroleum Hydrocarbons (TPH)												
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	NA	16 UJ	13 UJ	109 J	2040 J	82.8 J	16 UJ	44.5 J	237 J	12 UJ	12 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	NA	16 UJ	13 UJ	135 J	613 J	17 UJ	16 UJ	51.1 J	98.3 J	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	NA	16 UJ	13 UJ	159 J	79.6 J	17 UJ	16 UJ	17 UJ	17 UJ	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	1500	16 UJ	13 UJ	402 J	**2740 J**	82.8 J	16 UJ	95.6 J	336 J	12 UJ	12 UJ
General Chemistry												
Percent solids	%		75.0	--	77.5	77.1	71.2	76.2	71.3	72.6	79.2	74.4

Table 1

RA Construction – Waste Characterization
Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Regulatory Limits[1]	Grid-19 12599404-120222-S-MTK-WC-19 12/02/2022	Grid-20 12599404-120222-S-MTK-WC-20 12/02/2022	Grid-21 12599404-120222-S-MTK-WC-21 12/02/2022	Grid-22 12599404-120222-S-MTK-WC-22 12/02/2022	Grid-23 12599404-120222-S-MTK-WC-23 12/02/2022	Grid-24 12599404-120122-S-MTK-WC-24 12/01/2022	Grid-24 12599404-120522-S-MTK-WC-24 12/05/2022	Grid-25 12599404-120122-S-MTK-WC-25 12/01/2022	Grid-25 12599404-120522-S-MTK-WC-25 12/05/2022	Grid-26 12599404-120222-S-MTK-WC-26 12/02/2022
TCLP-Dioxins/Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	NA	3.37 J	7.16 J	9.58 J	1.67 U	6.07 J	3.54 U	--	5.93 U	--	1.57 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	NA	43.5 U	44 U	27 U	11.3 U	17.4 U	53.2 U	--	37.6 U	--	38.3 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	NA	0.803 U	1.85 J	2.88 U	0.837 U	1.15 U	2.15 U	--	6.4 J	--	1.19 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	NA	2.51 J	3.2 J	2.21 U	1.16 U	1.44 U	4.44 J	--	4.58 J	--	2.09 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	NA	0.965 U	1.49 U	3.7 U	0.904 U	1.43 U	2.45 U	--	2.86 U	--	1.44 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	1.02 U	1.08 U	2.03 U	1.07 U	1.01 U	2.62 U	--	6.07 U	--	0.943 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	1.15 U	1.32 U	2.46 U	1.37 U	1.58 U	3.67 U	--	3.76 U	--	1.43 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	1.02 U	1.02 U	1.94 U	1.17 U	0.946 U	2.42 U	--	2.64 U	--	0.928 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	1.25 U	1.32 U	2.52 U	1.48 U	1.56 U	3.96 U	--	3.98 U	--	1.46 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	50,000,000	1.18 U	1.37 U	2.71 U	1.43 U	1.09 U	3.16 U	--	3.46 U	--	1.21 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50,000,000	1.22 U	1.38 U	2.51 U	1.47 U	1.66 U	3.6 U	--	3.98 U	--	1.5 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	100,000,000	0.908 U	0.99 U	1.62 U	0.968 U	1.48 U	2.59 U	--	2.48 U	--	0.948 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	10,000,000	1.18 U	1.47 U	1.82 U	1.25 U	1.65 U	2.53 U	--	3.14 U	--	1.26 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	NA	0.984 U	1.05 U	2.13 U	1.26 U	1.04 U	2.49 U	--	2.64 U	--	0.988 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	10,000,000	0.872 U	1.04 U	1.65 U	0.911 U	1.49 U	2.4 U	--	2.22 U	--	0.926 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	50,000,000	3.67 J	18.8 J	10.9	11.2	20.1 J	7.45 U	--	24.2	--	27
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	5,000,000	1.57 U	7.81 J	4.76 J	2.88 J	7.04	6.7 U	--	13.3	--	7.55
Total heptachlorodibenzofuran (HpCDF)	pg/L	NA	0.877 UJ	1.85 J	3.24 UJ	0.869 UJ	1.28 UJ	2.29 UJ	--	6.4 J	--	1.3 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	NA	7.1 J	8.27 J	4.54 J	1.16 UJ	1.44 UJ	11.9 J	--	16.1 J	--	4.63 J
Total hexachlorodibenzofuran (HxCDF)	pg/L	NA	1.05 UJ	1.12 UJ	2.18 UJ	1.23 UJ	1.02 UJ	2.66 UJ	--	9.8 J	--	1.01 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	NA	1.2 UJ	1.34 UJ	2.49 UJ	1.44 UJ	1.6 UJ	3.73 UJ	--	3.9 UJ	--	1.46 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	NA	0.89 UJ	1.01 UJ	1.63 UJ	0.94 UJ	1.49 UJ	2.5 UJ	--	2.35 UJ	--	0.937 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	NA	1.18 UJ	1.47 UJ	1.82 UJ	1.25 UJ	1.65 UJ	2.53 UJ	--	3.14 UJ	--	1.26 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	NA	3.67 J	29 J	18.3 J	16.2 J	34.8 J	7.45 UJ	--	35.9 J	--	39.7 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	NA	1.57 UJ	7.81 J	4.76 J	2.88 J	7.04 J	6.7 UJ	--	13.3 J	--	7.55 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L		0.393 J	9.74 J	5.85 J	4.00 J	9.05 J	0.0444 J	--	15.8 J	--	10.3 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L		2.32 J	11.1 J	7.90 J	5.26 J	10.6 J	6.56 J	--	19.1 J	--	11.5 J
TCLP-Metals												
Antimony	mg/L	1.0	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	0.0047 U	--	0.0047 U	--	0.0047 U
Arsenic	mg/L	1.8	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	--	0.0028 U	--	0.0028 U
Barium	mg/L	100	1.2	0.71	1.0	0.80	0.65	1.2	--	0.97	--	0.81
Beryllium	mg/L	0.08	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	0.00050 U	--	0.00050 U	--	0.00050 U
Cadmium	mg/L	0.5	0.0057	0.0054	0.0045	0.0010 U	0.0066	0.0010 U	--	0.0054	--	0.0047
Chromium	mg/L	5.0	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	--	0.0020 U	--	0.0020 U
Lead	mg/L	1.5	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	--	0.0018 U	--	0.0018 U
Mercury	mg/L	0.2	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U	--	0.000095 U	--	0.000095 U
Nickel	mg/L	70	0.031	0.033	0.028	0.020	0.024	0.023	--	0.017	--	0.011
Selenium	mg/L	1.0	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U	0.0049 U	--	0.0049 U	--	0.0049 U
Silver	mg/L	5.0	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	--	0.0019 U	--	0.0019 U
Vanadium	mg/L	NA	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	--	0.0018 U	--	0.0018 U
Total Petroleum Hydrocarbons (TPH)												
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	NA	12 UJ	12 UJ	12 UJ	42.7 J	12 UJ	--	12 UJ	--	12 UJ	12 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	NA	12 UJ	12 UJ	12 UJ	12 UJ	12 UJ	--	12 UJ	--	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	NA	12 UJ	12 UJ	12 UJ	12 UJ	12 UJ	--	12 UJ	--	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	1500	12 UJ	12 UJ	12 UJ	42.7 J	12 UJ	--	12 UJ	--	12 UJ	12 UJ
General Chemistry												
Percent solids	%		80.9	80.2	73.5	76.7	80.5	--	80.9	--	79.3	80.0

Notes:
[1] Regulatory limits listed in Title 30 of the Texas of the Texas Administrative Code (TAC) Chapter 335, Subchapter R (Waste Classification) Appendix 1, Table 1 for Class 1 Nonhazardous Industrial Waste.
Reported analytical results that are above the listed regulatory limits are **bolded**.
U - Not detected at the associated reporting limit.
J - Estimated concentration.
EMPC-Value is EMPC (estimated maximum possible concentration).
UJ - Not detected; associated reporting limit is estimated.
NA - No Applicable Standard.
mg/L - milligram per liter.
mg/kg - milligram per kilogram.
pg/L - picogram per liter.
% - percent.

Table 2

RA Construction – Imported Fill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: / Sample Identification: / Sample Date:	Units	Aggregate Source Pit 12599404-112122-S-MTK-Source Aggregate-1 11/21/2022	Clay Source Pit 12599404-112122-S-MTK-Source Clay-1 11/21/2022	Sand Source Pit 12599404-112122-S-MTK-Source Sand-1 11/21/2022	Top Soil 12599404-070723-S-MTK-Source Topsoil-1 07/07/2023
Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.321 U	0.0912 U	0.3 U	0.685 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	5.81 U	303	23	118 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.11 U	0.0576 U	0.148 U	0.242 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.696 U	10.5	1.35 J	5.31 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.179 U	0.0779 U	0.183 U	0.0902 UJ
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.165 U	0.0653 U	0.147 U	0.0995 UJ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.265 U	0.346 J	0.119 U	0.377 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.143 U	0.0606 U	0.147 U	0.103 UJ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.276 U	0.226 J	0.119 U	0.357 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.196 U	0.0747 U	0.173 U	0.109 UJ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.279 U	0.625 J	0.122 U	0.508 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.178 U	0.0744 U	0.105 U	0.11 UJ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	0.11 U	0.173 U	0.246 UJ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.173 U	0.0689 U	0.16 U	0.106 UJ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.19 U	0.0695 U	0.101 U	0.0974 UJ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.176 U	0.0615 U	0.0663 U	0.109 UJ
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.326 U	0.115 U	0.104 U	0.208 UJ
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.137 UJ	0.0665 UJ	0.164 UJ	0.242 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.07 J	24.5 J	3.01 J	13.3 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.167 UJ	0.067 UJ	0.156 UJ	0.104 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.272 UJ	3.75 J	0.247 J	3.47 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.184 UJ	0.072 UJ	0.103 UJ	0.104 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 UJ	0.11 UJ	0.173 UJ	0.246 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.176 UJ	0.0615 UJ	0.0663 UJ	0.498 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.326 UJ	0.115 UJ	0.104 UJ	0.208 UJ
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0	0.3156 J	0.0204 J	0.215 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.429 J	0.457 J	0.230 J	0.485 J
Herbicides					
2,4,5-T	mg/kg	0.0018 U	0.0020 U	0.0017 U	0.0018 U
2,4,5-TP (Silvex)	mg/kg	0.0020 U	0.0022 U	0.0019 U	0.0020 J+
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/kg	0.0096 U	0.011 U	0.0090 U	0.0097 U
Metals					
Aluminum	mg/kg	2060	11800	1520	11200
Antimony	mg/kg	0.42 U	0.51 U	0.44 U	0.46 U
Arsenic	mg/kg	0.29 U	5.3	0.30 U	2.9
Barium	mg/kg	35.1	103	2.1 U	102
Beryllium	mg/kg	0.082 U	0.67	0.086 U	0.62
Cadmium	mg/kg	0.071 U	0.087 U	0.076 U	0.078 U
Calcium	mg/kg	270000	66400	11200	4700
Chromium	mg/kg	5.0	15.1	2.6	11.1
Chromium VI (hexavalent)	mg/kg	0.35 U	0.38 U	0.34 U	0.35 U
Cobalt	mg/kg	0.29 U	6.7	0.30 U	0.31 U
Copper	mg/kg	0.86 U	7.5	0.91 U	4.5
Iron	mg/kg	1510	13700	2050	8740
Lead	mg/kg	0.42 U	10.5	0.44 U	12.0
Magnesium	mg/kg	68000	2040	15 U	1180
Manganese	mg/kg	67.8	429	36.1	147
Mercury	mg/kg	0.014 U	0.016 U	0.013 U	0.014 U
Nickel	mg/kg	0.36 U	14.6	0.38 U	6.1
Potassium	mg/kg	32 U	1540	34 U	35 U
Selenium	mg/kg	0.66 U	0.81 U	0.70 U	0.72 U
Silver	mg/kg	0.17 U	0.21 U	0.18 U	0.19 U
Sodium	mg/kg	79 U	97 U	84 U	87 U
Thallium	mg/kg	0.59 U	0.72 U	0.63 U	0.65 U
Vanadium	mg/kg	5.6	27.1	0.21 U	24.3
Zinc	mg/kg	2.3 U	45.2	8.1	18.9

Table 2

RA Construction – Imported Fill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Aggregate Source Pit 12599404-112122-S-MTK-Source Aggregate-1 11/21/2022	Clay Source Pit 12599404-112122-S-MTK-Source Clay-1 11/21/2022	Sand Source Pit 12599404-112122-S-MTK-Source Sand-1 11/21/2022	Top Soil 12599404-070723-S-MTK-Source Topsoil-1 07/07/2023
PCBs					
Aroclor-1016 (PCB-1016)	mg/kg	0.015 U	0.017 U	0.016 U	0.017 U
Aroclor-1221 (PCB-1221)	mg/kg	0.020 U	0.023 U	0.022 U	0.022 U
Aroclor-1232 (PCB-1232)	mg/kg	0.021 U	0.023 U	0.022 U	0.023 U
Aroclor-1242 (PCB-1242)	mg/kg	0.013 U	0.015 U	0.014 U	0.015 U
Aroclor-1248 (PCB-1248)	mg/kg	0.029 U	0.032 U	0.031 U	0.032 U
Aroclor-1254 (PCB-1254)	mg/kg	0.018 U	0.020 U	0.019 U	0.019 U
Aroclor-1260 (PCB-1260)	mg/kg	0.014 U	0.015 U	0.015 U	0.015 U
Aroclor-1262 (PCB-1262)	mg/kg	0.021 U	0.024 U	0.023 U	0.023 U
Aroclor-1268 (PCB-1268)	mg/kg	0.014 U	0.015 U	0.015 U	0.015 U
Pesticides					
4,4'-DDD	mg/kg	0.00060 U	0.00067 U	0.00064 U	0.00066 U
4,4'-DDE	mg/kg	0.00057 U	0.00064 U	0.00061 U	0.00063 U
4,4'-DDT	mg/kg	0.0026 U	0.0029 U	0.0024 U	0.00064 U
Aldrin	mg/kg	0.00054 U	0.00060 U	0.00057 U	0.00059 U
alpha-BHC	mg/kg	0.00053 U	0.00059 U	0.00056 U	0.00058 U
alpha-Chlordane	mg/kg	0.00053 U	0.00059 U	0.00056 U	0.00058 U
beta-BHC	mg/kg	0.00059 U	0.00066 U	0.00063 U	0.00065 U
delta-BHC	mg/kg	0.00063 U	0.00070 U	0.00067 U	0.00069 U
Dieldrin	mg/kg	0.00045 U	0.00050 U	0.00048 U	0.00049 U
Endosulfan I	mg/kg	0.00038 U	0.00042 U	0.00040 U	0.00041 U
Endosulfan II	mg/kg	0.00041 U	0.00045 U	0.00043 U	0.00045 U
Endosulfan sulfate	mg/kg	0.00051 U	0.00057 U	0.00054 U	0.00056 U
Endrin	mg/kg	0.00051 U	0.00056 U	0.00054 U	0.00056 U
Endrin aldehyde	mg/kg	0.00037 U	0.00041 U	0.00039 U	0.00041 U
Endrin ketone	mg/kg	0.00047 U	0.00052 U	0.00050 U	0.00052 U
gamma-BHC (lindane)	mg/kg	0.00048 U	0.00053 U	0.00051 U	0.00053 U
gamma-Chlordane	mg/kg	0.00030 U	0.00033 U	0.00031 U	0.00033 U
Heptachlor	mg/kg	0.00056 U	0.00063 U	0.00060 U	0.00062 U
Heptachlor epoxide	mg/kg	0.00046 U	0.00051 U	0.00049 U	0.00050 U
Methoxychlor	mg/kg	0.00052 U	0.00058 U	0.00055 U	0.00057 U
Toxaphene	mg/kg	0.015 U	0.017 U	0.016 U	0.017 U
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	26 UJ	30 UJ	28 UJ	25 U
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	26 UJ	30 UJ	28 UJ	25 U
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	26 UJ	30 UJ	28 UJ	25 U
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	26 UJ	30 UJ	28 UJ	25 U
Semi-Volatile Organic Compounds (SVOCs)					
1,2,4,5-Tetrachlorobenzene	mg/kg	0.0088 U	0.0096 U	0.0091 U	0.0091 U
1,4-Dioxane	mg/kg	0.023 U	0.025 U	0.024 U	0.024 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.012 U	0.014 U	0.013 U	0.013 U
2,3,4,6-Tetrachlorophenol	mg/kg	0.023 U	0.025 U	0.024 U	0.024 U
2,4,5-Trichlorophenol	mg/kg	0.026 U	0.028 U	0.027 U	0.027 U
2,4,6-Trichlorophenol	mg/kg	0.021 U	0.023 U	0.021 U	0.021 U
2,4-Dichlorophenol	mg/kg	0.029 U	0.032 U	0.030 U	0.031 U
2,4-Dimethylphenol	mg/kg	0.061 U	0.067 U	0.063 U	0.064 U
2,4-Dinitrophenol	mg/kg	0.13 U	0.14 U	0.13 U	0.13 U
2,4-Dinitrotoluene	mg/kg	0.011 U	0.012 U	0.011 U	0.011 U
2,6-Dinitrotoluene	mg/kg	0.017 U	0.019 U	0.018 U	0.018 U
2-Chloronaphthalene	mg/kg	0.0082 U	0.0090 U	0.0085 U	0.0085 U
2-Chlorophenol	mg/kg	0.017 U	0.019 U	0.018 U	0.018 U
2-Methylnaphthalene	mg/kg	0.0078 U	0.0086 U	0.0081 U	0.0081 U
2-Methylphenol	mg/kg	0.022 U	0.024 U	0.023 U	0.023 U
2-Nitroaniline	mg/kg	0.0081 U	0.0089 U	0.0084 U	0.0084 U
2-Nitrophenol	mg/kg	0.023 U	0.025 U	0.024 U	0.024 U
3&4-Methylphenol	mg/kg	0.028 U	0.031 U	0.029 U	0.029 U
3,3'-Dichlorobenzidine	mg/kg	0.029 U	0.032 U	0.030 U	0.030 U
3-Nitroaniline	mg/kg	0.0086 U	0.0095 U	0.0089 U	0.0089 U

Table 2

RA Construction – Imported Fill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
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Sample Location: / Sample Identification: / Sample Date:	Units	Aggregate Source Pit 12599404-112122-S-MTK-Source Aggregate-1 11/21/2022	Clay Source Pit 12599404-112122-S-MTK-Source Clay-1 11/21/2022	Sand Source Pit 12599404-112122-S-MTK-Source Sand-1 11/21/2022	Top Soil 12599404-070723-S-MTK-Source Topsoil-1 07/07/2023
4,6-Dinitro-2-methylphenol	mg/kg	0.037 U	0.041 U	0.038 U	0.038 U
4-Bromophenyl phenyl ether	mg/kg	0.013 U	0.015 U	0.014 U	0.014 U
4-Chloro-3-methylphenol	mg/kg	0.021 U	0.023 U	0.022 U	0.022 U
4-Chloroaniline	mg/kg	0.012 U	0.014 U	0.013 U	0.013 U
4-Chlorophenyl phenyl ether	mg/kg	0.011 U	0.012 U	0.012 U	0.012 U
4-Nitroaniline	mg/kg	0.0089 U	0.0098 U	0.0092 U	0.0093 U
4-Nitrophenol	mg/kg	0.092 U	0.10 U	0.095 U	0.095 U
Acenaphthene	mg/kg	0.012 U	0.013 U	0.012 U	0.012 U
Acenaphthylene	mg/kg	0.018 U	0.019 U	0.018 U	0.018 U
Acetophenone	mg/kg	0.0074 U	0.0081 U	0.0077 U	0.0077 U
Anthracene	mg/kg	0.021 U	0.0271 J	0.022 U	0.022 U
Atrazine	mg/kg	0.015 U	0.016 U	0.015 U	0.015 U
Benzaldehyde	mg/kg	0.0085 U	0.0094 U	0.0088 U	0.0089 U
Benzo(a)anthracene	mg/kg	0.0098 U	0.011 U	0.010 U	0.010 U
Benzo(a)pyrene	mg/kg	0.016 U	0.017 U	0.016 U	0.016 U
Benzo(b)fluoranthene	mg/kg	0.015 U	0.017 U	0.016 U	0.016 U
Benzo(g,h,i)perylene	mg/kg	0.017 U	0.019 U	0.018 U	0.018 U
Benzo(k)fluoranthene	mg/kg	0.016 U	0.018 U	0.017 U	0.017 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.0047 U	0.0052 U	0.0049 U	0.0049 U
bis(2-Chloroethoxy)methane	mg/kg	0.0074 U	0.0081 U	0.0076 U	0.0077 U
bis(2-Chloroethyl)ether	mg/kg	0.015 U	0.016 U	0.015 U	0.015 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.0081 U	0.0089 U	0.0083 U	0.0084 U
Butyl benzylphthalate (BBP)	mg/kg	0.0084 U	0.0092 U	0.0087 U	0.0087 U
Caprolactam	mg/kg	0.014 U	0.015 U	0.014 U	0.014 U
Carbazole	mg/kg	0.0050 U	0.0055 U	0.0052 U	0.0052 U
Chrysene	mg/kg	0.011 U	0.012 U	0.011 U	0.011 U
Dibenz(a,h)anthracene	mg/kg	0.015 U	0.017 U	0.016 U	0.016 U
Dibenzofuran	mg/kg	0.014 U	0.015 U	0.015 U	0.015 U
Diethyl phthalate	mg/kg	0.0073 U	0.0081 U	0.0076 U	0.0076 U
Dimethyl phthalate	mg/kg	0.0061 U	0.0067 U	0.0063 U	0.0064 U
Di-n-butylphthalate (DBP)	mg/kg	0.0056 U	0.0062 U	0.0058 U	0.0058 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.0086 U	0.0094 U	0.0089 U	0.0089 U
Fluoranthene	mg/kg	0.015 U	0.0306 J	0.016 U	0.016 U
Fluorene	mg/kg	0.016 U	0.017 U	0.016 U	0.016 U
Hexachlorobenzene	mg/kg	0.0087 U	0.0096 U	0.0090 U	0.0090 U
Hexachlorobutadiene	mg/kg	0.014 U	0.015 U	0.014 U	0.014 U
Hexachlorocyclopentadiene	mg/kg	0.014 U	0.015 U	0.014 U	0.014 U
Hexachloroethane	mg/kg	0.017 U	0.019 U	0.018 U	0.018 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.016 U	0.018 U	0.017 U	0.017 U
Isophorone	mg/kg	0.0074 U	0.0081 U	0.0076 U	0.0077 U
Naphthalene	mg/kg	0.0097 U	0.011 U	0.010 U	0.010 U
Nitrobenzene	mg/kg	0.013 U	0.015 U	0.014 U	0.014 U
N-Nitrosodi-n-propylamine	mg/kg	0.010 U	0.011 U	0.010 U	0.010 U
N-Nitrosodiphenylamine	mg/kg	0.013 U	0.014 U	0.013 U	0.013 U
Pentachlorophenol	mg/kg	0.032 U	0.036 U	0.033 U	0.034 U
Phenanthrene	mg/kg	0.012 U	0.0758	0.012 U	0.0159 J
Phenol	mg/kg	0.018 U	0.020 U	0.019 U	0.019 U
Pyrene	mg/kg	0.011 U	0.0202 J	0.011 U	0.011 U
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	mg/kg	0.00042 U	0.00057 U	0.00060 U	0.00075 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00053 U	0.00071 U	0.00074 U	0.00093 U
1,1,2-Trichloroethane	mg/kg	0.00049 U	0.00066 U	0.00069 U	0.00086 U
1,1-Dichloroethane	mg/kg	0.00043 U	0.00059 U	0.00062 U	0.00076 U
1,1-Dichloroethene	mg/kg	0.00058 U	0.00078 U	0.00081 U	0.0010 U
1,2,3-Trichlorobenzene	mg/kg	0.0022 U	0.0030 U	0.0031 U	0.0039 U
1,2,4-Trichlorobenzene	mg/kg	0.0022 U	0.0030 U	0.0031 U	0.0039 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.00061 U	0.00082 U	0.00086 U	0.0011 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.00037 U	0.00050 U	0.00052 U	0.00065 U

Table 2

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San Jacinto River Waste Pits Site
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Sample Location: / Sample Identification: / Sample Date:	Units	Aggregate Source Pit 12599404-112122-S-MTK-Source Aggregate-1 11/21/2022	Clay Source Pit 12599404-112122-S-MTK-Source Clay-1 11/21/2022	Sand Source Pit 12599404-112122-S-MTK-Source Sand-1 11/21/2022	Top Soil 12599404-070723-S-MTK-Source Topsoil-1 07/07/2023
1,2-Dichlorobenzene	mg/kg	0.00048 U	0.00065 U	0.00068 U	0.00084 U
1,2-Dichloroethane	mg/kg	0.00041 U	0.00056 U	0.00058 U	0.00073 U
1,2-Dichloropropane	mg/kg	0.00042 U	0.00056 U	0.00059 U	0.00073 U
1,3-Dichlorobenzene	mg/kg	0.00044 U	0.00059 U	0.00062 U	0.00077 U
1,4-Dichlorobenzene	mg/kg	0.00043 U	0.00059 U	0.00061 U	0.00076 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.0021 U	0.0029 U	0.0030 U	0.0038 U
2-Hexanone	mg/kg	0.0019 U	0.0025 U	0.0026 U	0.0033 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	0.0020 U	0.0027 U	0.0028 U	0.0035 U
Acetone	mg/kg	0.0036 U	0.0049 U	0.0051 U	0.0064 U
Benzene	mg/kg	0.00040 U	0.00054 U	0.00057 U	0.00070 U
Bromodichloromethane	mg/kg	0.00038 U	0.00051 U	0.00053 U	0.00066 U
Bromoform	mg/kg	0.0012 U	0.0016 U	0.0017 U	0.0021 U
Bromomethane (Methyl bromide)	mg/kg	0.00067 U	0.00091 U	0.00095 U	0.0012 U
Carbon disulfide	mg/kg	0.00047 U	0.00064 U	0.00067 U	0.00083 U
Carbon tetrachloride	mg/kg	0.00054 U	0.00073 U	0.00077 U	0.00095 U
Chlorobenzene	mg/kg	0.00040 U	0.00055 U	0.00057 U	0.00071 U
Chlorobromomethane	mg/kg	0.00049 U	0.00067 U	0.00070 U	0.00087 U
Chloroethane	mg/kg	0.00052 U	0.00070 U	0.00073 U	0.00091 U
Chloroform (Trichloromethane)	mg/kg	0.00046 U	0.00062 U	0.00065 U	0.00080 U
Chloromethane (Methyl chloride)	mg/kg	0.0017 U	0.0023 U	0.0024 U	0.0030 U
cis-1,2-Dichloroethene	mg/kg	0.00074 U	0.0010 U	0.0010 U	0.0013 U
cis-1,3-Dichloropropene	mg/kg	0.00042 U	0.00056 U	0.00059 U	0.00073 U
Cyclohexane	mg/kg	0.00058 U	0.00078 U	0.00082 U	0.0010 U
Dibromochloromethane	mg/kg	0.00049 U	0.00067 U	0.00070 U	0.00087 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.00064 U	0.00086 U	0.00090 U	0.0011 U
Ethylbenzene	mg/kg	0.00040 U	0.00071 J	0.00056 U	0.00070 U
Isopropyl benzene	mg/kg	0.0012 U	0.0017 U	0.0018 U	0.0022 U
m&p-Xylenes	mg/kg	0.00079 U	0.0015	0.0011 U	0.0014 U
Methyl acetate	mg/kg	0.0012 U	0.0017 U	0.0017 U	0.0021 U
Methyl cyclohexane	mg/kg	0.00077 U	0.0010 U	0.0011 U	0.0014 U
Methyl tert butyl ether (MTBE)	mg/kg	0.00041 U	0.00056 U	0.00058 U	0.00072 U
Methylene chloride	mg/kg	0.0023 U	0.0031 U	0.0032 U	0.0040 U
o-Xylene	mg/kg	0.00040 U	0.00056 J	0.00057 U	0.00071 U
Styrene	mg/kg	0.00035 U	0.00048 U	0.00050 U	0.00062 U
Tetrachloroethene	mg/kg	0.00051 U	0.00069 U	0.00072 U	0.00090 U
Toluene	mg/kg	0.00046 U	0.00066 J	0.00065 U	0.00081 U
trans-1,2-Dichloroethene	mg/kg	0.00054 U	0.00073 U	0.00076 U	0.00094 U
trans-1,3-Dichloropropene	mg/kg	0.00040 U	0.00054 U	0.00057 U	0.00071 U
Trichloroethene	mg/kg	0.00067 U	0.00091 U	0.00095 U	0.0012 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.00060 U	0.00081 U	0.00085 U	0.0011 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.0023 U	0.0032 U	0.0033 U	0.0041 U
Vinyl chloride	mg/kg	0.00042 U	0.00057 U	0.00060 U	0.00074 U
Xylenes (total)	mg/kg	0.00040 U	0.0021	0.00057 U	0.00071 U
General Chemistry					
Cyanide (total)	mg/kg	0.30	0.14 U	0.15 U	0.12 U
Percent solids	%	93.3	82.5	93.5	89.9
pH	s.u.	--	--	--	7.98 J
Phosphorus	mg/kg	--	--	--	47.2

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
J+ - Estimated concentration, result may be biased high.
UJ - Not detected; associated reporting limit is estimated.
TEQ - Toxicity Equivalent Quotient.
pg/g - picogram per gram.
mg/kg - milligram per kilogram.
-- indicates sample was not analyzed for specific constituent.
% - percent.
s.u. - standard unit.

RA Construction - Quality Control Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: / Sample Identification: / Sample Date:	Units	Trip Blank / 12599404-112122-W-MTK-TRIP-BLANK-1 / 11/21/2022
Volatile Organic Compounds (VOCs)		
1,1,1-Trichloroethane	mg/L	0.00054 U
1,1,2,2-Tetrachloroethane	mg/L	0.00065 U
1,1,2-Trichloroethane	mg/L	0.00053 U
1,1-Dichloroethane	mg/L	0.00057 U
1,1-Dichloroethene	mg/L	0.00059 U
1,2,3-Trichlorobenzene	mg/L	0.00050 U
1,2,4-Trichlorobenzene	mg/L	0.00050 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.00053 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.00048 U
1,2-Dichlorobenzene	mg/L	0.00053 U
1,2-Dichloroethane	mg/L	0.00060 U
1,2-Dichloropropane	mg/L	0.00051 U
1,3-Dichlorobenzene	mg/L	0.00054 U
1,4-Dichlorobenzene	mg/L	0.00051 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.0027 U
2-Hexanone	mg/L	0.0020 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.0019 U
Acetone	mg/L	0.0031 U
Benzene	mg/L	0.00043 U
Bromodichloromethane	mg/L	0.00045 U
Bromoform	mg/L	0.00063 U
Bromomethane (Methyl bromide)	mg/L	0.0016 U
Carbon disulfide	mg/L	0.00046 U
Carbon tetrachloride	mg/L	0.00055 U
Chlorobenzene	mg/L	0.00056 U
Chlorobromomethane	mg/L	0.00048 U
Chloroethane	mg/L	0.00073 U
Chloroform (Trichloromethane)	mg/L	0.00050 U
Chloromethane (Methyl chloride)	mg/L	0.00076 U
cis-1,2-Dichloroethene	mg/L	0.00051 U
cis-1,3-Dichloropropene	mg/L	0.00047 U
Cyclohexane	mg/L	0.00078 U
Dibromochloromethane	mg/L	0.00056 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.00056 U
Ethylbenzene	mg/L	0.00060 U
Isopropyl benzene	mg/L	0.00065 U
m&p-Xylenes	mg/L	0.00078 U
Methyl acetate	mg/L	0.00080 U
Methyl cyclohexane	mg/L	0.00060 U
Methyl tert butyl ether (MTBE)	mg/L	0.00051 U
Methylene chloride	mg/L	0.0010 U
o-Xylene	mg/L	0.00059 U
Styrene	mg/L	0.00049 U
Tetrachloroethene	mg/L	0.00056 U
Toluene	mg/L	0.00049 U
trans-1,2-Dichloroethene	mg/L	0.00054 U
trans-1,3-Dichloropropene	mg/L	0.00043 U
Trichloroethene	mg/L	0.00053 U
Trichlorofluoromethane (CFC-11)	mg/L	0.00040 U
Trifluorotrichloroethane (CFC-113)	mg/L	0.00058 U
Vinyl chloride	mg/L	0.00052 U
Xylenes (total)	mg/L	0.00059 U

Notes:
U - Not detected at the associated reporting limit.
mg/L - milligram per liter.

Table 4

RA Construction - On-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	Backfill 12599404-021423-S-MTK-Backfill-1 02/14/2023	FILL-1 12599404-022323-S-MTK-FILL-1 02/23/2023	FILL-2 12599404-022323-S-MTK-FILL-2 02/23/2023	FILL-3 12599404-022323-S-MTK-FILL-3 02/23/2023	FILL-4 12599404-022323-S-MTK-FILL-4 02/23/2023	FILL-5 12599404-022323-S-MTK-FILL-5 02/23/2023	FILL-6 12599404-022323-S-MTK-FILL-6 02/23/2023	FILL-7 12599404-022323-S-MTK-FILL-7 02/23/2023
Metals									
Aluminum	mg/kg	10400 J+	5810 J+	7550 J+	9150 J+	5430 J+	4740 J+	4100 J+	10200 J+
Antimony	mg/kg	0.47 UJ	2.3 UJ	2.5 UJ	2.6 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ
Arsenic	mg/kg	4.1	3.2 J-	5.2 J-	4.4 J-	3.5 J-	2.6 J-	2.6 J-	4.7 J-
Barium	mg/kg	56.6	42.1 J-	68.7 J-	53.2 J-	33.1 J-	31.5 J-	26.7 J-	74.9 J-
Beryllium	mg/kg	0.53	0.46 J-	0.57 J-	0.65 J-	0.46 J-	0.39 J-	0.35 J-	0.70 J-
Cadmium	mg/kg	0.081 U	0.59 UJ	0.62 UJ	0.64 UJ	0.58 UJ	0.58 UJ	0.59 UJ	0.57 UJ
Calcium	mg/kg	1200	17200	29300	17600	23300	24300	26400	35200
Chromium	mg/kg	10.2	6.9 J-	9.1 J-	10.3 J-	7.0 J-	6.5 J-	4.8 J-	11.7 J-
Chromium VI (hexavalent)	mg/kg	0.37 U	--	--	--	--	--	--	--
Cobalt	mg/kg	0.32 U	5.9 UJ	6.2 UJ	6.4 UJ	5.8 UJ	5.8 UJ	5.9 UJ	5.7 UJ
Copper	mg/kg	6.0	4.3 J-	6.1 J-	6.3 J-	4.2 J-	4.0 J-	3.0 UJ	7.8 J-
Iron	mg/kg	11000 J+	7000 J-	10100 J-	11000 J-	6810 J-	6220 J-	4840 J-	10900 J-
Lead	mg/kg	7.9	4.3 J-	6.2 J-	7.3 J-	3.9 J-	3.4 J-	3.0 J-	6.5 J-
Magnesium	mg/kg	1070	886 J-	1210 J-	1290 J-	913 J-	802 J-	636 J-	1560 J-
Manganese	mg/kg	87.3	138 J-	202 J-	93.6 J-	119 J-	119 J-	73.2 J-	186 J-
Mercury	mg/kg	0.017 U	0.033 U	0.033 U	0.034 U	0.039 U	0.035 U	0.032 U	0.033 U
Nickel	mg/kg	7.9	6.4 J-	8.7 J-	8.7 J-	6.4 J-	5.3 J-	4.7 UJ	9.3 J-
Potassium	mg/kg	37 U	1200 UJ	1200 UJ	1300 UJ	1200 UJ	1200 UJ	1200 UJ	1100 UJ
Selenium	mg/kg	0.75 U	2.3 UJ	2.5 UJ	2.6 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ
Silver	mg/kg	0.20 U	0.59 UJ	0.62 UJ	0.64 UJ	0.58 UJ	0.58 UJ	0.59 UJ	0.57 UJ
Sodium	mg/kg	90 U	1200 UJ	1200 UJ	1300 UJ	1200 UJ	1200 UJ	1200 UJ	1100 UJ
Thallium	mg/kg	0.67 U	1.2 UJ	1.2 UJ	1.3 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.1 UJ
Vanadium	mg/kg	17.1	12.8 J-	18.4 J-	18.5 J-	12.4 J-	11.4 J-	10.2 J-	20.5 J-
Zinc	mg/kg	23.9	14.9 J-	20.8 J-	20.9 J-	16.4 J-	13.5 J-	9.6 J-	27.0 J-
General Chemistry									
Cyanide (total)	mg/kg	0.14 U	--	--	--	--	--	--	--
Percent moisture	%	17.6	--	--	--	--	--	--	--
Percent solids	%	--	82.7	82.9	80.8	82.2	83.2	83.0	91.0

Table 4

RA Construction - On-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	FILL-8 12599404-022323-S-MTK-FILL-8 02/23/2023	FILL-9 12599404-022323-S-MTK-FILL-9 02/23/2023	FILL-10 12599404-022323-S-MTK-FILL-10 02/23/2023	FILL-11 12599404-022323-S-MTK-FILL-11 02/23/2023	FILL-12 12599404-022323-S-MTK-FILL-12 02/23/2023	FILL-13 12599404-022323-S-MTK-FILL-13 02/23/2023	FILL-14 12599404-022323-S-MTK-FILL-14 02/23/2023	FILL-15 12599404-022323-S-MTK-FILL-15 02/23/2023
Metals									
Aluminum	mg/kg	12900 J+	8800 J+	8690 J+	9840 J+	9270 J+	6150 J+	8990 J+	9560 J+
Antimony	mg/kg	2.4 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.5 UJ
Arsenic	mg/kg	4.9 J-	4.6 J-	4.4 J-	3.7 J-	4.9 J-	3.0 J-	6.0 J-	3.8 J-
Barium	mg/kg	111 J-	70.3 J-	73.0 J-	60.8 J-	69.5 J-	51.4 J-	83.2 J-	83.8 J-
Beryllium	mg/kg	0.84 J-	0.65 J-	0.61 J-	0.67 J-	0.64 J-	0.48 J-	0.73 J-	0.68 J-
Cadmium	mg/kg	0.59 UJ	0.57 UJ	0.57 UJ	0.59 UJ	0.61 UJ	0.56 UJ	0.58 UJ	0.63 UJ
Calcium	mg/kg	39700	39000	34400	32900	15300	32400	33600	21600
Chromium	mg/kg	14.6 J-	10.1 J-	10.2 J-	10.9 J-	11.3 J-	8.0 J-	11.2 J-	11.9 J-
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--
Cobalt	mg/kg	5.9 UJ	5.7 UJ	5.7 UJ	5.9 UJ	6.1 UJ	5.6 UJ	10.6 J-	6.3 UJ
Copper	mg/kg	7.6 J-	6.0 J-	5.9 J-	5.1 J-	6.8 J-	4.7 J-	8.6 J-	7.8 J-
Iron	mg/kg	13500 J-	10500 J-	10200 J-	10000 J-	11900 J-	8150 J-	12300 J-	11400 J-
Lead	mg/kg	8.8 J-	6.0 J-	5.8 J-	5.4 J-	6.3 J-	4.5 J-	8.5 J-	7.6 J-
Magnesium	mg/kg	1960 J-	1360 J-	1370 J-	1370 J-	1390 J-	1040 J-	1470 J-	1560 J-
Manganese	mg/kg	312 J-	213 J-	269 J-	146 J-	150 J-	174 J-	363 J-	151 J-
Mercury	mg/kg	0.036 U	0.039 U	0.032 U	0.036 U	0.033 U	0.032 U	0.035 U	0.033 U
Nickel	mg/kg	11.1 J-	9.5 J-	9.2 J-	8.8 J-	9.8 J-	7.6 J-	13.2 J-	9.6 J-
Potassium	mg/kg	1400 J-	1100 UJ	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ	1300 UJ
Selenium	mg/kg	2.4 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.5 UJ
Silver	mg/kg	0.59 UJ	0.57 UJ	0.57 UJ	0.59 UJ	0.61 UJ	0.56 UJ	0.58 UJ	0.63 UJ
Sodium	mg/kg	1200 UJ	1100 UJ	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ	1300 UJ
Thallium	mg/kg	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ	1.2 UJ	1.3 UJ
Vanadium	mg/kg	25.7 J-	18.9 J-	18.7 J-	19.1 J-	17.7 J-	14.0 J-	21.8 J-	16.2 J-
Zinc	mg/kg	29.0 J-	23.0 J-	22.1 J-	20.2 J-	27.8 J-	19.3 J-	38.1 J-	29.9 J-
General Chemistry									
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--
Percent moisture	%	--	--	--	--	--	--	--	--
Percent solids	%	84.1	83.5	90.6	82.7	79.3	86.1	83.5	81.3

Table 4

RA Construction - On-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	FILL-16 12599404-022323-S-MTK-FILL-16 02/23/2023	FILL-17 12599404-022323-S-MTK-FILL-17 02/23/2023	FILL-18 12599404-022323-S-MTK-FILL-18 02/23/2023	FILL-19 12599404-022323-S-MTK-FILL-19 02/23/2023	FILL-20 12599404-022323-S-MTK-FILL-20 02/23/2023	FILL-21 12599404-022323-S-MTK-FILL-21 02/23/2023	FILL-22 12599404-022323-S-MTK-FILL-22 02/23/2023	FILL-23 12599404-022323-S-MTK-FILL-23 02/23/2023	FILL-24 12599404-022323-S-MTK-FILL-24 02/23/2023
Metals										
Aluminum	mg/kg	8320 J+	9250 J+	10300 J+	8550 J+	9930 J+	12700 J+	17600 J+	8660 J+	10800 J+
Antimony	mg/kg	2.2 UJ	2.4 UJ	2.5 UJ	2.3 UJ	2.3 UJ	13 UJ	2.4 UJ	2.3 UJ	2.4 UJ
Arsenic	mg/kg	3.9 J-	3.6 J-	3.0 J-	8.8 J-	3.9 J-	38.1	5.4	5.1	7.6
Barium	mg/kg	53.5 J-	63.3 J-	52.7 J-	99.9 J-	86.6 J-	168	116	60.2	108
Beryllium	mg/kg	0.64 J-	0.63 J-	0.67 J-	0.84 J-	0.80 J-	1.9	1.6	0.68	0.91
Cadmium	mg/kg	0.56 UJ	0.59 UJ	0.62 UJ	0.57 UJ	0.58 UJ	3.4 U	0.61 U	0.57 U	0.60 U
Calcium	mg/kg	23200	31300	8230	4690	9140	17700	78400	52600	29000
Chromium	mg/kg	10 J-	10.8 J-	10.5 J-	9.3 J-	10.1 J-	20.0	23.0	10.8	12.6
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--	--	--
Cobalt	mg/kg	5.6 UJ	5.9 UJ	6.2 UJ	76.7 J-	14.6 J-	20.0	8.2	5.7 U	6.0 U
Copper	mg/kg	6.1 J-	5.6 J-	5.0 J-	8.9 J-	5.9 J-	29.5	12.8	6.2	7.4
Iron	mg/kg	9430 J-	9260 J-	10600 J-	18600 J-	11600 J-	49100	19400	11200	16800
Lead	mg/kg	6.7 J-	5.9 J-	5.7 J-	26.7 J-	13.2 J-	28.7	11.2	6.8	11.3
Magnesium	mg/kg	1260 J-	1390 J-	1260 J-	1080 J-	1300 J-	2250	3130	1650	1610
Manganese	mg/kg	133 J-	183 J-	37.6 J-	715 J-	316 J-	724	536	175	250
Mercury	mg/kg	0.032 U	0.032 U	0.031 U	0.036 U	0.031 U	0.034 U	0.037 U	0.030 U	0.032 U
Nickel	mg/kg	8.7 J-	8.8 J-	7.9 J-	11.8 J-	11.4 J-	42.7	20.8	11.0	12.3
Potassium	mg/kg	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ	1300 U	2590 J+	1100 U	1200 U
Selenium	mg/kg	2.2 UJ	2.4 UJ	2.5 UJ	2.3 UJ	2.3 UJ	13 U	2.4 U	2.3 U	2.4 U
Silver	mg/kg	0.56 UJ	0.59 UJ	0.62 UJ	0.64 J-	0.58 UJ	3.4 U	0.61 U	0.57 U	0.60 U
Sodium	mg/kg	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ	1300 U	1200 U	1100 U	1200 U
Thallium	mg/kg	1.1 UJ	1.2 UJ	1.2 UJ	1.1 J-	1.2 UJ	6.7 U	2.0	1.1 U	1.2 U
Vanadium	mg/kg	15.4 J-	16.9 J-	15.0 J-	28.0 J-	16.4 J-	74.7	38.4	19.1	36.9
Zinc	mg/kg	27.8 J-	22.4 J-	17.8 J-	16.7 J-	21.0 J-	57.3	47.0	23.7	24.7
General Chemistry										
Cyanide (total)	mg/kg	--	--	--	--	--	--	--	--	--
Percent moisture	%	--	--	--	--	--	--	--	--	--
Percent solids	%	85.0	83.4	81.9	86.0	82.9	76.0	80.1	84.8	84.1

Notes:
U - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
J- - Estimated concentration, result may be biased low.
J+ - Estimated concentration, result may be biased high.
mg/kg - milligrams per kilogram.
% - percent.

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	Backfill-1 12599404-030123-S-MTK-BACKFILL-1 (6-8) 03/01/2023 6-8 ft bgs	Backfill-2 12599404-030123-S-MTK-BACKFILL-2 (4-6) 03/01/2023 4-6 ft bgs	Backfill-3 12599404-030123-S-MTK-BACKFILL-3 (2-4) 03/01/2023 2-4 ft bgs	Backfill-4 12599404-030123-S-MTK-BACKFILL-4 (6-8) 03/01/2023 6-8 ft bgs	Backfill-5 12599404-030123-S-MTK-BACKFILL-5 (4-6) 03/01/2023 4-6 ft bgs	Backfill-6 12599404-030123-S-MTK-BACKFILL-6 (2-4) 03/01/2023 2-4 ft bgs	Backfill-7 12599404-030123-S-MTK-BACKFILL-7 (6-8) 03/01/2023 6-8 ft bgs	Backfill-8 12599404-030123-S-MTK-BACKFILL-8 (4-6) 03/01/2023 4-6 ft bgs	Backfill-9 12599404-030123-S-MTK-BACKFILL-9 (2-4) 03/01/2023 2-4 ft bgs
Metals										
Aluminum	mg/kg	14600	13400	10600	9240	16000	7020	10100	14300	13900
Antimony	mg/kg	2.4 UJ	2.3 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.2 UJ	2.4 UJ	2.4 UJ	2.2 UJ
Arsenic	mg/kg	7.7	5.6	2.5	2.4 U	10.7	2.6	3.0	3.4	2.2 U
Barium	mg/kg	78.8	107	37.7	73.5	136	201	64.3	129	128
Beryllium	mg/kg	0.96	0.86	0.61	0.41	1.4	0.42	0.52	0.77	0.59
Cadmium	mg/kg	0.60 U	0.59 U	0.61 U	0.60 U	0.60 U	0.55 U	0.59 U	0.59 U	0.56 U
Calcium	mg/kg	18600	69400	3720	3050	39900	53800	122000	41200	47000
Chromium	mg/kg	16.8	13.8	10.4	10.9	15.8	6.7	10.5	14.6	13.5
Chromium VI (hexavalent)	mg/kg	0.49 U	0.48 U	0.49 U	0.48 U	0.49 U	0.44 U	0.48 U	0.47 U	0.46 U
Cobalt	mg/kg	6.0 U	5.9 U	6.1 U	6.0 U	156	5.5 U	5.9 U	5.9 U	5.6 U
Copper	mg/kg	8.4	5.6	4.4	3.8	6.1	2.8 U	3.9	3.2	5.7
Iron	mg/kg	20500	14500	7970	8080	16800	5160	8200	12300	9750
Lead	mg/kg	7.7	6.4	8.3	4.4	96.6	5.8	5.3	6.4	5.4
Magnesium	mg/kg	2160 J+	1740 J+	1130 J+	1450 J+	1970 J+	964 J+	1600 J+	2320 J+	2060 J+
Manganese	mg/kg	143 J+	166 J+	19.6 J+	177 J+	714 J+	288 J+	148 J+	84.7 J+	35.9 J+
Mercury	mg/kg	0.039 U	0.039 U	0.037 U	0.038 U	0.039 U	0.029 U	0.038 U	0.036 U	0.031 U
Nickel	mg/kg	16.7	14.7	5.2	7.6	28.1	12.1	7.4	8.4	6.2
Potassium	mg/kg	1200 U	1200 U	1200 U	1200 U	1200 U	1100 U	1200 U	1200 U	1100 U
Selenium	mg/kg	2.4 U	2.3 U	2.4 U	2.4 U	2.4 U	2.2 U	2.4 U	2.4 U	2.2 U
Silver	mg/kg	0.60 U	0.59 U	0.61 U	0.60 U	0.60 U	0.55 U	0.59 U	0.59 U	0.56 U
Sodium	mg/kg	1200 U	1200 U	1200 U	1200 U	1200 U	1100 U	1200 U	1200 U	1100 U
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	6.0 U	1.1 U	1.2 U	1.2 U	1.1 U
Vanadium	mg/kg	28.3	23.6	16.3	11.9	41.4	12.0	13.7	23.3	20.1
Zinc	mg/kg	35.2	22.5	16.2	19.6	22.5	9.2	19.0	23.1	20.0
General Chemistry										
Moisture	%	--	--	--	--	--	--	--	--	--
Percent Solids	%	83.5	85.3	81.8	82.1	84.1	88.5	84.9	84.9	87.4

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: / Sample Identification: / Sample Date: / Sample Depth:	Units	Backfill-10 12599404-030123-S-MTK-BACKFILL-10 (6-8) 03/01/2023 6-8 ft bgs	Backfill-11 12599404-030123-S-MTK-BACKFILL-11 (4-6) 03/01/2023 4-6 ft bgs	Backfill-12 12599404-030123-S-MTK-BACKFILL-12 (2-4) 03/01/2023 2-4 ft bgs	Backfill-13 12599404-030123-S-MTK-BACKFILL-13 (2-4) 03/01/2023 2-4 ft bgs	Backfill-14 12599404-030123-S-MTK-BACKFILL-14 (6-8) 03/01/2023 6-8 ft bgs	Backfill-15 12599404-030123-S-MTK-BACKFILL-15 (4-6) 03/01/2023 4-6 ft bgs	Backfill-16 12599404-030123-S-MTK-BACKFILL-16 (2-4) 03/01/2023 2-4 ft bgs	Backfill-17 12599404-030123-S-MTK-BACKFILL-17 (6-8) 03/01/2023 6-8 ft bgs	Backfill-18 12599404-030123-S-MTK-BACKFILL-18 (4-6) 03/01/2023 4-6 ft bgs
Metals										
Aluminum	mg/kg	15400	13500	14700	10800	14200	9260	10600	12500	12600
Antimony	mg/kg	2.5 UJ	2.4 UJ	2.4 UJ	2.2 UJ	2.5 UJ	2.4 UJ	2.3 UJ	2.4 UJ	2.4 UJ
Arsenic	mg/kg	8.8	9.4	3.4	3.2	7.7	2.4 U	2.3 U	3.0	9.4
Barium	mg/kg	228	106	98.8	55.0	222	61.4	91.9	33.2	160
Beryllium	mg/kg	0.94	0.98	0.71	0.51	1.1	0.59	0.48	0.68	0.93
Cadmium	mg/kg	0.61 U	0.60 U	0.60 U	0.56 U	0.63 U	0.59 U	0.57 U	0.60 U	0.60 U
Calcium	mg/kg	48800	27400	4150	25800	9250	2850	29700	4730	4060
Chromium	mg/kg	17.2	14.2	13.7	10.5	16.1	9.2	10.0	12.1	12.9
Chromium VI (hexavalent)	mg/kg	0.48 U	0.47 U	0.49 U	0.48 U	0.49 U	0.47 U	1.7	0.61	0.48 U
Cobalt	mg/kg	15.8	11.5	6.0 U	5.6 U	21.1	5.9 U	5.7 U	6.0 U	7.5
Copper	mg/kg	10.4	11.9	5.2	3.1	10.0	2.9 U	3.1	5.7	7.7
Iron	mg/kg	18900	18800	11500	10100	18400	8100	8370	11200	15600
Lead	mg/kg	14.7	10.6	9.4	6.2	15.9	7.4	6.1	7.7	10.1
Magnesium	mg/kg	2480 J+	2000 J+	1480 J+	1240 J+	2450 J+	1060 J+	1180 J+	1440 J+	1580 J+
Manganese	mg/kg	1210 J+	383 J+	44.9 J+	14.6 J+	939 J+	16.9 J+	26.0 J+	52.8 J+	597 J+
Mercury	mg/kg	0.038 U	0.039 U	0.072 U	0.072 U	0.075 U	0.064 U	0.076 U	0.064 U	0.072 U
Nickel	mg/kg	28.4	15.0	7.6	5.6	36.4	5.0	4.6 U	8.2	19.3
Potassium	mg/kg	1430	1200 U	1200 U	1100 U	1300 U	1200 U	1100 U	1200 U	1200 U
Selenium	mg/kg	2.5 U	2.4 U	2.4 U	2.2 U	2.5 U	2.4 U	2.3 U	2.4 U	2.4 U
Silver	mg/kg	0.61 U	0.60 U	0.60 U	0.56 U	0.63 U	0.59 U	0.57 U	0.60 U	0.60 U
Sodium	mg/kg	1200 U	1200 U	1200 U	1100 U	1300 U	1200 U	1100 U	1200 U	1200 U
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.1 U	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U
Vanadium	mg/kg	32.5	30.3	22.1	19.0	25.6	14.3	15.8	19.8	25.6
Zinc	mg/kg	34.9	24.9	19.6	13.9	35.8	13.8	13.8	18.4	22.4
General Chemistry										
Moisture	%	--	--	--	--	--	--	--	--	--
Percent Solids	%	81.5	83.4	82.8	86.6	80.0	85.1	87.0	82.5	81.5

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: / Sample Identification: / Sample Date: / Sample Depth:	Units	Backfill-19 12599404-030123-S-MTK-BACKFILL-19 (2-4) 03/01/2023 2-4 ft bgs	Backfill-20 12599404-030123-S-MTK-BACKFILL-20 (6-8) 03/01/2023 6-8 ft bgs	Backfill-21 12599404-030123-S-MTK-BACKFILL-21 (4-6) 03/01/2023 4-6 ft bgs	Backfill-22 12599404-030123-S-MTK-BACKFILL-22 (2-4) 03/01/2023 2-4 ft bgs	Backfill-23 12599404-030123-S-MTK-BACKFILL-23 (6-8) 03/01/2023 6-8 ft bgs	Backfill-24 12599404-030123-S-MTK-BACKFILL-24 (4-6) 03/01/2023 4-6 ft bgs	Backfill-25 12599404-030123-S-MTK-BACKFILL-25 (4-6) 03/01/2023 4-6 ft bgs	Backfill-26 12599404-030123-S-MTK-BACKFILL-26 (2-4) 03/01/2023 2-4 ft bgs	Backfill-27 12599404-030123-S-MTK-BACKFILL-27 (6-8) 03/01/2023 6-8 ft bgs
Metals										
Aluminum	mg/kg	12400	11800	11400	9880	15400	7150	12100	11400	10500
Antimony	mg/kg	2.5 UJ	2.5 UJ	2.6 UJ	2.5 UJ	2.4 UJ	2.5 UJ	2.6 UJ	2.2 UJ	2.4 UJ
Arsenic	mg/kg	2.9	6.8	4.4	2.5 U	3.3	2.5 U	3.2	6.2	8.0
Barium	mg/kg	136	54.9	58.2	90.2	81.7	72.1	51.8	70.6	61.3
Beryllium	mg/kg	0.74	1.1	1.2	0.86	0.81	0.62	0.83	0.67	0.75
Cadmium	mg/kg	0.64 U	0.61 U	0.64 U	0.63 U	0.61 U	0.63 U	0.64 U	0.56 U	0.61 U
Calcium	mg/kg	14900	4390	7250 J+	4500 J+	45200 J+	74100 J+	4990 J+	5340 J+	3360 J+
Chromium	mg/kg	12.9	12.5	11.5	9.0	15.5	6.9	12.5	12.0	12.1
Chromium VI (hexavalent)	mg/kg	0.95	0.48 U	0.48 U	0.50 U	0.47 U	0.49 U	0.49 U	0.60	0.50 U
Cobalt	mg/kg	6.4 U	6.1 U	6.4 U	6.3 U	6.1 U	6.3 U	6.4 U	5.6 U	6.1 U
Copper	mg/kg	6.7	7.3	5.9	4.9	6.8	3.2 U	5.3	5.9	6.4
Iron	mg/kg	10400	16000	13000	7920	13300	6140	11300	14100	16700
Lead	mg/kg	9.5	7.4	7.4	10.9	7.9	4.8	8.4	9.5	8.8
Magnesium	mg/kg	1410 J+	1470 J+	1290	861	1750	1110	1400	1310	1590
Manganese	mg/kg	88.2 J+	132 J+	36.3 J+	31.2 J+	105 J+	44.0 J+	47.2 J+	27.4 J+	108 J+
Mercury	mg/kg	0.068 U	0.072 U	0.064 U	0.068 U	0.064 U	0.072 U	0.074 U	0.072 U	0.074 U
Nickel	mg/kg	7.2	16.8	14.2	8.4	10.1	5.1 U	9.1	7.9	12.3
Potassium	mg/kg	1300 U	1200 U	1300 U	1300 U	1200 U	1300 U	1300 U	1100 U	1200 U
Selenium	mg/kg	2.5 U	2.5 U	2.6 U	2.5 U	2.4 U	2.5 U	2.6 U	2.2 U	2.4 U
Silver	mg/kg	0.64 U	0.61 U	0.64 U	0.63 U	0.61 U	0.63 U	0.64 U	0.56 U	0.61 U
Sodium	mg/kg	1300 U	1200 U	1300 U	1300 U	1200 U	1300 U	1300 U	1100 U	1200 U
Thallium	mg/kg	1.3 U	1.2 U	1.3 U	1.3 U	1.2 U	1.3 U	1.3 U	1.1 U	1.2 U
Vanadium	mg/kg	21.1	24.4	17.5	12.6	20.3	11.4	16.4	28.2	21.3
Zinc	mg/kg	22.5	22.9	18.4	15.1	25.4	12.5	18.5	16.4	25.3
General Chemistry										
Moisture	%	--	--	--	--	--	--	--	--	--
Percent Solids	%	80.3	81.6	80.6	80.6	82.5	80.5	82.3	84.7	77.9

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	Backfill-28 12599404-030123-S-MTK-BACKFILL-28 (4-6) 03/01/2023 4-6 ft bgs	Backfill-29 12599404-030123-S-MTK-BACKFILL-29 (2-4) 03/01/2023 2-4 ft bgs	Backfill-30 12599404-030123-S-MTK-BACKFILL-30 (6-8) 03/01/2023 6-8 ft bgs	Backfill-31 12599404-030123-S-MTK-BACKFILL-31 (4-6) 03/01/2023 4-6 ft bgs	Backfill-32 12599404-030123-S-MTK-BACKFILL-32 (2-4) 03/01/2023 2-4 ft bgs	Backfill-33 12599404-030123-S-MTK-BACKFILL-33 (6-8) 03/01/2023 6-8 ft bgs	Backfill-34 12599404-030123-S-MTK-BACKFILL-34 (4-6) 03/01/2023 4-6 ft bgs	Backfill-35 12599404-030123-S-MTK-BACKFILL-35 (2-4) 03/01/2023 2-4 ft bgs	Backfill-36 12599404-030123-S-MTK-BACKFILL-36 (6-8) 03/01/2023 6-8 ft bgs
Metals										
Aluminum	mg/kg	13200	11500	11700	12800	14500	11200	11000	14600	9810
Antimony	mg/kg	2.4 UJ	2.3 UJ	2.5 UJ	2.4 UJ	2.5 UJ	2.5 UJ	2.3 UJ	2.4 UJ	2.3 UJ
Arsenic	mg/kg	6.6	3.1	2.5 U	5.1	4.3	2.5 U	3.3	2.4 U	4.0
Barium	mg/kg	276	76.7	63.5	170	121	63.0	68.4	94.2	101
Beryllium	mg/kg	1.3	0.57	0.53	0.81	0.64	0.50	0.79	0.58	0.47
Cadmium	mg/kg	0.60 U	0.57 U	0.64 U	0.59 U	0.62 U	0.62 U	0.57 U	0.59 U	0.58 U
Calcium	mg/kg	4160 J+	48200 J+	6490 J+	19600 J+	37600 J+	22700 J+	8750 J+	9760 J+	92400 J+
Chromium	mg/kg	13.7	11.8	11.9	12.4	13.5	10.7	11.0	13.9	10.6
Chromium VI (hexavalent)	mg/kg	0.56	0.48 U	0.50 U	0.48 U	0.48 U	0.51 U	0.47 U	0.47 U	0.50 U
Cobalt	mg/kg	22.0	7.2	6.4 U	14.8	6.2 U	6.2 U	5.7 U	5.9 U	5.9
Copper	mg/kg	9.2	4.4	3.2 U	6.7	5.3	4.2	4.6	5.2	3.6
Iron	mg/kg	15700	10000	9340	12300	12300	8910	12400	10400	8480
Lead	mg/kg	14.8	8.9	5.0	14.9	8.3	6.6	7.7	6.5	6.5
Magnesium	mg/kg	1870	1570	1580	1670	2140	1640	1580	1660	1470
Manganese	mg/kg	1840 J+	194 J+	46.2 J+	833 J+	28.2 J+	15.9 J+	66.5 J+	16.6 J+	323 J+
Mercury	mg/kg	0.080 U	0.068 U	0.068 U	0.068 U	0.060 U	0.074 U	0.064 U	0.064 U	0.080 U
Nickel	mg/kg	39.8	10.6	5.7	18.2	5.7	5.0 U	9.0	5.3	8.4
Potassium	mg/kg	1200 U	1100 U	1300 U	1200 U	1200 U	1200 U	1100 U	1200 U	1200 U
Selenium	mg/kg	2.4 U	2.3 U	2.5 U	2.4 U	2.5 U	2.5 U	2.3 U	2.4 U	2.3 U
Silver	mg/kg	0.64	0.57 U	0.64 U	0.59 U	0.62 U	0.62 U	0.57 U	0.59 U	0.58 U
Sodium	mg/kg	1200 U	1100 U	1300 U	1200 U	1720	1510	1230	1470	1200 U
Thallium	mg/kg	6.0 U	1.1 U	1.3 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U
Vanadium	mg/kg	22.3	18.4	9.8	21.7	28.0	16.7	14.2	19.5	19.8
Zinc	mg/kg	26.1	16.7	20.3	21.8	19.8	16.1	22.4	18.9	17.2
General Chemistry										
Moisture	%	--	--	--	--	--	--	--	--	--
Percent Solids	%	82.2	85.5	82.0	84.1	83.7	80.6	83.6	83.2	82.6

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	Backfill-37 12599404-030123-S-MTK-BACKFILL-37 (6-8) 03/01/2023 6-8 ft bgs	Backfill-38 12599404-030123-S-MTK-BACKFILL-38 (4-6) 03/01/2023 4-6 ft bgs	Backfill-39 12599404-030123-S-MTK-BACKFILL-39 (2-4) 03/01/2023 2-4 ft bgs	Backfill-40 12599404-030123-S-MTK-BACKFILL-40 (6-8) 03/01/2023 6-8 ft bgs	Backfill-41 12599404-030123-S-MTK-BACKFILL-41 (4-6) 03/01/2023 4-6 ft bgs	Backfill-42 12599404-030123-S-MTK-BACKFILL-42 (2-4) 03/01/2023 2-4 ft bgs	Backfill-43 12599404-030123-S-MTK-BACKFILL-43 (6-8) 03/01/2023 6-8 ft bgs	Backfill-44 12599404-030123-S-MTK-BACKFILL-44 (4-6) 03/01/2023 4-6 ft bgs	Backfill-45 12599404-030123-S-MTK-BACKFILL-45 (2-4) 03/01/2023 2-4 ft bgs
Metals										
Aluminum	mg/kg	11500	12700	14300	12000	14500	11900	13300	15700	19900
Antimony	mg/kg	2.3 UJ	2.4 UJ	2.5 UJ	2.4 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.5 UJ	2.4 UJ
Arsenic	mg/kg	6.6	5.3	3.3	5.7	3.8	2.6	4.4	3.6	3.9
Barium	mg/kg	50.8	112	68.3	37.0	47.6	73.3	105	55.7	57.1
Beryllium	mg/kg	0.75	0.83	0.77	0.85	0.75	0.46	0.76	1.0	0.98
Cadmium	mg/kg	0.58 U	0.60 U	0.63 U	0.59 U	0.60 U	0.59 U	0.57 U	0.61 U	0.59 U
Calcium	mg/kg	4600 J+	11600 J+	3510 J+	3560 J+	8460 J+	28800 J+	23300 J+	3470 J+	11900 J+
Chromium	mg/kg	13.1	13.6	13.4	13.2	14.8	11.6	14.3	15.9	19.4
Chromium VI (hexavalent)	mg/kg	0.47 U	0.48 U	0.51 U	0.47 U	0.47 U	0.47 U	0.47 U	0.50 U	0.47 U
Cobalt	mg/kg	5.8 U	6.0 U	6.3 U	5.9 U	6.0 U	5.9 U	5.7 U	6.1 U	5.9 U
Copper	mg/kg	6.6	5.9	4.6	5.1	6.7	3.6	7.1	5.0	6.5
Iron	mg/kg	14100	12900	11500	14100	13500	8530	12700	13000	13600
Lead	mg/kg	6.7	7.0	9.6	10.3	6.5	5.8	7.5	6.4	8.1
Magnesium	mg/kg	1780	1710	1450	1770	1980	1750	2290	2270	2620
Manganese	mg/kg	215 J+	157 J+	15.9 J+	127 J+	80.5	97.4	245	79.3	27.8
Mercury	mg/kg	0.076 U	0.066 U	0.080 U	0.076 U	0.062 U	0.068 U	0.062 U	0.076 U	0.070 U
Nickel	mg/kg	14.5	13.4	6.6	11.6	9.2	5.3	11.7	12.9	8.7
Potassium	mg/kg	1200 U	1200 U	1300 U	1200 U	1200 U	1200 U	1100 U	1200 U	1200 U
Selenium	mg/kg	2.3 U	2.4 U	2.5 U	2.4 U	2.4 U	2.3 U	2.3 U	2.5 U	2.4 U
Silver	mg/kg	0.58 U	0.60 U	0.63 U	0.59 U	0.60 U	0.59 U	0.57 U	0.61 U	0.59 U
Sodium	mg/kg	1200 U	1200 U	1300 U	1200 U	1200 U	1200 U	1100 U	1200 U	1200 U
Thallium	mg/kg	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U
Vanadium	mg/kg	21.8	23.4	21.5	22.2	22.7	19.9	22.7	23.1	33.9
Zinc	mg/kg	26.0	20.2	20.0	27.6	22.5	17.5	23.9	26.0	27.8
General Chemistry										
Moisture	%	--	--	--	--	--	--	--	--	--
Percent Solids	%	83.5	83.5	80.3	82.8	82.9	82.9	85.9	80.6	82.8

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	Backfill-46 12599404-030123-S-MTK-BACKFILL-46 (6-8) 03/01/2023 6-8 ft bgs	Backfill-47 12599404-030123-S-MTK-BACKFILL-47 (4-6) 03/01/2023 4-6 ft bgs	Backfill-48 12599404-030123-S-MTK-BACKFILL-48 (2-4) 03/01/2023 2-4 ft bgs	Backfill-49 12599404-030123-S-MTK-BACKFILL-49 (2-4) 03/01/2023 2-4 ft bgs	Backfill-50 12599404-030123-S-MTK-BACKFILL-50 (6-8) 03/01/2023 6-8 ft bgs	Backfill-51 12599404-030123-S-MTK-BACKFILL-51 (4-6) 03/01/2023 4-6 ft bgs	Backfill-52 12599404-030123-S-MTK-BACKFILL-52 (2-4) 03/01/2023 2-4 ft bgs	Backfill-53 12599404-030123-S-MTK-BACKFILL-53 (6-8) 03/01/2023 6-8 ft bgs	Backfill-54 12599404-030123-S-MTK-BACKFILL-54 (4-6) 03/01/2023 4-6 ft bgs
Metals										
Aluminum	mg/kg	13100	15200	12800	13700	14800	17200	17800	16100	14800
Antimony	mg/kg	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.5 UJ	2.4 UJ	2.4 UJ
Arsenic	mg/kg	3.9	2.9	2.6	3.5	4.3	2.4 U	2.5	5.0	10.1
Barium	mg/kg	75.7	50.9	144	117	86.9	53.8	90.8	233	62.5
Beryllium	mg/kg	0.72	0.93	0.97	1.1	0.76	0.85	0.72	1.3	0.93
Cadmium	mg/kg	0.60 U	0.59 U	0.60 U	0.61 U	0.60 U	0.60 U	0.62 U	0.61 U	0.61 U
Calcium	mg/kg	21400 J+	7650 J+	5210 J+	18600 J+	13300 J+	6480 J+	5050 J+	5410 J+	2370 J+
Chromium	mg/kg	14.0	14.8	12.0	14.4	17.0	15.8	16.4	18.5	14.0
Chromium VI (hexavalent)	mg/kg	0.47 U	0.47 U	0.70	0.49 U	0.48 U	0.48 U	0.55	0.49 U	0.48 U
Cobalt	mg/kg	6.0 U	5.9 U	6.0 U	6.1 U	6.0 U	6.0 U	6.2 U	7.7	6.1 U
Copper	mg/kg	6.2	4.2	7.5	4.8	5.7	6.3	5.4	9.6	6.9
Iron	mg/kg	12200	10800	8600	11000	14000	10900	11300	16500	14500
Lead	mg/kg	6.2	9.3	8.7	5.3	6.2	10.1	10	9.6	11.8
Magnesium	mg/kg	1900	1510	1610	1760	2410	2010	1940	2820	1670
Manganese	mg/kg	111	38.9	17.0	73.3	267	19.4	30.6	1050	50.6
Mercury	mg/kg	0.074 U	0.078 U	0.066 U	0.040	0.062 U	0.042	0.066 UJ	0.070 UJ	0.064 UJ
Nickel	mg/kg	8.6	7.0	6.0	8.9	12.1	7.5	6.4	28.4	7.9
Potassium	mg/kg	1200 U	1200 U	1200 U	1200 U	1270	1200 U	1200 U	1200 U	1200 U
Selenium	mg/kg	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U
Silver	mg/kg	0.60 U	0.59 U	0.60 U	0.61 U	0.60	0.60 U	0.62 U	0.82	0.69
Sodium	mg/kg	1200 U	1200 U	1200 U	1200 U	1200 U	1760	1200 U	1200 U	1200 U
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	2.4 U	1.2 U
Vanadium	mg/kg	22.2	23.4	15.3	23.8	21.0	22.9	23.6	26.0	52.2
Zinc	mg/kg	24.3	22.4	21.7	22.4	31.6	25.6	24.4	32.4	19.9
General Chemistry										
Moisture	%	--	--	--	--	--	--	--	--	--
Percent Solids	%	82.6	83.9	80.8	82.7	82.2	81.6	81.8	81.3	81.0

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	Backfill-55 12599404-030123-S-MTK-BACKFILL-55 (2-4) 03/01/2023 2-4 ft bgs	Backfill-56 12599404-030123-S-MTK-BACKFILL-56 (6-8) 03/01/2023 6-8 ft bgs	Backfill-57 12599404-030123-S-MTK-BACKFILL-57 (4-6) 03/01/2023 4-6 ft bgs	Backfill-58 12599404-030123-S-MTK-BACKFILL-58 (2-4) 03/01/2023 2-4 ft bgs	Backfill-59 12599404-030123-S-MTK-BACKFILL-59 (6-8) 03/01/2023 6-8 ft bgs	Backfill-60 12599404-030123-S-MTK-BACKFILL-60 (4-6) 03/01/2023 4-6 ft bgs	Backfill-61 12599404-030723-S-MTK-Backfill-61 (0-2) 03/07/2023 0-2 ft bgs	Backfill-62 12599404-030723-S-MTK-Backfill-62 (8-10) 03/07/2023 8-10 ft bgs	Backfill-63 12599404-030723-S-MTK-Backfill-63 (0-2) 03/07/2023 0-2 ft bgs
Metals										
Aluminum	mg/kg	14500	10700	12300	14500	11800	14300	14500	10300	12000
Antimony	mg/kg	2.3 UJ	2.4 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.4 UJ	0.0767 UJ	0.126 J-	0.0718 UJ
Arsenic	mg/kg	4.7	2.4 U	2.4 U	2.3 U	4.3	3.0	2.72	12.0	3.00
Barium	mg/kg	46.6	43.7	52.3	55.2	87.2	77.7	20.2	89.5	197
Beryllium	mg/kg	0.81	0.74	0.81	0.60	1.0	0.66	1.10	0.915	0.709
Cadmium	mg/kg	0.58 U	0.59 U	0.59 U	0.59 U	0.57 U	0.60 U	0.0319 U	0.0903 J	0.106 J
Calcium	mg/kg	2350 J+	3570 J+	3620 J+	32400 J+	4200 J+	9150 J+	5710	86000	101000
Chromium	mg/kg	12.7	9.4	10.9	13.9	12.4	13.9	14.1	15.3	11.1
Chromium VI (hexavalent)	mg/kg	0.47 U	0.48 U	0.50 U	0.46 U	0.49 U	0.60	0.365 U	0.374 U	0.348 U
Cobalt	mg/kg	16.2	5.9 U	5.9 U	5.9 U	5.7 U	6.0 U	2.63	6.69	7.49
Copper	mg/kg	5.7	4.2	4.1	4.7	5.3	4.5	7.64	13.2	3.65
Iron	mg/kg	12400	10100	9780	9980	12400	11700	12200	24000	9790
Lead	mg/kg	19.0	6.5	7.2	7.1	7.6	7.1	8.24	9.92	7.99
Magnesium	mg/kg	1690	1440	1240	1400	1480	1580	1930	2280	3150
Manganese	mg/kg	431	37.5	13.6	17.8	239	34.3	27.0 J	263 J	290 J
Mercury	mg/kg	0.064 UJ	0.068 UJ	0.066 UJ	0.064 UJ	0.064 UJ	0.074 UJ	0.0161	0.00924	0.0190
Nickel	mg/kg	13.2	7.3	6.9	6.0	13.8	5.9	9.96	22.4	8.10
Potassium	mg/kg	1200 U	1200 U	1200 U	1200 U	1100 U	1200 U	560	1180	581
Selenium	mg/kg	2.3 U	2.4 U	2.4 U	2.3 U	2.3 U	2.4 U	1.16	1.35	0.797
Silver	mg/kg	0.58 U	0.59 U	0.59 U	0.59 U	0.57	0.60 U	0.0611 J	0.0182 U	0.442 J
Sodium	mg/kg	1810	1200 U	1200 U	1200 U	1100 U	1200 U	1050	345	142
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U	1.2 U	0.263 U	0.271 U	0.246 U
Vanadium	mg/kg	27.5	13.2	14.8	20.9	17.9	21.8	24.5	36.7	20.2
Zinc	mg/kg	21.1	15.9	18.2	21.2	22.3	23.0	23.5	43.4	18.6
General Chemistry										
Moisture	%	--	--	--	--	--	--	18.0	20.7	14.7
Percent Solids	%	83.8	82.2	82.5	86.3	82.9	82.9	--	--	--

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: Sample Identification: Sample Date: Sample Depth:	Units	Backfill-64 12599404-030723-S-MTK-Backfill-64 (10-12) 03/07/2023 10-12 ft bgs	Backfill-65 12599404-030723-S-MTK-Backfill-65 (8-10) 03/07/2023 8-10 ft bgs	Backfill-66 12599404-030723-S-MTK-Backfill-66 (0-2) 03/07/2023 0-2 ft bgs	Backfill-67 12599404-030723-S-MTK-Backfill-67 (10-12) 03/07/2023 10-12 ft bgs	Backfill-68 12599404-030723-S-MTK-Backfill-68 (0-2) 03/07/2023 0-2 ft bgs	Backfill-69 12599404-030723-S-MTK-Backfill-69 (0-2) 03/07/2023 0-2 ft bgs	Backfill-70 12599404-030723-S-MTK-Backfill-70 (0-2) 03/07/2023 0-2 ft bgs	Backfill-71 12599404-030723-S-MTK-Backfill-71 (8-10) 03/07/2023 8-10 ft bgs	Backfill-72 12599404-030723-S-MTK-Backfill-72 (10-12) 03/07/2023 10-12 ft bgs
Metals										
Aluminum	mg/kg	7510	8020	13100	8910	10400	12000	13300	12100	13900
Antimony	mg/kg	0.0752 UJ	0.0767 UJ	0.0757 UJ	0.0899 J-	0.0763 UJ	0.0740 UJ	0.0733 UJ	0.0817 J-	0.124 J-
Arsenic	mg/kg	2.09	2.99	6.39	15.4	1.55	2.62	3.40	8.80	14.1
Barium	mg/kg	71.6	36.6	70.3	66.6	137	424	174	578	306
Beryllium	mg/kg	0.517 J	0.625	1.37	0.917	0.850	0.919	0.955	1.44	1.09
Cadmium	mg/kg	0.0312 U	0.0318 U	0.0314 U	0.0315 U	0.0317 U	0.0308 U	0.0305 U	0.580 J	0.213 J
Calcium	mg/kg	11800	2700	3900	17600	4920	3540	8730	5260	88800
Chromium	mg/kg	10.4	9.54	12.4	12.3	9.31	10.3	12.3	15.3	17.8
Chromium VI (hexavalent)	mg/kg	0.370 U	0.367 U	0.360 U	0.368 U	0.372 U	0.357 U	0.362 U	0.374 U	0.374 U
Cobalt	mg/kg	2.74	1.72	10.1	4.02	2.85	2.58	1.71	52.4	25.1
Copper	mg/kg	5.11	4.27	7.61	16.1	5.51	5.22	6.08	16.4	15.3
Iron	mg/kg	9200	9940	25700	19800	9230	10500	11700	25400	26800
Lead	mg/kg	6.67	6.52	64.1	10.6	9.03	10.3	7.82	23.0	17.7
Magnesium	mg/kg	1440	1260	1460	1630	911	1530	1800	2280	2760
Manganese	mg/kg	52.4 J	20.1 J	171 J	91.1 J	32.5 J	10.6 J	16.9 J	2620 J	1570 J
Mercury	mg/kg	0.0320	0.0163	0.0185	0.00609	0.0117	0.0237	0.0214	0.0318	0.00527
Nickel	mg/kg	6.93	9.41	8.09	19.8	6.71	6.04	9.31	56.9	31.1
Potassium	mg/kg	876	713	349	992	377	344	474	1210	1500
Selenium	mg/kg	0.822	1.27	1.62	1.02	1.22	0.950	1.17	3.15	1.62
Silver	mg/kg	0.0174 U	0.202 J	0.0539 J	0.0175 U	0.0533 J	0.0211 J	0.0343 J	0.0177 U	0.0179 U
Sodium	mg/kg	330	328	586	354	290	614	526	510	333
Thallium	mg/kg	0.258 U	0.263 U	0.260 U	0.261 U	0.262 U	0.254 U	0.252 U	0.281 J	0.271 J
Vanadium	mg/kg	14.1	15.5	38.4	37.6	16.0	22.1	25.2	33.7	41.7
Zinc	mg/kg	22.8	19.5	14.1	36.9	14.5	14.7	17.1	48.3	47.4
General Chemistry										
Moisture	%	19.0	18.4	17.8	19.4	21.1	17.1	17.9	21.1	20.0
Percent Solids	%	--	--	--	--	--	--	--	--	--

Table 5

RA Construction - Off-Site Backfill Analytical Results Summary
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Location: / Sample Identification: / Sample Date: / Sample Depth:	Units	Backfill-73 12599404-030723-S-MTK-Backfill-73 (10-12) 03/07/2023 10-12 ft bgs	Backfill-74 12599404-030723-S-MTK-Backfill-74 (0-2) 03/07/2023 0-2 ft bgs	Backfill-75 12599404-030723-S-MTK-Backfill-75 (0-2) 03/07/2023 0-2 ft bgs	Backfill-76 12599404-030723-S-MTK-Backfill-76 (8-10) 03/07/2023 8-10 ft bgs	Backfill-77 12599404-030723-S-MTK-Backfill-77 (0-2) 03/07/2023 0-2 ft bgs	Backfill-78 12599404-030723-S-MTK-Backfill-78 (10-12) 03/07/2023 10-12 ft bgs	Backfill-79 12599404-030723-S-MTK-Backfill-79 (8-10) 03/07/2023 8-10 ft bgs	Backfill-80 12599404-030723-S-MTK-Backfill-80 (0-2) 03/07/2023 0-2 ft bgs
Metals									
Aluminum	mg/kg	10600	10800	13200	9830	14000	10800	14000	11600
Antimony	mg/kg	0.0772 UJ	0.0717 UJ	0.0754 UJ	0.0876 J-	0.0722 UJ	0.0773 UJ	0.167 J-	0.0731 UJ
Arsenic	mg/kg	3.84	1.94	2.31	6.61	1.45	2.66	17.3	1.78
Barium	mg/kg	69.6	43.3	62.3	129	152	62.3	137	110
Beryllium	mg/kg	0.829	0.682	0.832	0.712	0.822	0.671	1.37	0.629
Cadmium	mg/kg	0.0551 J	0.0298 U	0.0313 U	0.0409 J	0.0300 U	0.0321 U	0.107 J	0.0304 U
Calcium	mg/kg	3460	4160	14900	35100	2590	21000	60600	7300
Chromium	mg/kg	12.8	9.16	11.1	12.7	12.9	13.1	19.9	12.2
Chromium VI (hexavalent)	mg/kg	0.361 U	0.356 U	0.360 U	0.363 U	0.352 U	0.371 U	0.387 U	0.354 U
Cobalt	mg/kg	5.89	1.09	3.45	7.58	1.76	2.66	10.6	1.23
Copper	mg/kg	6.47	6.45	4.71	8.96	3.58	7.10	20.6	4.40
Iron	mg/kg	12400	8500	9390	16000	9150	12000	34800	10100
Lead	mg/kg	9.44	8.26	7.43	8.08	7.86	8.38	15.6	7.33
Magnesium	mg/kg	1660	1350	2030	2070	1560	2170	2580	1360
Manganese	mg/kg	325 J	11.5 J	45.1 J	420 J	13.1 J	57.4 J	471 J	15.6 J
Mercury	mg/kg	0.0156	0.0190	0.0198	0.0120	0.0254	0.0265	0.00352 U	0.0160
Nickel	mg/kg	16.2	5.25	8.03	15.0	5.96	9.69	29.9	4.60
Potassium	mg/kg	953	319	445	980	421	1120	1530	400
Selenium	mg/kg	1.26	0.749	0.842	1.15	0.911	1.14	1.94	0.614
Silver	mg/kg	0.0178 U	0.0550 J	0.0372 J	0.0168 U	0.0470 J	0.0178 U	0.0178 U	0.0425 J
Sodium	mg/kg	519	452	2790	311	1830	257	812	607
Thallium	mg/kg	0.265 U	0.246 U	0.259 U	0.249 U	0.248 U	0.265 U	0.265 U	0.251 U
Vanadium	mg/kg	18.1	20.8	18.9	24.5	20.1	17.9	51.0	19.4
Zinc	mg/kg	28.4	15.2	18.0	33.7	18.1	28.1	60.9	19.4
General Chemistry									
Moisture	%	18.4	16.9	16.7	18.1	16.6	19.2	22.8	16.4
Percent Solids	%	--	--	--	--	--	--	--	--

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
J- - Estimated concentration, result may be biased low.
J+ - Estimated concentration, result may be biased high.
mg/kg - milligrams per kilogram.
ft bgs - feet below ground surface.
% - percent.

Table 6

Depth-Weighted Average Calculations - Northeast Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sub-Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
NE-1a	6.00	9.65	10.00	0.457
	2.00	15700		
	2.00	12200		
	5586		**0.46**	
NE-1b	6.00	24.60	10.00	0.457
	2.00	15700		
	2.00	12200		
	5595		**0.46**	
NE-1c	6.00	9.58	10.00	0.457
	2.00	15700		
	2.00	12200		
	5586		**0.46**	
NE-1d	6.00	10.50	10.00	0.457
	2.00	15700		
	2.00	12200		
	5586		**0.46**	
NE-1e	6.00	7.95	10.00	0.457
	2.00	15700		
	2.00	12200		
	5585		**0.46**	
NE-2	6.00	50.20	10.00	0.457
	2.00	15700		
	2.00	12200		
	5610		**0.46**	
NE-3	4.00	12.40	6.78	0.457
	2.00	18000	1.22	531.00
	2.00	531.00	2.00	85.90
	2.00	85.90		
	3728		**82.27**	
NE-4a	4.00	10.10	10.00	0.457
	2.00	47.60		
	2.00	707.00		
	2.00	340.00		
	222.96		**0.46**	
NE-5a	4.00	11.90	8.04	0.457
	2.00	6528	1.96	73.70
	2.00	4992		
	2.00	73.70		
	2324		**14.81**	
NE-5b	4.00	42.80	8.08	0.457
	2.00	6528	1.92	73.70
	2.00	4992		
	2.00	73.70		
	2335.86		**14.52**	
NE-6a	4.00	11.90	8.05	0.457
	2.00	4410	1.95	73.70
	2.00	4460		
	2.00	73.70		
	1794		**14.74**	
NE-6b	4.00	42.80	8.06	0.457
	2.00	4410	1.94	73.70
	2.00	4460		
	2.00	73.70		
	1806		**14.67**	
NE-7a	4.00	36.20	6.23	0.457
	2.00	18000	1.26	71.60
	2.00	71.60	2.00	5.93
	2.00	5.93		
	3630		**10.49**	
NE-7b	4.00	14.30	6.66	0.457
	2.00	18000	1.34	71.60
	2.00	71.60	2.00	5.93
	2.00	5.93		
	3621		**11.08**	

Depth-Weighted Average Calculations - North Central Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
NC-1	6.00	54.50	8.75	0.457
	2.00	1880	1.25	224.00
	2.00	224		
	454		**28.40**	
NC-2	6.00	154.00	10.00	0.457
	2.00	1880		
	2.00	1120		
	692		**0.46**	
NC-3	6.00	12500	8.48	0.457
	2.00	1880	1.52	376.00
	2.00	376.00		
	7951		**57.54**	
NC-4	6.00	581.00	9.14	0.457
	2.00	1880.20	0.86	1010.00
	2.00	1010.00		
	926.64		**87.28**	
NC-5	6.00	388.00	9.48	0.457
	2.00	1730	0.52	49.80
	2.00	49.8		
	589		**3.02**	
NC-6	6.00	1800.00	10.00	0.457
	2.00	1730		
	2.00	1650		
	1756		**0.46**	
NC-7	6.00	442.00	10.00	0.457
	2.00	4930		
	2.00	779.00		
	1407		**0.46**	
NC-8a	6.00	28.80	10.00	0.457
	2.00	47400		
	2.00	779		
	9653		**0.46**	
NC-8b	6.00	33.30	10.00	0.457
	2.00	47400		
	2.00	779		
	9656		**0.46**	
NC-9	6.00	86.20	10.00	0.457
	2.00	1880		
	2.00	4840.00		
	1396		**0.46**	
NC-10a	6.00	20.90	10.00	0.457
	2.00	1880		
	2.00	6440		
	1677		**0.46**	
NC-10b	6.00	47.80	10.00	0.457
	2.00	25300		
	2.00	5770		
	6243		**0.46**	
NC-10c	6.00	176.00	10.00	0.457
	2.00	25300		
	2.00	5770		
	6320		**0.46**	
NC-11	6.00	72.70	10.00	0.457
	2.00	1880		
	2.00	4840.00		
	1388		**0.46**	
NC-12	6.00	494.00	9.23	0.457
	2.00	1880	0.77	258.00
	2.00	258.00		
	724		**20.29**	
NC-13	6.00	120.00	10.00	0.457
	2.00	7190		
	2.00	1650.00		
	1840		**0.46**	

Depth-Weighted Average Calculations - North Central Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
NC-14	6.00	148.00	10.00	0.457
	2.00	1730		
	2.00	2330.00		
	901		**0.46**	
NC-15a	6.00	58.50	10.00	0.457
	2.00	1730		
	2.00	6090		
	1599		**0.46**	
NC-15b	6.00	15.50	10.00	0.457
	2.00	1730		
	2.00	6090		
	1573		**0.46**	
NC-15c	6.00	39.40	10.00	0.457
	2.00	1730		
	2.00	6090		
	1588		**0.46**	
NC-16	6.00	67.20	10.00	0.457
	2.00	7190		
	2.00	2330.00		
	1944		**0.46**	
NC-17a	8.00	199.00	10.00	0.457
	2.00	49000		
	9959		**0.46**	
NC-17b	8.00	815.00	10.00	0.457
	2.00	49000		
	10452		**0.46**	
NC-17c	8.00	1380.00	10.00	0.457
	2.00	49000		
	10904		**0.46**	
NC-17d	8.00	742.00	10.00	0.457
	2.00	49000		
	10394		**0.46**	
NC-17e	8.00	2500.00	10.00	0.457
	2.00	49000		
	11800		**0.46**	
NC-18a	6.00	1250.00	10.00	0.457
	2.00	7190		
	2.00	1300		
	2448		**0.46**	
NC-18b	6.00	603.00	10.00	0.457
	2.00	7190		
	2.00	1300		
	2060		**0.46**	
NC-18c	6.00	83.40	10.00	0.457
	2.00	7190		
	2.00	1300		
	1748		**0.46**	
NC-18d	6.00	129.00	10.00	0.457
	2.00	7190		
	2.00	4730		
	2461		**0.46**	
NC-18e	6.00	36.30	10.00	0.457
	2.00	7190		
	2.00	4730		
	2406		**0.46**	
NC-18f	6.00	96.70	10.00	0.457
	2.00	7190		
	2.00	4730		
	2442		**0.46**	

Depth-Weighted Average Calculations - North Central Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
NC-19a	8.00	37.50	10.00	0.457
	2.00	1900		
	410		**0.46**	
NC-19b	8.00	46.10	10.00	0.457
	2.00	1900		
	417		**0.46**	
NC-19c	8.00	50.00	10.00	0.457
	2.00	1900		
	420		**0.46**	
NC-19d	8.00	41.60	10.00	0.457
	2.00	1900		
	413		**0.46**	
NC-19e	8.00	33.50	10.00	0.457
	2.00	1900		
	407		**0.46**	
NC-20	8.00	2480.00	10.00	0.457
	2.00	49000		
	11784		**0.46**	
NC-21	8.00	2220.00	10.00	0.457
	2.00	49000		
	11576		**0.46**	
NC-22	8.00	298.00	10.00	0.457
	2.00	49000		
	10038		**0.46**	
NC-23	8.00	1440.00	10.00	0.457
	2.00	49000		
	10952		**0.46**	
NC-24	8.00	2320.00	10.00	0.457
	2.00	49000		
	11656		**0.46**	
NC-25	8.00	502.00	10.00	0.457
	2.00	49000		
	10202		**0.46**	
NC-26	8.00	3270.00	10.00	0.457
	2.00	49000		
	12416		**0.46**	
NC-27	8.00	296.00	10.00	0.457
	2.00	49000		
	10037		**0.46**	
NC-28	6.00	49.10	10.00	0.457
	2.00	7190		
	2.00	749.00		
	1617		**0.46**	
NC-29	8.00	68.90	10.00	0.457
	2.00	1900		
	435		**0.46**	
NC-30	8.00	1330	10.00	0.457
	2.00	1900		
	1444		**0.46**	
NC-31	6.00	27.00	10.00	0.457
	2.00	7190		
	2.00	3330.00		
	2120		**0.46**	
NC-32	8.00	324.00	10.00	0.457
	2.00	1900		
	639		**0.46**	
NC-33	8.00	535	10.00	0.457
	2.00	1900		
	808		**0.46**	
NC-34	6.00	27.00	10.00	0.457
	2.00	7190		
	2.00	3330.00		
	2120		**0.46**	
NC-35	8.00	19.10	10.00	0.457
	2.00	1900		
	395		**0.46**	
NC-36	8.00	959	10.00	0.457
	2.00	1900		
	1147		**0.46**	
NC-37	8.00	836.00	10.00	0.457
	2.00	1900		
	1049		**0.46**	

Depth-Weighted Average Calculations - South Central Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
SC-1	2.00	3.14	10.00	0.457
	2.00	19500		
	2.00	4320		
	2.00	10.9		
	2.00	2.51		
	4767		**0.46**	
SC-2	2.00	9.49	10.00	0.457
	2.00	19500		
	2.00	4320		
	2.00	48.7		
	2.00	2820		
	5340		**0.46**	
SC-3a	2.00	73.00	10.00	0.457
	2.00	19500		
	2.00	4320		
	2.00	14100		
	2.00	32400		
	14079		**0.46**	
SC-3b	2.00	25.30	8.10	0.457
	2.00	19500	1.90	5.30
	2.00	4320		
	2.00	362		
	2.00	5.3		
	4843		**1.38**	
SC-4	4.00	10.30	10.00	0.457
	2.00	199000		
	2.00	12000		
	2.00	3370		
	42878		**0.46**	
SC-5a	4.00	16.20	10.00	0.457
	2.00	199000		
	2.00	12000		
	2.00	6310		
	43468		**0.46**	
SC-5b	4.00	42.50	8.94	0.457
	2.00	199000	1.06	33.20
	2.00	12000		
	2.00	33.2		
	42224		**3.93**	
SC-6a	4.00	39.80	8.52	0.457
	2.00	5010	1.48	7.45
	2.00	1480		
	2.00	7.45		
	1315		**1.49**	
SC-6b	4.00	39.80	8.80	0.457
	2.00	5010	1.20	7.45
	2.00	1480		
	2.00	7.45		
	1315		**1.30**	
SC-7	2.00	40.70	10.00	0.457
	2.00	20800		
	2.00	115000		
	2.00	1160.0		
	2.00	51.1		
	27410		**0.46**	

Depth-Weighted Average Calculations - South Central Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
SC-8	8.00	10100	10.00	0.457
	2.00	50105		
	18101		**0.46**	
SC-9	2.00	59.70	10.00	0.457
	2.00	609		
	2.00	48.3		
	2.00	206000		
	2.00	17800		
	44903		**0.46**	
SC-10	2.00	71.80	8.27	0.457
	2.00	20800	1.73	8.09
	2.00	115000		
	2.00	1160		
	2.00	8.09		
	27408		**1.78**	
SC-11	4.00	23.70	10.00	0.457
	2.00	187000		
	2.00	28400		
	2.00	2690		
	43627		**0.46**	
SC-12	4.00	48.70	9.11	0.457
	2.00	187000	0.89	865.00
	2.00	11100		
	2.00	865		
	39812		**77.40**	
SC-13	2.00	47.60	8.29	0.457
	2.00	20800	1.71	0.926
	2.00	115000		
	2.00	1160		
	2.00	0.926		
	27402		**0.54**	
SC-14	4.00	4050.00	8.67	0.457
	2.00	187000	1.33	394.00
	2.00	25100		
	2.00	394		
	44119		**52.80**	
SC-15	2.00	24.50	8.25	0.457
	2.00	20800	1.75	4.15
	2.00	115000		
	2.00	1160		
	2.00	4.15		
	27398		**1.10**	
SC-16	4.00	345.00	8.58	0.457
	2.00	187000	1.42	175.00
	2.00	10800		
	2.00	175		
	39733		**25.24**	
SC-17	4.00	156.00	7.38	0.457
	2.00	187000	0.62	29.20
	2.00	29.2	2.00	9.39
	2.00	9.39		
	37470		**4.03**	

Depth-Weighted Average Calculations - Southwest Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
SW-1	2.00	15.70	8.25	0.457
	2.00	3880	1.75	98.80
	2.00	88300		
	2.00	11800		
	2.00	98.8		
	20819		**17.67**	
SW-2	2.00	28.60	8.10	0.457
	2.00	3880	1.90	188.00
	2.00	88300		
	2.00	27000		
	2.00	188		
	23879		**36.09**	
SW-3	2.00	16.00	8.12	0.457
	2.00	3880	1.88	4.47
	2.00	88300		
	2.00	3060		
	2.00	4.47		
	19052		**1.21**	
SW-4	2.00	17.10	7.60	0.457
	2.00	5060	0.40	1000.00
	2.00	4130	2.00	20.1
	2.00	1000		
	2.00	20.1		
	2045		**50.43**	
SW-5A	2.00	79.50	10.00	0.457
	2.00	2620		
	2.00	1960		
	2.00	1330		
	2.00	2200		
	1638		**0.46**	
SW-5B	2.00	118.00	7.96	0.457
	2.00	5060	0.04	1730.00
	2.00	4130	2.00	25.70
	2.00	1730		
	2.00	25.7		
	2213		**5.53**	
SW-6	2.00	8600.00	8.08	0.457
	2.00	16900	1.92	59.30
	2.00	1200		
	2.00	2190		
	2.00	59.3		
	5790		**11.75**	
SW-7	2.00	11.00	8.09	0.457
	2.00	3880	1.91	270.00
	2.00	88300		
	2.00	4200		
	2.00	270		
	19332		**51.94**	
SW-8	2.00	8100.00	8.09	0.457
	2.00	71300	1.91	130.00
	2.00	63500		
	2.00	1220		
	2.00	130		
	28850		**25.20**	

Depth-Weighted Average Calculations - Southwest Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
SW-9	2.00	11.00	8.09	0.457
	2.00	3880	1.91	270.00
	2.00	88300		
	2.00	4200		
	2.00	270		
	19332		**51.94**	
SW-10	2.00	473	8.10	0.457
	2.00	473	1.90	270.00
	2.00	1250		
	2.00	4200		
	2.00	270		
	1333		**51.67**	
SW-11	2.00	319	8.10	0.457
	2.00	319	1.90	4.47
	2.00	1250		
	2.00	3060		
	2.00	4.47		
	990		**1.22**	
SW-12	2.00	1570	8.98	0.457
	2.00	47800	1.02	130.00
	2.00	35800		
	2.00	1220		
	2.00	130		
	17304		**13.67**	
SW-13	2.00	1790	7.13	0.457
	2.00	63900	0.87	686.00
	2.00	3230	2.00	30.9
	2.00	686		
	2.00	30.9		
	13927		**66.19**	
SW-14	2.00	13700	10.00	0.457
	2.00	47700		
	2.00	2690		
	2.00	55.6		
	2.00	2400		
	13309		**0.46**	
SW-15A	2.00	1270	7.61	0.457
	2.00	2170	0.39	50.20
	2.00	2610	2.00	6.28
	2.00	50.2		
	2.00	6.28		
	1221		**3.56**	
SW-15B	2.00	382	6.45	0.457
	2.00	2170	1.55	80.70
	2.00	6680	2.00	0.919
	2.00	80.7		
	2.00	0.919		
	1863		**12.99**	
SW-16	2.00	212	6.60	0.457
	2.00	63900	1.40	158.00
	2.00	702	2.00	14.9
	2.00	158		
	2.00	14.9		
	12997		**25.40**	

Depth-Weighted Average Calculations - Southwest Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
SW-17	2.00	212	6.60	0.457
	2.00	63900	1.40	158.00
	2.00	702	2.00	14.9
	2.00	158		
	2.00	14.9		
	12997		**25.40**	
SW-18	2.00	455	6.56	0.457
	2.00	63900	1.44	328.00
	2.00	6200	2.00	42.4
	2.00	328		
	2.00	42.4		
	14185		**56.01**	
SW-19	2.00	93	6.60	0.457
	2.00	63900	1.40	198.00
	2.00	2110	2.00	3.4
	2.00	198		
	2.00	3.4		
	13261		**28.70**	
SW-20	2.00	33	8.10	0.457
	2.00	3770	1.90	5.83
	2.00	10100		
	2.00	1320		
	2.00	5.83		
	3046		**1.48**	
SW-21	2.00	4.58	8.24	0.457
	2.00	3770	1.76	1.88
	2.00	10100		
	2.00	1320		
	2.00	1.88		
	3039		**0.71**	
SW-22	2.00	31.90	8.23	0.457
	2.00	3770	1.77	3.66
	2.00	10100		
	2.00	1320		
	2.00	3.66		
	3045		**1.02**	
SW-23a	2.00	47.70	8.10	0.457
	2.00	3770	1.90	6.08
	2.00	10100		
	2.00	1320		
	2.00	6.08		
	3049		**1.53**	
SW-23b	2.00	7.92	8.12	0.457
	2.00	16100	1.88	129.00
	2.00	6930		
	2.00	1970		
	2.00	129		
	5027		**24.62**	
SW-24	2.00	150.00	7.16	0.457
	2.00	717	0.84	225.00
	2.00	2052	2.00	30.3
	2.00	225		
	2.00	30.3		
	635		**25.29**	

Depth-Weighted Average Calculations - Southwest Excavation Area
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Polygon	Original DWA		Final DWA	
	Thickness	Concentration	Thickness	Concentration
SW-25	2.00	28.80	6.54	0.457
	2.00	2170	1.46	6.39
	2.00	3910	2.00	1.75
	2.00	6.39		
	2.00	1.75		
	1223		**1.58**	
SW-26	2.00	9.74	6.23	0.46
	2.00	717	1.77	8.26
	2.00	2052	2.00	17.00
	2.00	8.26		
	2.00	17		
	561		**5.15**	
SW-27	2.00	150.00	6.04	0.457
	2.00	13500	1.96	225.00
	2.00	84.3	2.00	30.30
	2.00	225		
	2.00	30.3		
	2798		**50.44**	
SW-28	2.00	6390.00	6.14	0.457
	2.00	717.4	1.86	6.16
	2.00	2052	2.00	2.97
	2.00	6.16		
	2.00	2.97		
	1834		**2.02**	
SW-29	2.00	9.49	6.12	0.457
	2.00	717	1.88	1.24
	2.00	2052	2.00	1.04
	2.00	1.24		
	2.00	1.04		
	556		**0.72**	
SW-30	2.00	327.00	3.16	0.457
	2.00	1.84	0.84	1.84
	2.00	0.665	2.00	0.665
	2.00	0.771	2.00	0.771
	2.00	0.687	2.00	0.687
	66		**0.72**	

RA Construction – Diagnostic Water Sampling
Analytical Results - Dioxins/Furans
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Description: Sample Location: Sample Identification: Sample Date:	Units	Minimum Level[1]	Diagnostic Water Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-042723-W-MTK-WTS-1 04/27/2023
Dioxins/Furans			
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	100	ND
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	100	ND
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	50	ND
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	50	ND
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	50	ND
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50	ND
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50	ND
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50	ND
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	50	ND
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	50	ND
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	50	ND
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	10	ND
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	10	ND

Notes:
[1] Per 40 Code of Federal Regulations (CFR) Appendix A-to-Part 136 31 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).
ND - non-detect at the Minimum Level.
pg/L - picogram per liter.

RA Construction – Diagnostic Water Sampling
Analytical Results - Metals, TSS, and pH
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Description: Sample Location: Sample Identification: Sample Date:	Units	Reporting Limit	Diagnostic Water Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-042723-W-MTK-WTS-1 04/27/2023	Diagnostic Water Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-042723-W-MTK-WTS-1-TSS 04/27/2023	Diagnostic Water Sampling Results San Jacinto River Waste Pits - Southern Impoundment WTS-1 Field pH Reading 04/27/2023
Metals					
Antimony	mg/L	0.006	ND	--	--
Arsenic	mg/L	0.003	ND	--	--
Barium	mg/L	0.200	0.217	--	--
Cadmium	mg/L	0.003	ND	--	--
Chromium	mg/L	0.010	ND	--	--
Copper	mg/L	0.010	ND	--	--
Lead	mg/L	0.003	ND	--	--
Mercury	mg/L	0.0002	0.00022 J	--	--
Nickel	mg/L	0.010	ND	--	--
Selenium	mg/L	0.010	ND	--	--
Silver	mg/L	0.010	ND	--	--
Thallium	mg/L	0.010	ND	--	--
Zinc	mg/L	0.020	ND	--	--
General Chemistry					
Total Suspended Solids (TSS)	mg/L	4.0	ND	ND	--
pH[1]	s.u.	NA	--	--	8.47

Notes:
ND - Not detected at the reporting limit.
NA - Not Applicable.
J - Estimated concentration.
mg/L - milligram per liter.
s.u. - standard unit.
-- indicates sample was not analyzed for specific constituent.
[1] pH readings were measured with a field pH meter at the Site.

Table 12

RA Construction – Water Treatment System Sampling Analytical Results - Dioxins/Furans
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Description: Sample Location: Sample Identification: Sample Date:	Units	Minimum Level[1]	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-060123-W-MTK-WTS-2-Total 6/1/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-061423-W-MTK-WTS-3-Total 06/14/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-072023-W-MTK-WTS-4-Total 07/20/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-110723-W-MTK-WTS-5 11/7/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-110723-W-MTK-DUP-1 11/7/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-111623-W-MTK-WTS-6 11/16/2023
Dioxins/Furans								
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	100	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	100	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	50	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	50	ND	ND	ND	ND	ND	ND
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	10	ND	ND	ND	ND	ND	ND
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	10	ND	ND	ND	ND	ND	ND

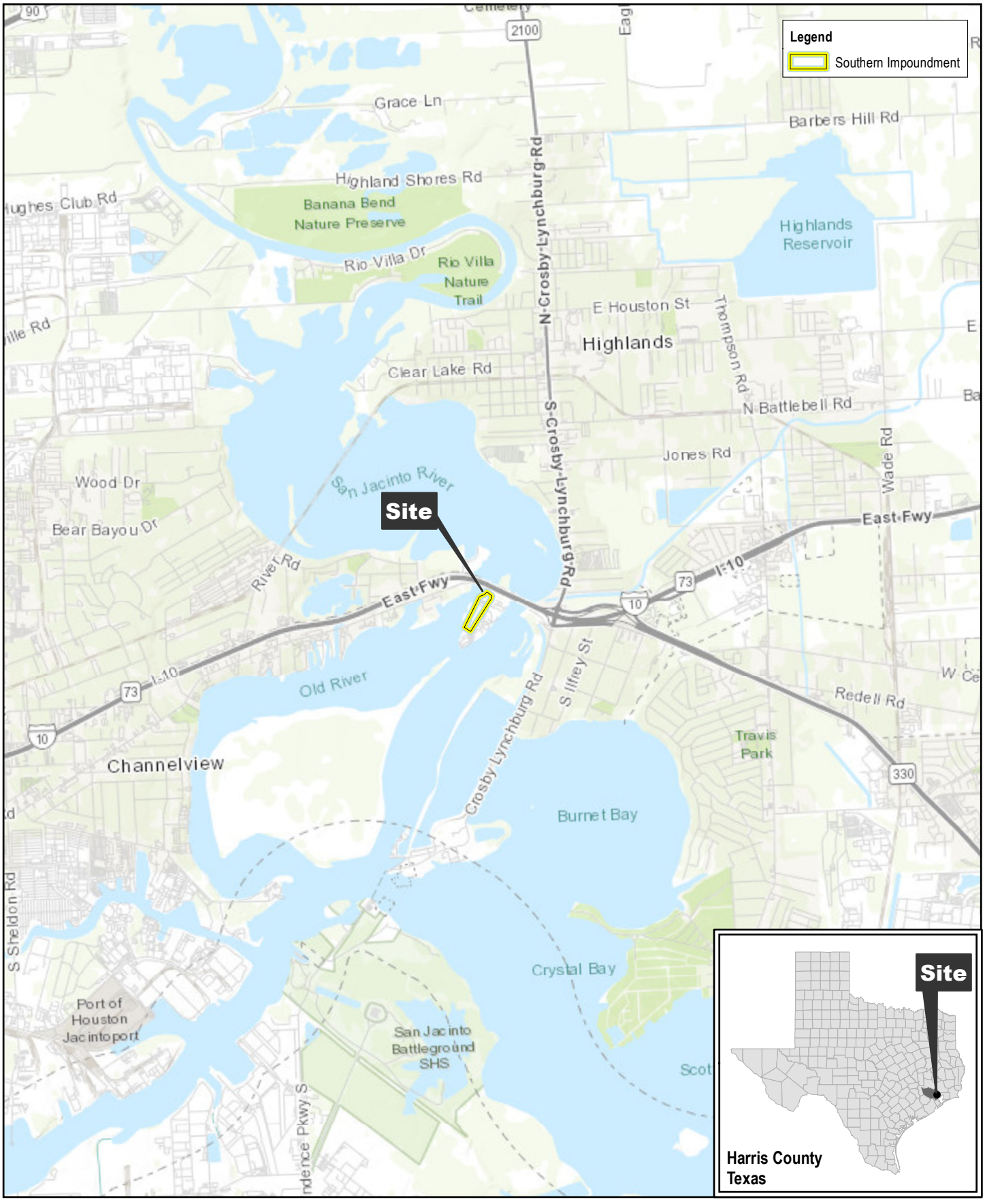
Notes:
[1] Per 40 Code of Federal Regulations (CFR) Appendix A-to-Part 136 31 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).
ND - non-detect at the Minimum Level.
pg/L - picogram per liter.

Table 13

RA Construction – Water Treatment Sampling Analytical Results - Metals, TSS, and pH
Southern Impoundment
San Jacinto River Waste Pits Site
Harris County, Texas

Sample Description: Sample Location: Sample Identification: Sample Date:	Units	Reporting Limit[1]	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-053023-W-MTK-WTS-2-TSS 05/30/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-060123-W-MTK-WTS-2 06/01/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-061423-W-MTK-WTS-3 06/14/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-071523-W-MTK-WTS-4-TSS 07/15/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-072023-W-MTK-WTS-4 07/20/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-072723-W-WTS-4-TSS 07/27/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-110223-W-MTK-WTS-5-TSS 11/2/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-110723-W-MTK-WTS-5 11/7/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-110723-W-MTK-DUP-1 11/7/2023	Water Treatment Sampling Results San Jacinto River Waste Pits - Southern Impoundment 12599404-111623-W-MTK-WTS-6 11/16/2023
Metals												
Antimony	mg/L	0.006	--	ND	ND	--	ND	--	--	--	--	--
Arsenic	mg/L	0.003	--	ND	ND	--	ND	--	--	--	--	--
Barium	mg/L	0.200	--	ND	ND	--	ND	--	--	--	--	--
Cadmium	mg/L	0.003	--	ND	ND	--	ND	--	--	--	--	--
Chromium	mg/L	0.010	--	ND	ND	--	ND	--	--	--	--	--
Copper	mg/L	0.010	--	ND	ND	--	ND	--	--	--	--	--
Lead	mg/L	0.003	--	ND	ND	--	ND	--	--	--	--	--
Mercury	mg/L	0.0002	--	ND	ND	--	ND	--	--	--	--	--
Nickel	mg/L	0.010	--	ND	ND	--	ND	--	--	--	--	--
Selenium	mg/L	0.010	--	ND	ND	--	ND	--	--	--	--	--
Silver	mg/L	0.010	--	ND	ND	--	ND	--	--	--	--	--
Thallium	mg/L	0.010	--	ND	ND	--	ND	--	--	--	--	--
Zinc	mg/L	0.020	--	ND	0.0288	--	0.049	--	--	--	--	--
Antimony	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Arsenic	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Barium	mg/L	0.0200	--	--	--	--	--	--	--	0.533	0.376	--
Cadmium	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Chromium	mg/L	0.0200	--	--	--	--	--	--	--	ND	ND	--
Copper	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Lead	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Mercury	mg/L	0.000200	--	--	--	--	--	--	--	ND	ND	--
Nickel	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Selenium	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Silver	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Thallium	mg/L	0.0100	--	--	--	--	--	--	--	ND	ND	--
Zinc	mg/L	0.0200	--	--	--	--	--	--	--	0.121	0.0876	--
Antimony	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Arsenic	mg/L	0.00200	--	--	--	--	--	--	--	--	--	0.00254
Barium	mg/L	0.00400	--	--	--	--	--	--	--	--	--	0.254
Cadmium	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Chromium	mg/L	0.00400	--	--	--	--	--	--	--	--	--	ND
Copper	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Lead	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Mercury	mg/L	0.000200	--	--	--	--	--	--	--	--	--	ND
Nickel	mg/L	0.00200	--	--	--	--	--	--	--	--	--	0.00647
Selenium	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Silver	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Thallium	mg/L	0.00200	--	--	--	--	--	--	--	--	--	ND
Zinc	mg/L	0.00400	--	--	--	--	--	--	--	--	--	0.0169
General Chemistry												
Total Suspended Solids (TSS)	mg/L	4.0	ND	ND	ND	R	ND	--	--	--	--	--
TSS	mg/L	2.5	--	--	--	--	--	4.67	17.0	21.3 J	8.40 J	5.6
pH[2]	s.u.	NA	--	8.04	7.86	--	7.79	--	8.17	--	--	8.09

Notes:
ND - Not detected at the reporting limit.
NA - Not Applicable.
J - Estimated concentration.
mg/L - milligram per liter.
s.u. - standard unit.
R - Rejected.
The TSS result for sample "12599404-071523-W-MTK-WTS-4-TSS" was not detected at the reporting limit. However, the sample was rejected due to sample holding time being exceeded by two days. Therefore, an additional TSS sample "12599404-072723-W-WTS-4-TSS" was collected from the effluent tank on 7/27/23 and analyzed within holding time.
-- indicates sample was not analyzed for specific constituent.
[1] Samples collected in May 2023, June 2023, and July 2023 (WTS-2 through WTS-4) were analyzed at a different laboratory than the samples collected from November 2023 (WTS-5 and WTS-6), and the respective associated reporting limits for both metals and TSS from each laboratory are shown.
In addition, samples "12599404-110723-W-MTK-WTS-5" and "12599404-110723-W-MTK-DUP-1" have elevated reporting limits due to dilution for high concentrations of non-target analytes.
[2] pH readings were measured with a field pH meter at the Site.



Paper Size ANSI A

0 0.25 0.5 0.75 1

Miles

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

Project No. **12599404**
Date **Aug 6, 2024**

VICINITY MAP

FIGURE 1

Q:\GIS\PROJECTS\12599000s\12599404\RPT004\12599404_RPT004_GIS004.mxd

Data source: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community.

Paper Size ANSI A

0 125 250 375 500

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

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SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

SOUTHERN IMPOUNDMENT BOUNDARY

Project No. **12599404**
Date **Aug 6, 2024**

FIGURE 2

Q:\GIS\PROJECTS\12599000s\12599404\RPT004\12599404_RPT004_GIS005.mxd

Data source: ©2024 Google, Imagery Date 2/9/2023

SOURCE:

TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

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- 620 EXISTING CONTOUR INTERVAL
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- SHORELINE
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- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- SJSB002 PDIRI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
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- PRE-CONSTRUCTION SIDEWALL/ BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS
- PRE-CONSTRUCTION BASE OF EXCAVATION CONFIRMATION BORING LOCATIONS

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn **JC**	Designer **RH**
Drafting Check **BS**	Design Check **LL**
Project Coordinator **CM**	Date **Jul 26, 2024**
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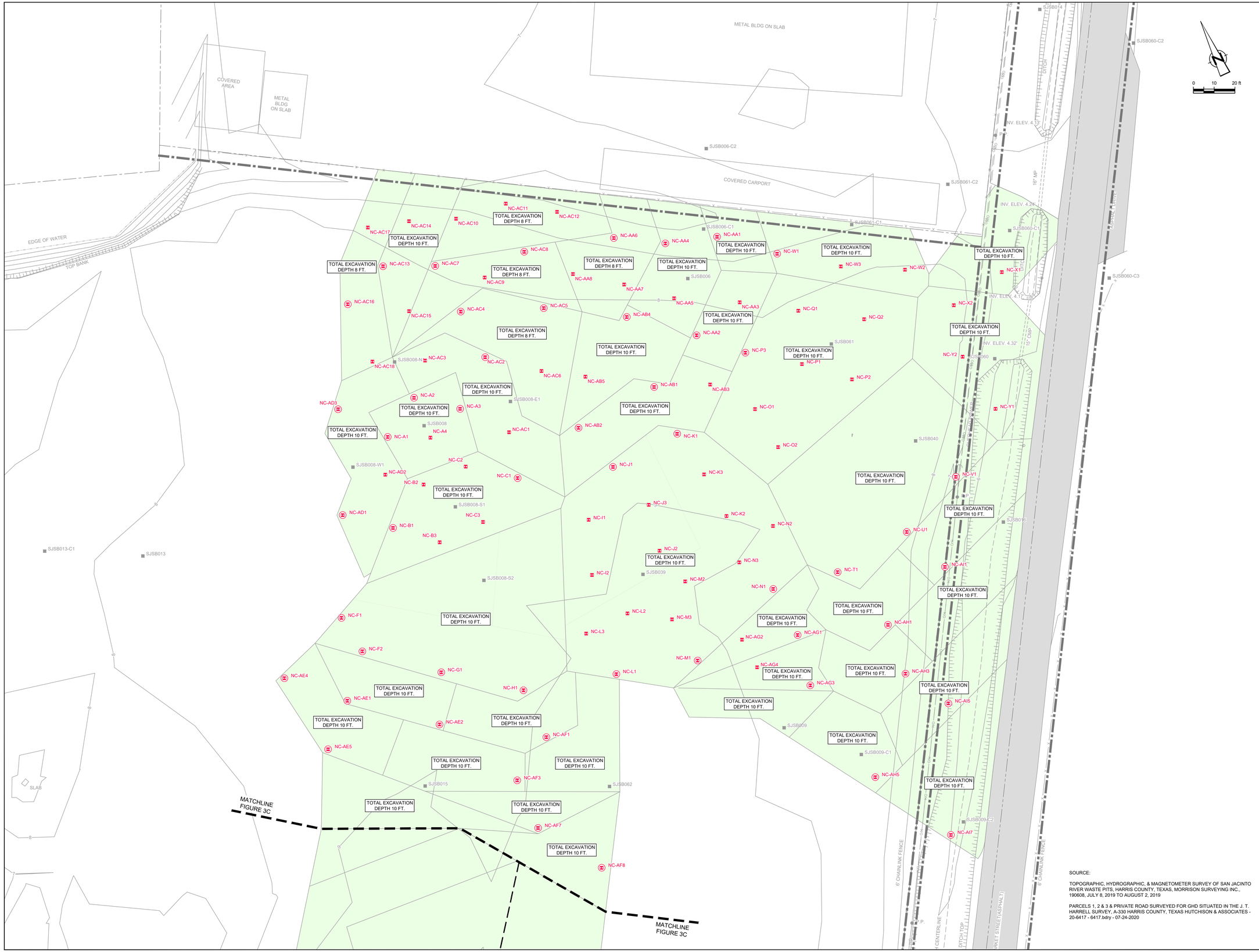
Project No. **12599404**

Title
REMEDIATION LIMITS NORTHEAST EXCAVATION AREA

Sheet No.
FIGURE 3A

Sheet - of -

Plot Date: 26 July 2024 - 1:29 PM Plotted By: Jonathan Compton Filename: \\ghdnet\ghd\US\Baton Rouge\Projects\562\12599404\Digital_Design\ACAD\Figures\RPT004\12599404-GHD-00-00-FIG-GN-D001-RPT004.dwg



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Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

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Drafting Check BS	Design Check LL
Project Coordinator CM	Date Jul 26, 2024
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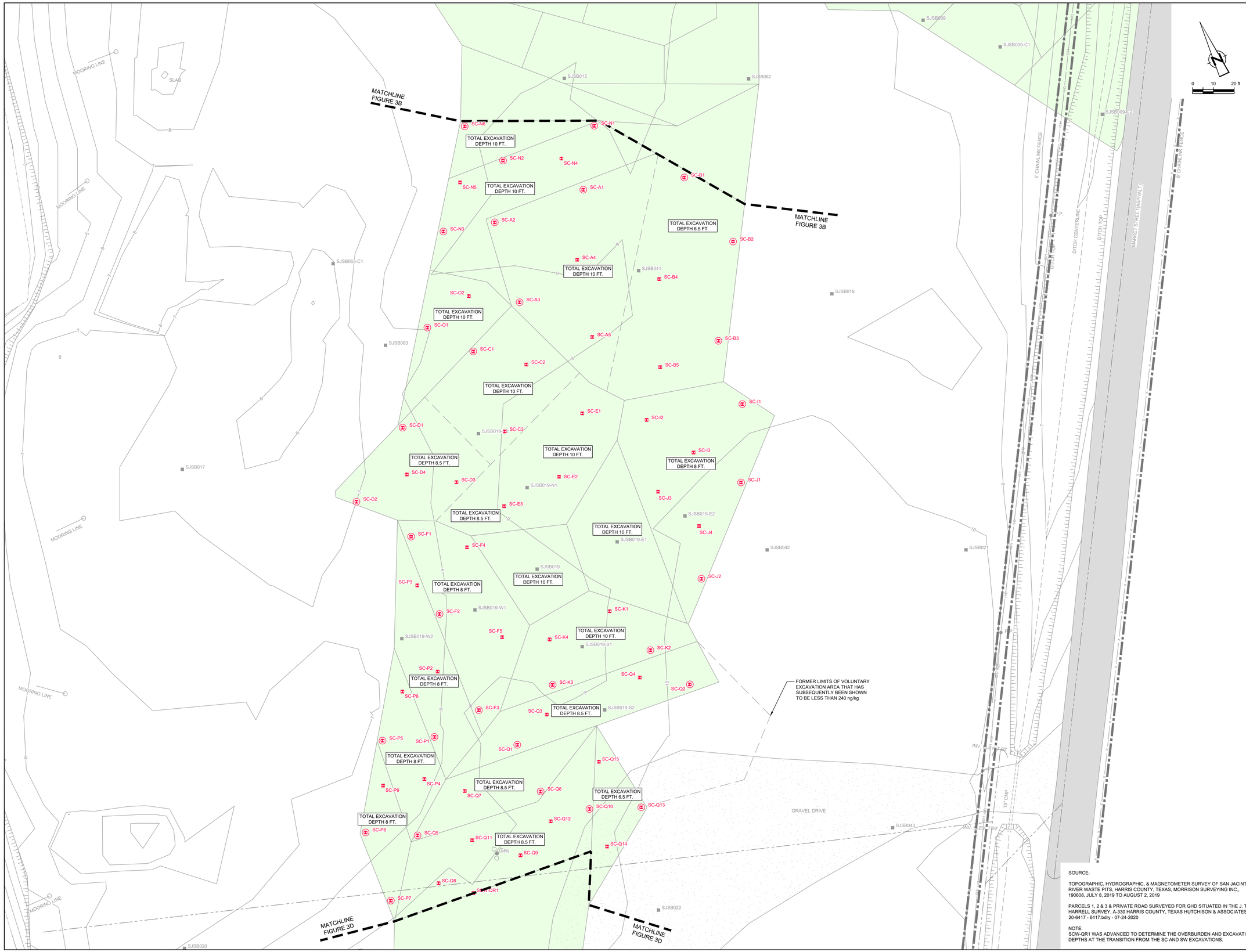
Project No. 12599404

Title
REMEDIATION LIMITS NORTHCENTRAL EXCAVATION AREA

Sheet No.
FIGURE 3B

Sheet - of -



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Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

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Title
REMEDIATION LIMITS SOUTHCENTRAL EXCAVATION AREA

Sheet No.
FIGURE 3C

Sheet - of -

SOURCE:

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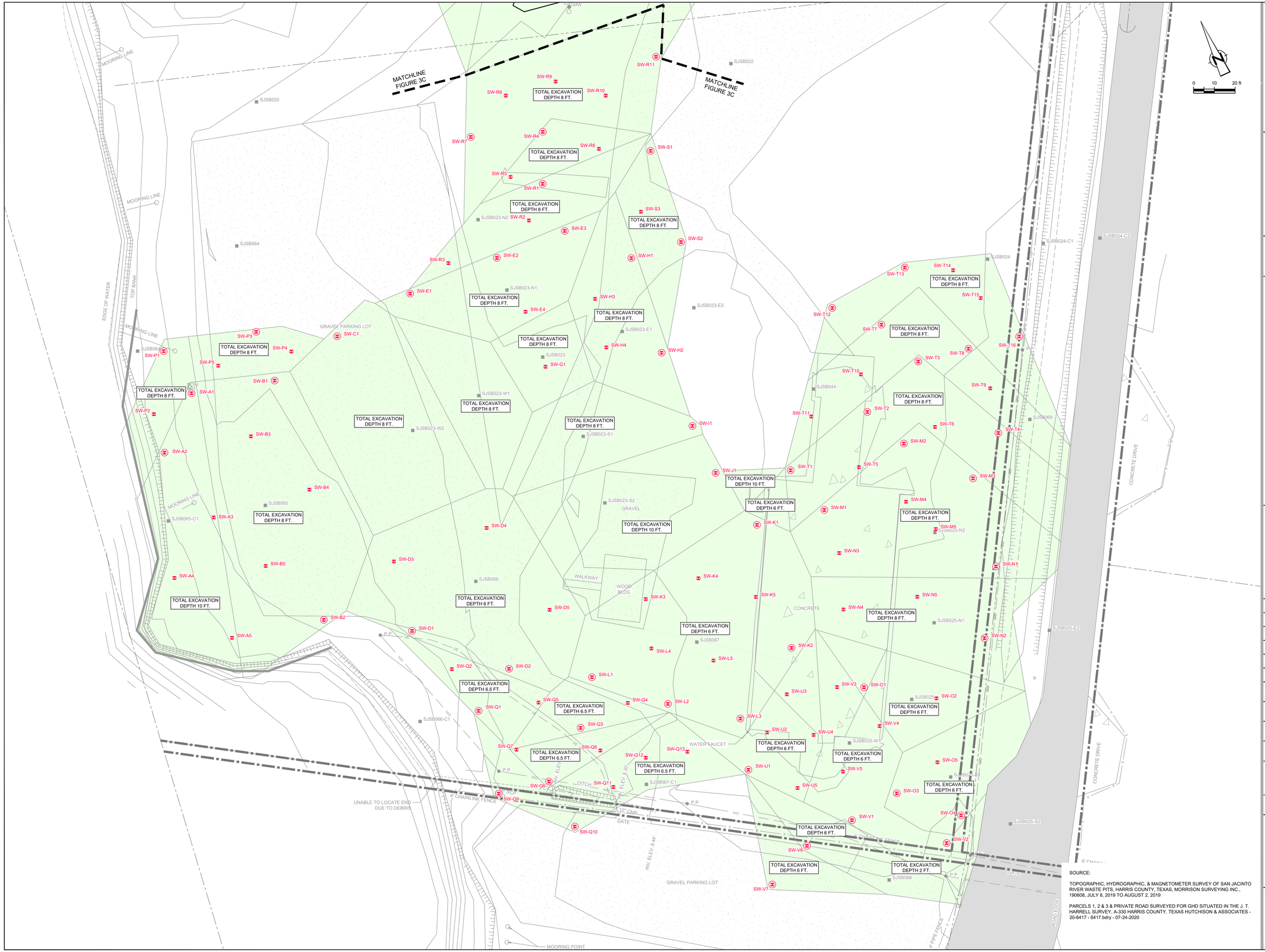
NOTE:
SCW-QR1 WAS ADVANCED TO DETERMINE THE OVERBURDEN AND EXCAVATION DEPTHS AT THE TRANSITION FROM THE SC AND SW EXCAVATIONS.

Plot Date: 26 July 2024 - 2:04 PM Plotted By: Jonathan Compton Filename: \\ghdnet\ghd\US\Baton Rouge\Projects\56\12599404\Digital_Design\ACAD\Figures\RPT004\12599404-GHD-00-00-FIG-GN-D003-RPT004.dwg



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Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

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Project No. **12599404**

Title
REMEDIATION LIMITS SOUTHWEST EXCAVATION AREA

Sheet No.
FIGURE 3D
Sheet - of -

SOURCE:

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Plot Date: 26 July 2024 - 2:04 PM
Plotted By: Jonathan Compton
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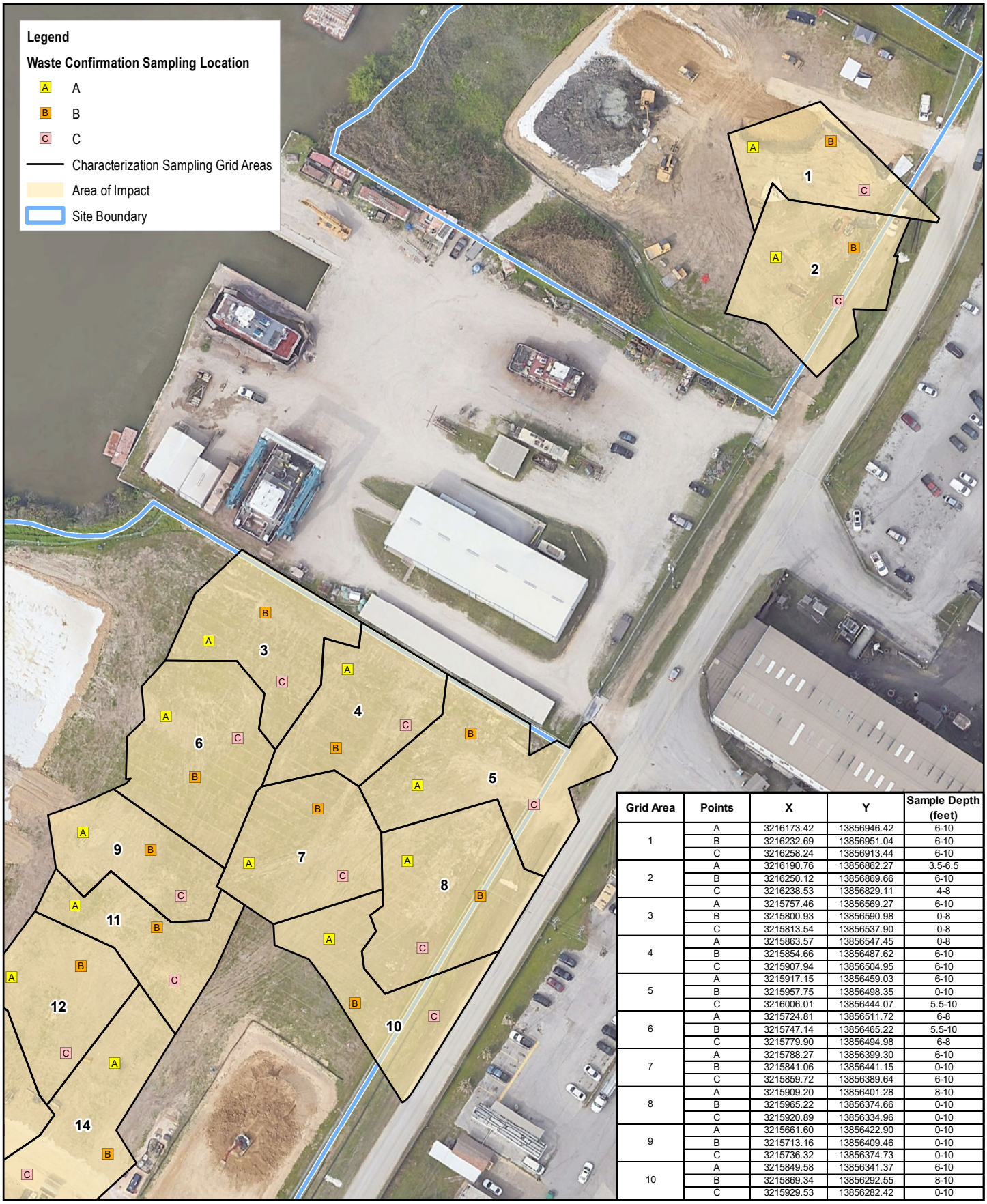

Grid Area	Points	X	Y	Sample Depth (feet)
1	A	3216173.42	13856946.42	6-10
	B	3216232.69	13856951.04	6-10
	C	3216258.24	13856913.44	6-10
2	A	3216190.76	13856862.27	3.5-6.5
	B	3216250.12	13856869.66	6-10
	C	3216238.53	13856829.11	4-8
3	A	3215757.46	13856569.27	6-10
	B	3215800.93	13856590.98	0-8
	C	3215813.54	13856537.90	0-8
4	A	3215863.57	13856547.45	0-8
	B	3215854.66	13856487.62	6-10
	C	3215907.94	13856504.95	6-10
5	A	3215917.15	13856459.03	6-10
	B	3215957.75	13856498.35	0-10
	C	3216006.01	13856444.07	5.5-10
6	A	3215724.81	13856511.72	6-8
	B	3215747.14	13856465.22	5.5-10
	C	3215779.90	13856494.98	6-8
7	A	3215788.27	13856399.30	6-10
	B	3215841.06	13856441.15	0-10
	C	3215859.72	13856389.64	6-10
8	A	3215909.20	13856401.28	8-10
	B	3215965.22	13856374.66	0-10
	C	3215920.89	13856334.96	0-10
9	A	3215661.60	13856422.90	0-10
	B	3215713.16	13856409.46	0-10
	C	3215736.32	13856374.73	0-10
10	A	3215849.58	13856341.37	6-10
	B	3215869.34	13856292.55	8-10
	C	3215929.53	13856282.42	0-10

Paper Size ANSI A

0 25 50 75 100

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

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SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

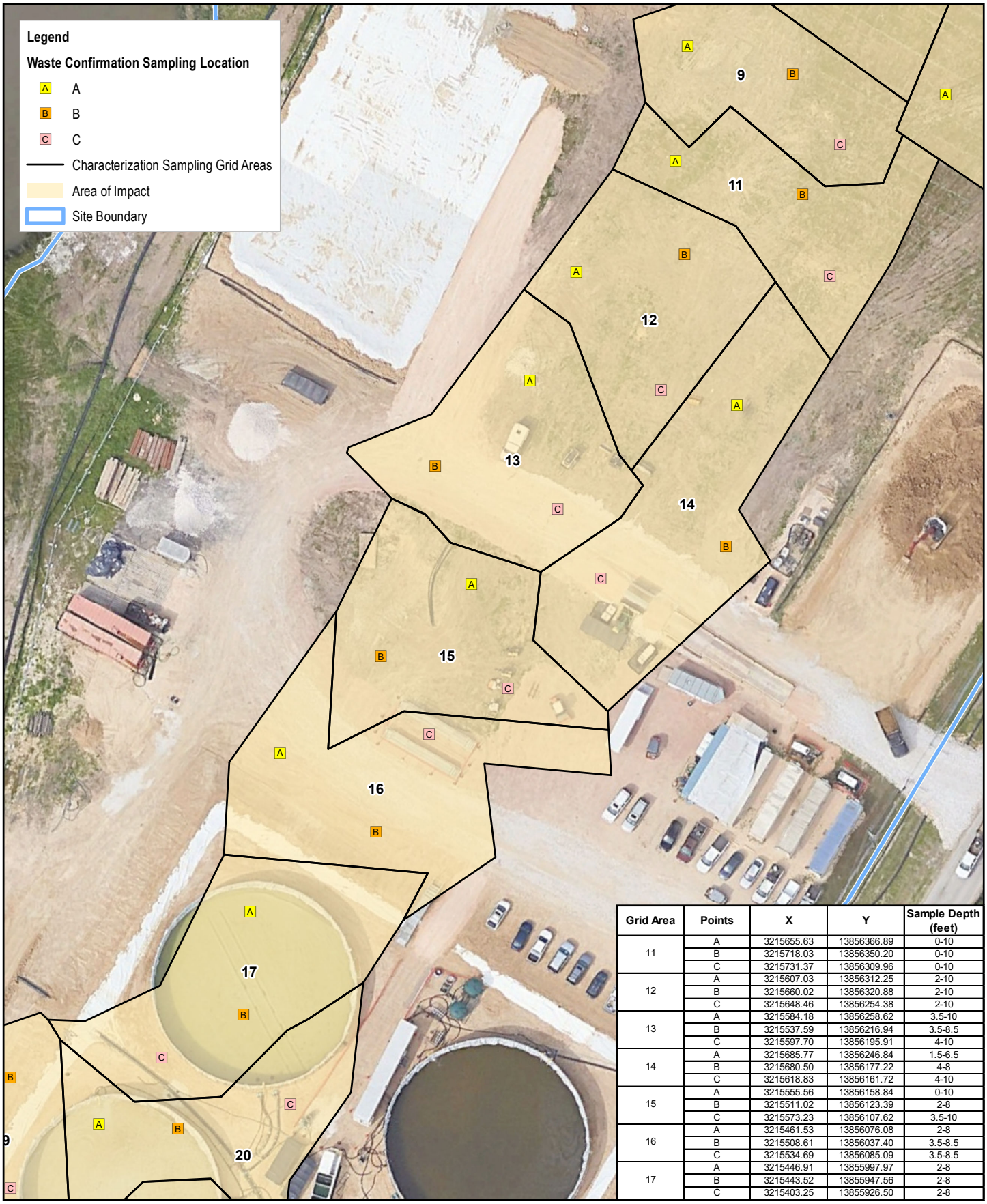
WASTE CONFIRMATION SAMPLING LOCATIONS (GRIDS 1-10)

Project No. 12599404
Date Jul 31, 2024

FIGURE 4A

Q:\GIS\PROJECTS\12599000s\12599404\RPT004\12599404_RPT004_GIS001.mxd

Data source: Google Earth Basemap, Imagery Date 2/9/2023



Grid Area	Points	X	Y	Sample Depth (feet)
11	A	3215655.63	13856366.89	0-10
	B	3215718.03	13856350.20	0-10
	C	3215731.37	13856309.96	0-10
12	A	3215607.03	13856312.25	2-10
	B	3215660.02	13856320.88	2-10
	C	3215648.46	13856254.38	2-10
13	A	3215584.18	13856258.62	3.5-10
	B	3215537.59	13856216.94	3.5-8.5
	C	3215597.70	13856195.91	4-10
14	A	3215685.77	13856246.84	1.5-6.5
	B	3215680.50	13856177.22	4-8
	C	3215618.83	13856161.72	4-10
15	A	3215555.56	13856158.84	0-10
	B	3215511.02	13856123.39	2-8
	C	3215573.23	13856107.62	3.5-10
16	A	3215461.53	13856076.08	2-8
	B	3215508.61	13856037.40	3.5-8.5
	C	3215534.69	13856085.09	3.5-8.5
17	A	3215446.91	13855997.97	2-8
	B	3215443.52	13855947.56	2-8
	C	3215403.25	13855926.50	2-8

Paper Size ANSI A

0 15 30 45 60

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

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SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

WASTE CONFIRMATION SAMPLING LOCATIONS (GRIDS 11-17)

Project No. **12599404**

Date **Jul 31, 2024**

FIGURE 4B

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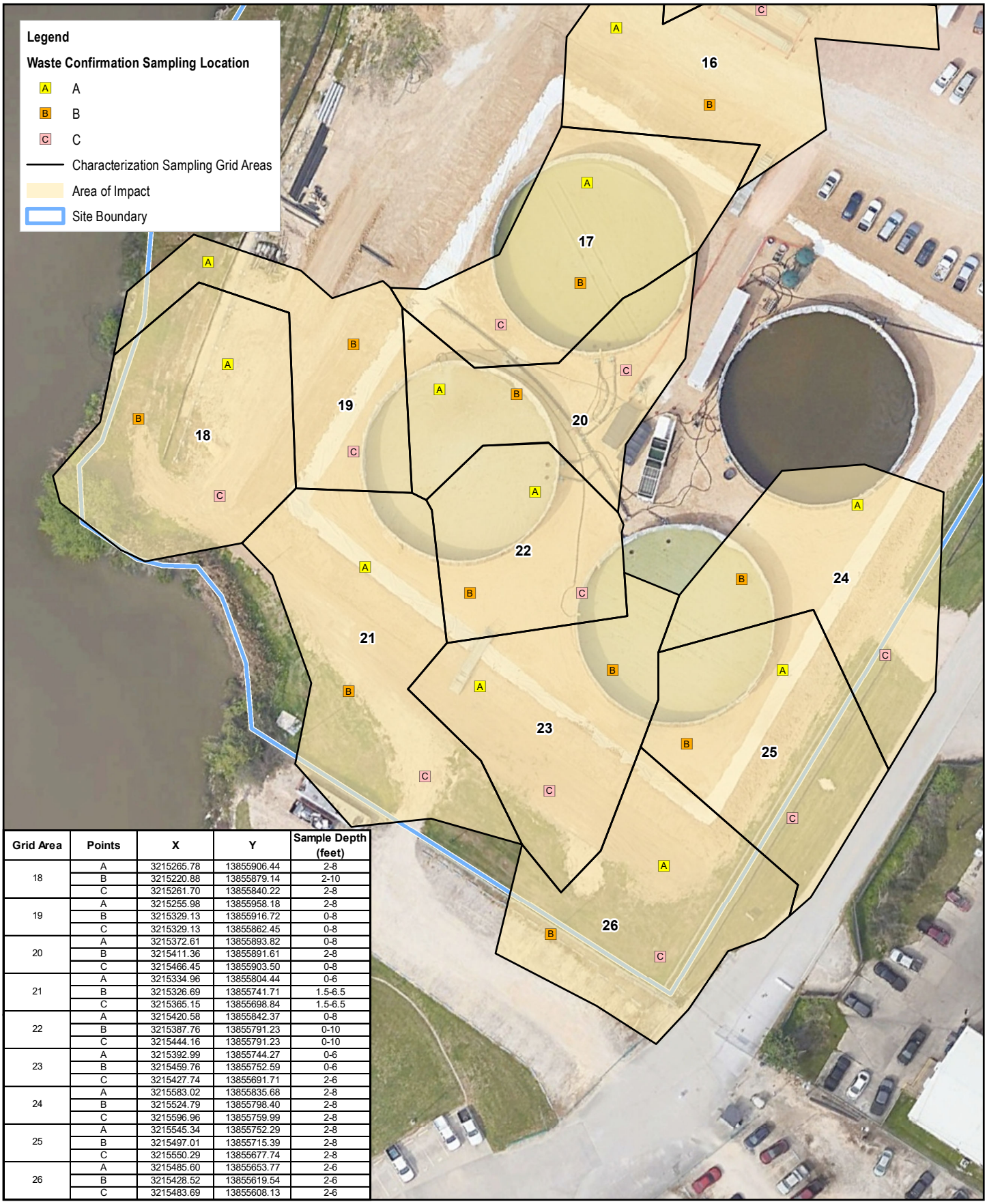
Data source: Google Earth Basemap, Imagery Date 2/9/2023



Grid Area	Points	X	Y	Sample Depth (feet)
18	A	3215265.78	13855906.44	2-8
	B	3215220.88	13855879.14	2-10
	C	3215261.70	13855840.22	2-8
19	A	3215255.98	13855958.18	2-8
	B	3215329.13	13855916.72	0-8
	C	3215329.13	13855862.45	0-8
20	A	3215372.61	13855893.82	0-8
	B	3215411.36	13855891.61	2-8
	C	3215466.45	13855903.50	0-8
21	A	3215334.96	13855804.44	0-6
	B	3215326.69	13855741.71	1.5-6.5
	C	3215365.15	13855698.84	1.5-6.5
22	A	3215420.58	13855842.37	0-8
	B	3215387.76	13855791.23	0-10
	C	3215444.16	13855791.23	0-10
23	A	3215392.99	13855744.27	0-6
	B	3215459.76	13855752.59	0-6
	C	3215427.74	13855691.71	2-6
24	A	3215583.02	13855835.68	2-8
	B	3215524.79	13855798.40	2-8
	C	3215596.96	13855759.99	2-8
25	A	3215545.34	13855752.29	2-8
	B	3215497.01	13855715.39	2-8
	C	3215550.29	13855677.74	2-8
26	A	3215485.60	13855653.77	2-6
	B	3215428.52	13855619.54	2-6
	C	3215483.69	13855608.13	2-6

Paper Size ANSI A

0 15 30 45 60

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

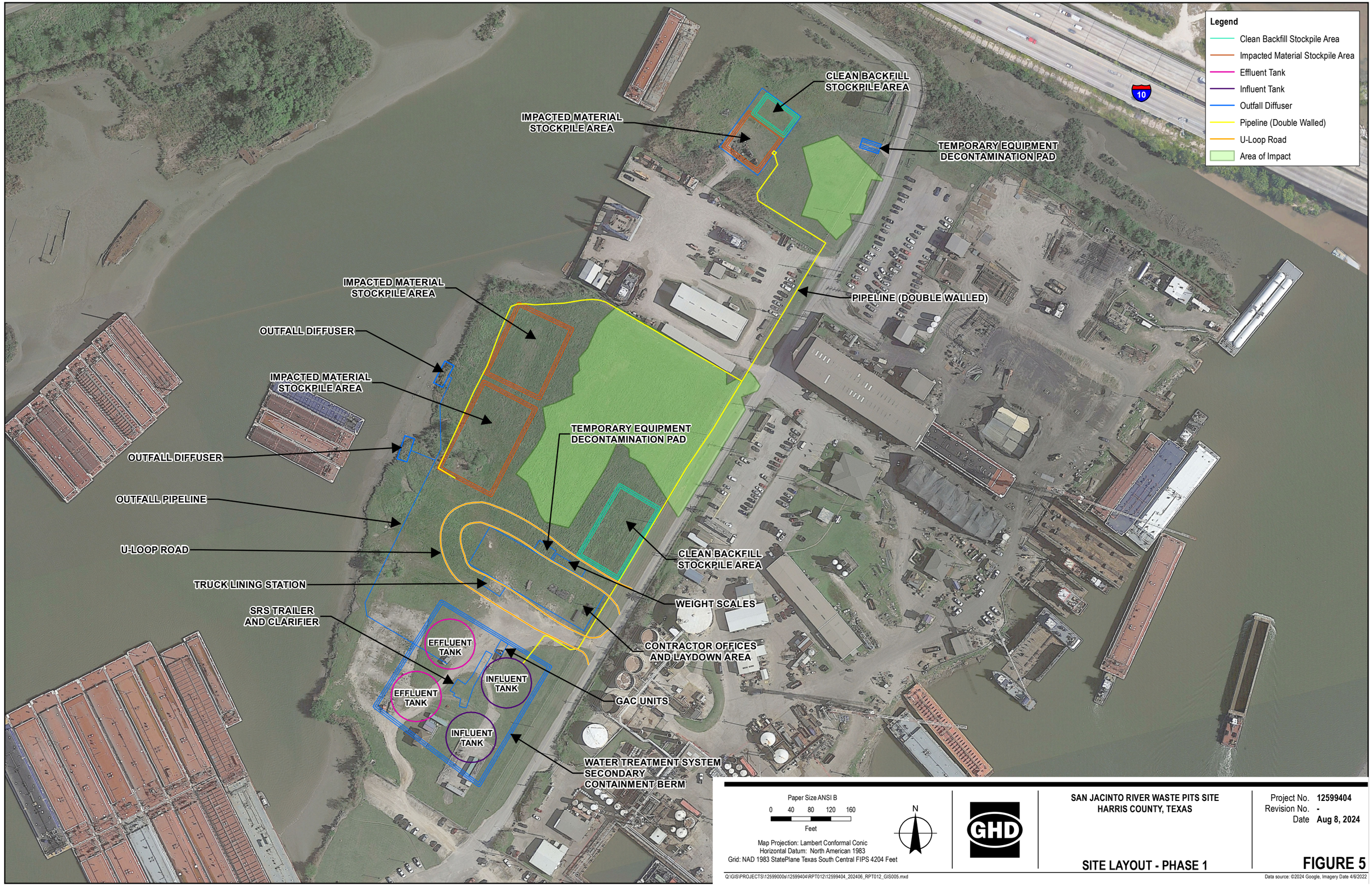
WASTE CONFIRMATION SAMPLING LOCATIONS (GRIDS 18-26)

Project No. 12599404
Date Jul 31, 2024

FIGURE 4C

Q:\GIS\PROJECTS\12599000s\12599404\RPT004\12599404_RPT004_GIS003.mxd

Data source: Google Earth Basemap, Imagery Date 2/9/2023



Paper Size ANSI B

0 40 80 120 160

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

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SAN JACINTO RIVER WASTE PITS SITE
HARRIS COUNTY, TEXAS

Project No. **12599404**
Revision No. **-**
Date **Aug 8, 2024**

SITE LAYOUT - PHASE 1

FIGURE 5

Q:\GIS\PROJECTS\12599000s\12599404\RPT012\12599404_202406_RPT012_GIS005.mxd

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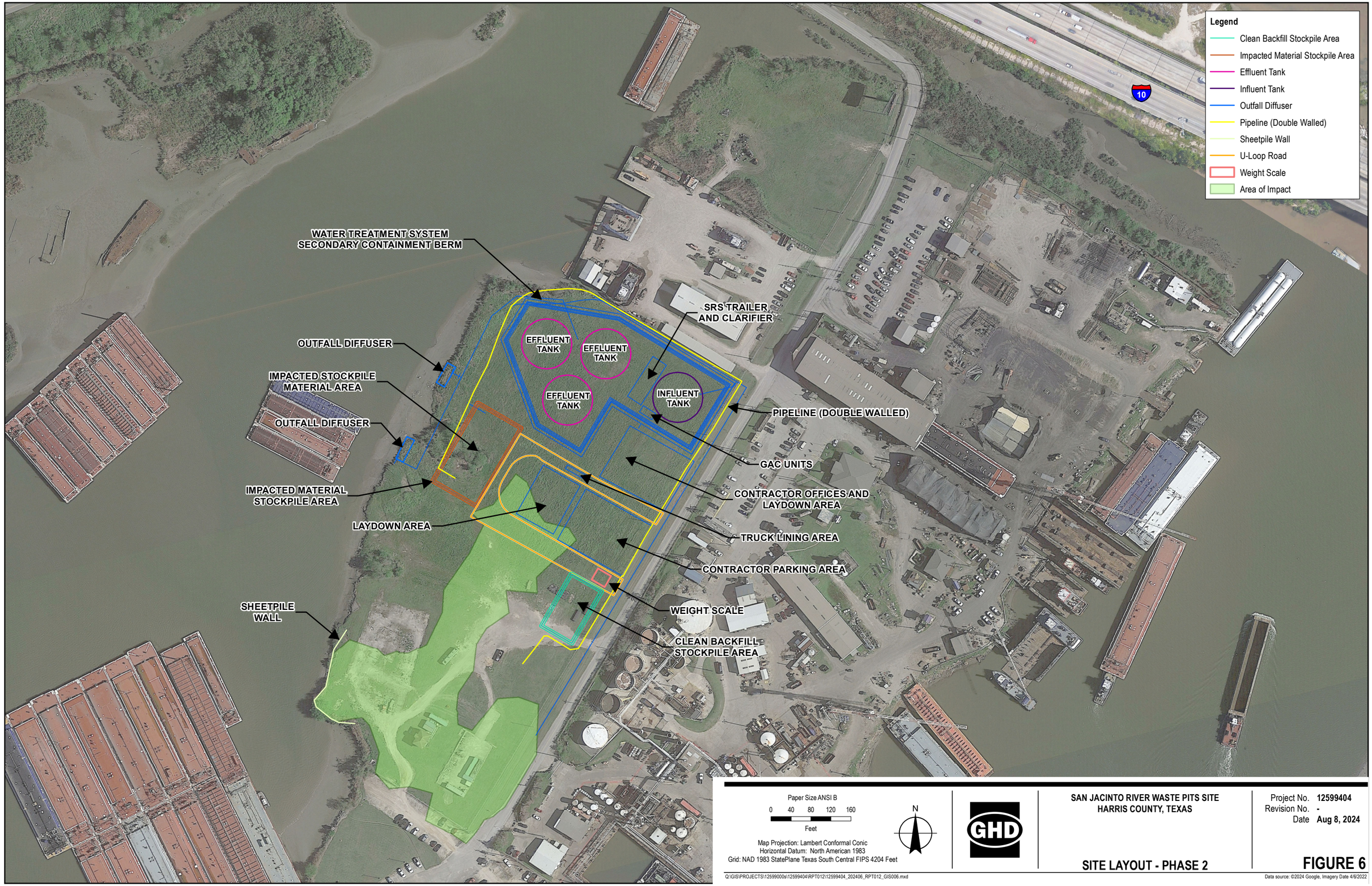

Paper Size ANSI B

0 40 80 120 160

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

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SAN JACINTO RIVER WASTE PITS SITE
HARRIS COUNTY, TEXAS

Project No. **12599404**
Revision No. **-**
Date **Aug 8, 2024**

SITE LAYOUT - PHASE 2

FIGURE 6

Q:\GIS\PROJECTS\12599000s\12599404\RPT012\12599404_202406_RPT012_GIS006.mxd

Data source: ©2024 Google, Imagery Date 4/6/2022

Paper Size ANSI B

0 30 60 90 120

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

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SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

PHASE 1 EXCAVATION AREA

Project No. **12599404**
Revision No. **-**
Date **Jul 25, 2024**

FIGURE 7A

Q:\GIS\PROJECTS\12599000s\12599404\RPT012\12599404_202406_RPT012_GIS007A.mxd
Print date: 25 Jul 2024 - 16:38

Data source: Image ©2024 Google, Imagery Date 4/6/2022

Paper Size ANSI B

0 30 60 90 120

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

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SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

Project No. **12599404**
Revision No. **-**
Date **Jul 25, 2024**

PHASE 2 EXCAVATION AREA

FIGURE 7B

Q:\GIS\PROJECTS\12599000s\12599404\RPT012\12599404_202406_RPT012_GIS007B.mxd
Print date: 25 Jul 2024 - 16:40

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PRE-EXCAVATION TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

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GHD SERVICES INC.

JOB NO. 11215131 FILE NO. 02

GHD TEXAS FIRM REGISTRATION NO. 276

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137828
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LEGEND

- P.P. — REPLACED POWER POLE
- 1136 / ×10.23 — SURVEY POINT / SURVEYED DEPTH OF EXCAVATION
- NE-2 — POLYGON NUMBER
- 6FT EXCAVATION DEPTH
- 6.5FT EXCAVATION DEPTH
- 8FT EXCAVATION DEPTH
- 10FT EXCAVATION DEPTH
- EXCAVATION SLOPE

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

Drawn JC	Designer RH
Drafting Check MW	Design Check WB
Project Coordinator CM	Date Aug 12, 2024
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Project No. 11215131

Title
NORTHEAST EXCAVATION AREA FINAL EXCAVATION PLAN

Sheet No.
FIGURE 8A

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- 1136 — SURVEY POINT
- -10.23 — SURVEYED DEPTH OF EXCAVATION
- NE-2 — POLYGON NUMBER
- 6.5FT EXCAVATION DEPTH
- 8FT EXCAVATION DEPTH
- 10FT EXCAVATION DEPTH
- EXCAVATION SLOPE

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

Drawn JC	Designer RH
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Title
NORTH CENTRAL EXCAVATION AREA FINAL EXCAVATION PLAN

Sheet No.
FIGURE 8B

SOURCE:

PRE-EXCAVATION TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

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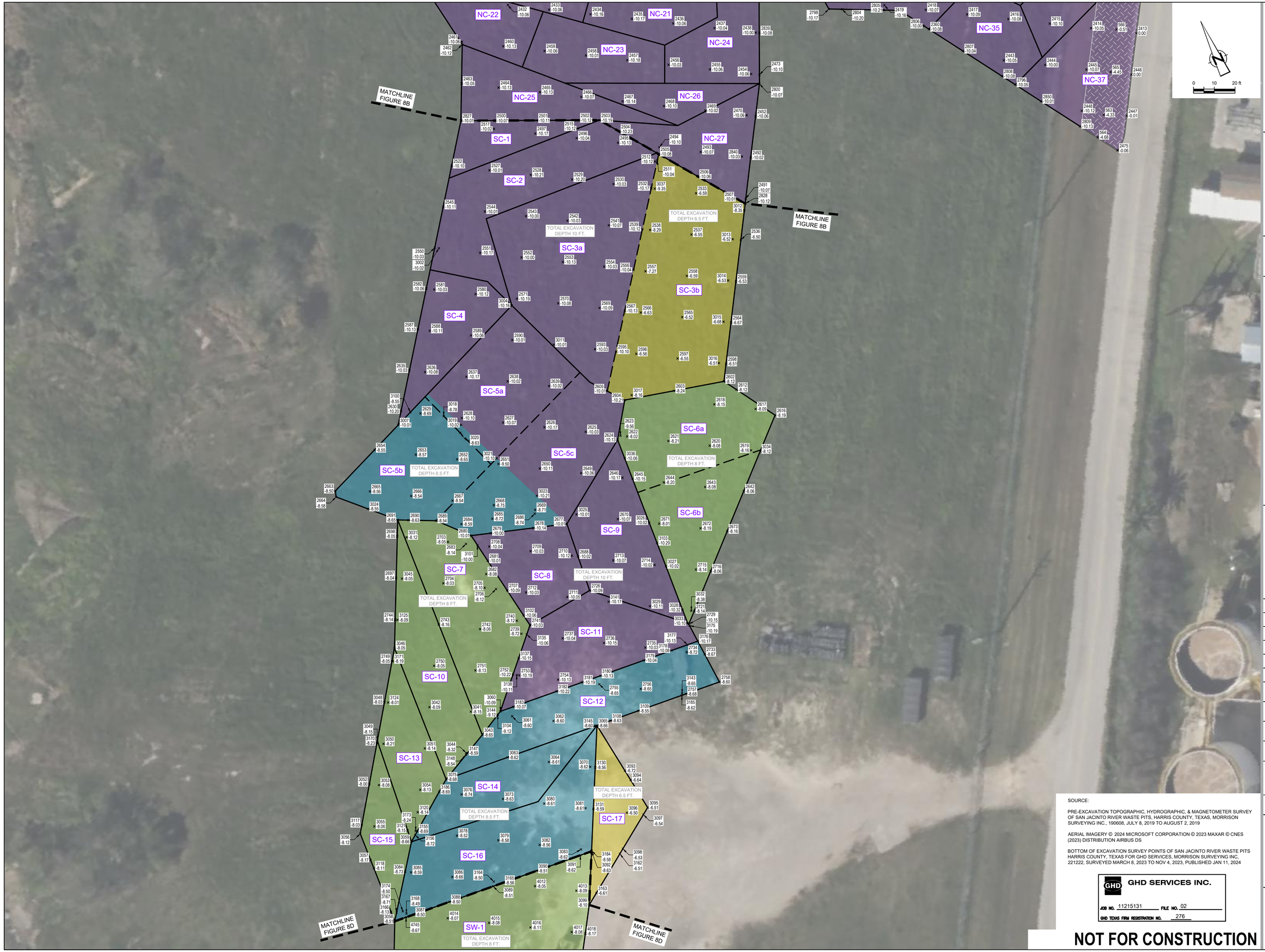

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- 1136 — SURVEY POINT
- -10.23 — SURVEYED DEPTH OF EXCAVATION
- NE-2 — POLYGON NUMBER
- 6.5FT EXCAVATION DEPTH
- 8FT EXCAVATION DEPTH
- 8.5FT EXCAVATION DEPTH
- 10FT EXCAVATION DEPTH
- EXCAVATION SLOPE

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

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Project No. 11215131

Title
SOUTH CENTRAL EXCAVATION AREA FINAL EXCAVATION PLAN

Sheet No.
FIGURE 8C

SOURCE:

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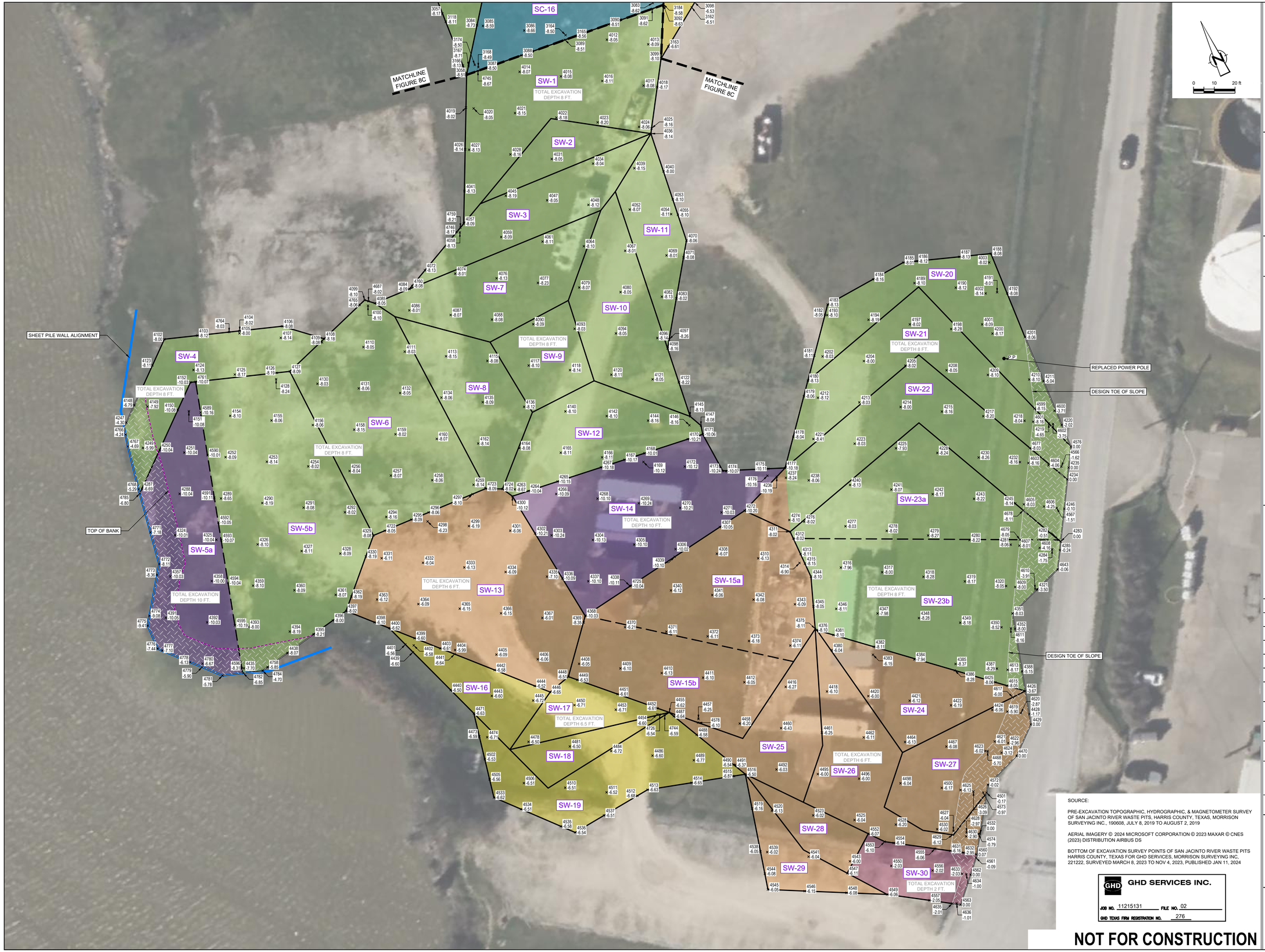

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LEGEND

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- 1136 — SURVEY POINT
- -10.23 — SURVEYED DEPTH OF EXCAVATION
- NE-2 — POLYGON NUMBER
- 2FT EXCAVATION DEPTH
- 6FT EXCAVATION DEPTH
- 6.5FT EXCAVATION DEPTH
- 8FT EXCAVATION DEPTH
- 8.5FT EXCAVATION DEPTH
- 10FT EXCAVATION DEPTH
- EXCAVATION SLOPE
- SHEET PILE WALL ALIGNMENT
- TOP OF BANK

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

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Project No. **11215131**

Title
SOUTHWEST EXCAVATION AREA FINAL EXCAVATION PLAN

Sheet No.
FIGURE 8D

Plot Date: 12 August 2024 - 4:50 PM Plotted By: Jonathan Compton Filename: \\ghdnet\ghd\US\Baton Rouge\Projects\562\12599404\Digital_Design\ACAD\Figures\PRES002\12599404-GHD-0000-FIG-CI-003-PRES002.dwg

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LEGEND

- EXISTING CONTOUR INTERVAL
- FENCELINE
- TOP OF BANK DITCH
- CENTERLINE OF DITCH
- CULVERT
- P.P. RESTORED POWER POLE
- ASPHALT
- CONCRETE
- GRAVEL

Client
SAN JACINTO RIVER WASTE PITS

Project
AS-BUILT SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

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Project No. 12599404

Title
RESTORATION SURFACE NORTHEAST EXCAVATION AREA

GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
GHD TEXAS FIRM REGISTRATION NO. 276

Sheet No.
FIGURE 9A
Sheet of

0 10 20 ft

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LEGEND

- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK SHORELINE
- TOP OF BANK DITCH
- CENTERLINE OF DITCH
- CULVERT
- RESTORED POWER POLE
- ASPHALT
- CONCRETE
- GRAVEL

Client
SAN JACINTO RIVER WASTE PITS

Project
AS-BUILT SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

Drawn JC	Designer RH
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Project No. 12599404

Title
RESTORATION SURFACE NORTH CENTRAL EXCAVATION AREA

Sheet No.
FIGURE 9B
Sheet of

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RESTORATION SURVEY FROM FILE: 221222-2 GHD SAN JACINTO SOUTH IMPOUNDMENT ASBUILT (RESTORATION SURFACE).DWG, PROVIDED BY MORRISON SURVEYING INC JULY 23, 2024, 221222, SURVEYED 2024

GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
GHD TEXAS FIRM REGISTRATION NO. 276

0 10 20 ft

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LEGEND

- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK SHORELINE
- TOP OF BANK DITCH
- CENTERLINE OF DITCH
- CULVERT
- P.P. RESTORED POWER POLE
- ASPHALT
- CONCRETE
- GRAVEL

Client
SAN JACINTO RIVER WASTE PITS

Project
AS-BUILT SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-				

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Project No. 12599404

Title
RESTORATION SURFACE SOUTH CENTRAL EXCAVATION AREA

Sheet No.
FIGURE 9C

Sheet of

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GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
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MATCHLINE FIGURE 9C

MATCHLINE FIGURE 9C

P.P.

0 10 20 ft

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LEGEND

- EXISTING CONTOUR INTERVAL
- FENCELINE
- SHORELINE
- TOP OF BANK SHORELINE
- TOP OF BANK DITCH
- CENTERLINE OF DITCH
- CULVERT
- P.P. RESTORED POWER POLE
- ASPHALT
- CONCRETE
- GRAVEL
- RIP RAP

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JOB NO. 11215131 FILE NO. 02
GHD TEXAS FIRM REGISTRATION NO. 276

Client
SAN JACINTO RIVER WASTE PITS

Project
AS-BUILT SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
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Drawn JC	Designer RH
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Project No. 12599404

Title
RESTORATION SURFACE SOUTHWEST EXCAVATION AREA

Sheet No.
FIGURE 9D

Sheet of

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→ The Power of Commitment

Appendix A

Southwest Shoreline Deliverable

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Houston, Texas 77079
United States
www.GHD.com

Our Ref.: 12599404-Poulos-17

April 21, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

Southwest Excavation Area Shoreline Deliverable
San Jacinto Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), GHD Services Inc. (GHD) submits to the United States Environmental Protection Agency (EPA) this deliverable related to the Southwest Excavation Area shoreline in connection with the Remedial Action (RA) for the Southern Impoundment of the San Jacinto Waste Pits Superfund Site in Harris County, Texas. This deliverable is being submitted in response to email correspondence from the EPA, dated April 13, 2023, requesting that an informational package and analysis related to the Southwest Excavation Area shoreline be submitted to the EPA by April 21 2023.

1. Remedial Design/Action

As shown on Drawing C-36 from the 100% Remedial Design (RD) Addendum, dated June 2, 2022, a sheet pile wall has been designed to support the temporary removal of impacted soils to a depth of up to 10-feet below existing grade at the San Jacinto River shoreline in the Southwest Excavation Area. The extension of excavation to the shoreline is defined by boring SJSB065-C1, which is located within two lateral feet from the top of bank. The design intent was for the sheet pile wall to be installed at the edge of water (shoreline), as defined by the topographic and hydrographic survey conducted by Morrison Surveying, Inc. (Morrison) between July and August 2019.

As part of the ongoing implementation of the RA, a supplemental hydrographic survey was conducted by Morrison on April 11, 2023, to support excavation planning in the Southwest Excavation Area and provide additional detail of the San Jacinto River bottom surface. The reference datum for both the July/August 2019 and the April 11, 2023 surveys, is the North American Vertical Datum of 1988 (NAVD88).

2. Southwest Excavation Area

Upon receipt of the April 11, 2023 hydrographic survey data, GHD further evaluated the San Jacinto River shoreline along the Southwest Excavation Area in regard to long-term bank stability following excavation. GHD prepared the Drawing C-45 (see Attachment 1) presenting a plan view of the Southwest Excavation Area and the associated sheet pile wall incorporating the additional survey data. To further understand the relationship

between the shoreline, excavation, and sheet pile wall, GHD also prepared six cross sections at various locations perpendicular to the sheet pile wall, as shown on Drawings C-46 and C-47 in Attachment 1. The six cross sections show the excavation of impacted soil and placement of clean backfill as specified in the remedial design.

The cross sections all demonstrate that the current sheet pile wall design will facilitate the excavation of impacted material. Since the intent of the RD was to excavate impacted material to the shoreline but not beyond the shoreline, field implementation may slightly adjust the sheet pile wall alignment to follow the actual shoreline.

The 2019 survey and the 2023 survey demonstrate that there is no erosion occurring, as expected in this slow-moving portion of the river. The river bottom surface from the 2019 survey (as defined by the blue line on the six cross sections) and the river bottom surface from the recent 2023 survey (as defined by the dashed line) coincides along the cross sections. The only instance of a difference in the data between the two surveys appears along Cross Section E, where the 2019 surface (defined by the blue line) is generally lower in elevation by between 0.5 to 1.5 feet than the 2023 surface (defined by the dashed line). This would suggest that there has been some disposition of sediment in the location of Cross Section E since the 2019 survey was conducted. Otherwise, the 2019 and 2023 hydrographic surveys show very little change in elevation, suggesting there has been little to no erosion of the shoreline over the past four years.

In addition, the cross sections demonstrate that a significant soil buttress, ranging in length from 20 feet at Cross Section B to over 50 feet at Cross Sections E and F, exists adjacent to the clean backfill. This soil buttress has substantive size and will prevent the potential for the area of clean backfill to slide into the river. Furthermore, the top of the native soil that would remain at 10 feet below ground surface (directly below the clean backfill) has no ability to move outward (in the case of Cross Sections A, B, C, and D) or upward (in the case of Cross Sections E and F) and come into contact with the river.

3. Conclusions

The 2019 and 2023 hydrographic surveys along with the cross sections indicate that the native soils below the excavation depth specified in the 100% RD Addendum will be stable after excavation and backfill and will not be influenced by the river. If the sheet piles are removed, there would remain a significant soil buttress adjacent to the backfill material, effectively containing any material below the excavation depth. The hydrographic survey data also suggests that the river conditions in the area are either stable or depositional, limiting the potential for erosion of the soil buttress and the bank in the Southwest Excavation Area adjacent to the shoreline.

GHD recommends that the Southwest Excavation Area proceed with backfill and compaction using the same methodology as the other portions of the site.

Should you have any questions regarding this submittal, please contact GHD at (832) 380-7655.

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

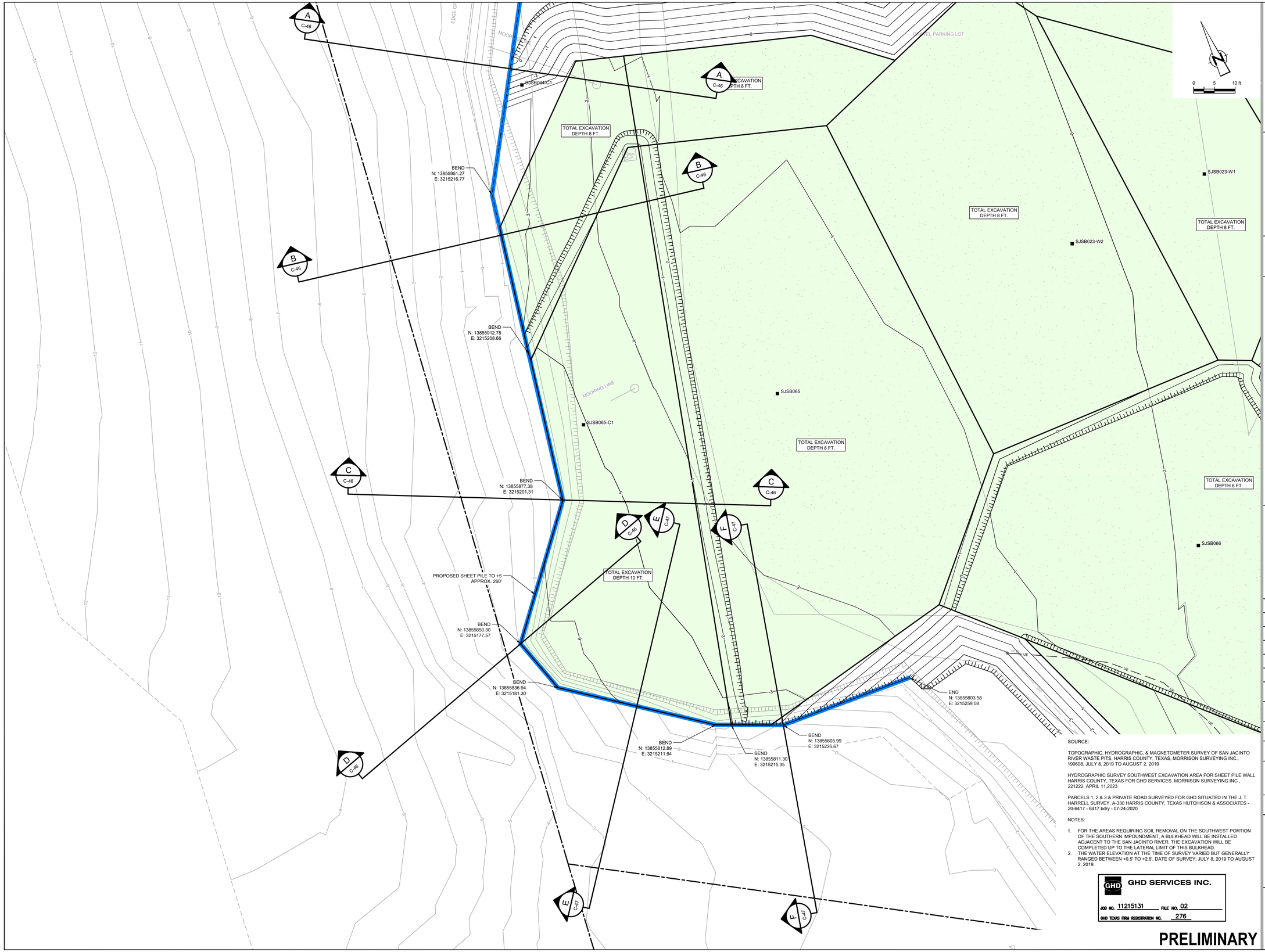
NWR/kdn/17

Encl.: Attachment 1 – Southwest Excavation Area Shoreline Drawings

Copy to: Brent Sasser, IPC
Katie Delbecq, TCEQ
Xiaoxia Lu, TCEQ

Attachment 1

Southwest Excavation Area Shoreline Drawings



SOURCE:

TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., 221222, APRIL 11,2023

PARCELS 1, 2 & 3 & PRIVATE ROAD SURVEYED FOR GHD SITUATED IN THE J. T. HARRELL SURVEY, A-330 HARRIS COUNTY, TEXAS HUTCHISON & ASSOCIATES - 20-6417 - 6417.bdry - 07-24-2020

NOTES:

1. FOR THE AREAS REQUIRING SOIL REMOVAL ON THE SOUTHWEST PORTION OF THE SOUTHERN IMPOUNDMENT, A BULKHEAD WILL BE INSTALLED ADJACENT TO THE SAN JACINTO RIVER. THE EXCAVATION WILL BE COMPLETED UP TO THE LATERAL LIMIT OF THIS BULKHEAD.
2. THE WATER ELEVATION AT THE TIME OF SURVEY VARIED BUT GENERALLY RANGED BETWEEN +0.5' TO +2.6'. DATE OF SURVEY: JULY 8, 2019 TO AUGUST 2, 2019.

GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- UG UNDERGROUND AT&T LINE
- SJSB002 PDI/RI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- SHEET PILE WALL ALIGNMENT

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-

Drawn **MW** | Designer **RH**
Drafting Check - | Design Check -
Project Coordinator **CM** | Date **Apr 20, 2023**
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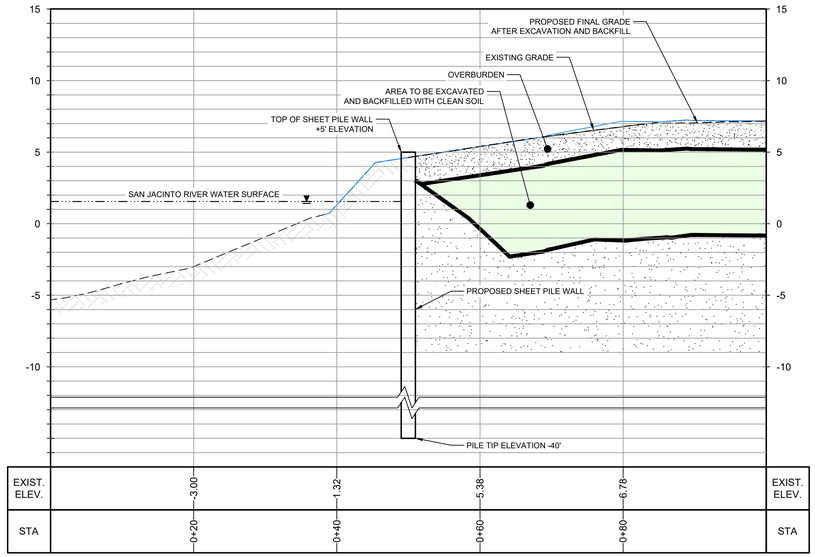
Project No. **11215131**

Title
SOUTHWEST EXCAVATION AREA ADDITIONAL SHEET PILE WALL EXCAVATION PLAN

Sheet No.
C-45
Sheet - of -

Plot Date: 20 April 2023 - 6:44 PM Plotted By: Matt Wolfer Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Sheets\11215131-01-DWG-C-040.dwg



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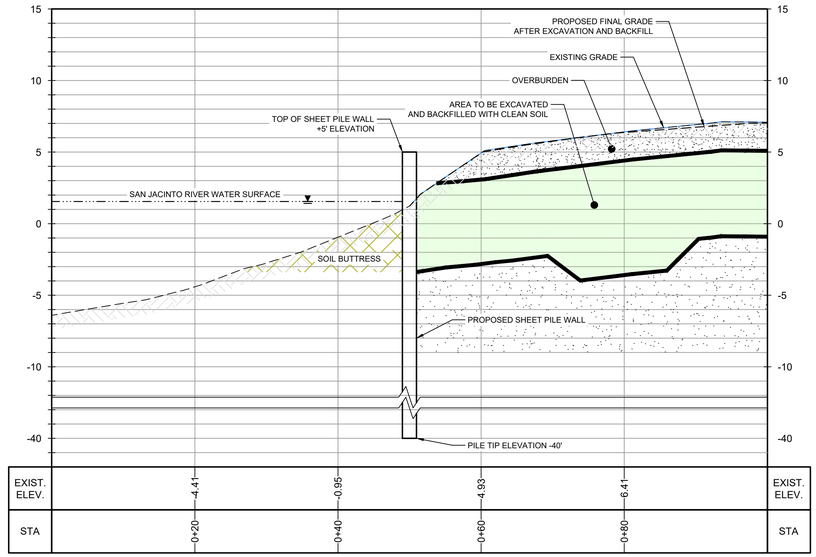
VERT: 1"=5'
C-45



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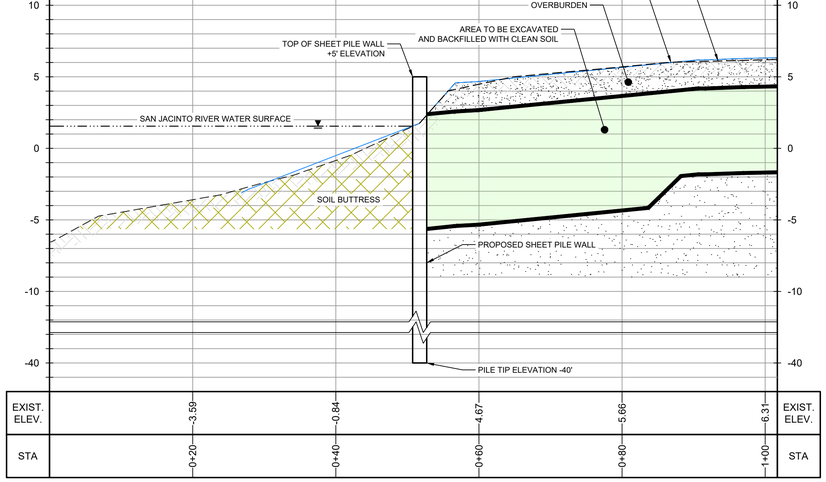
C-45



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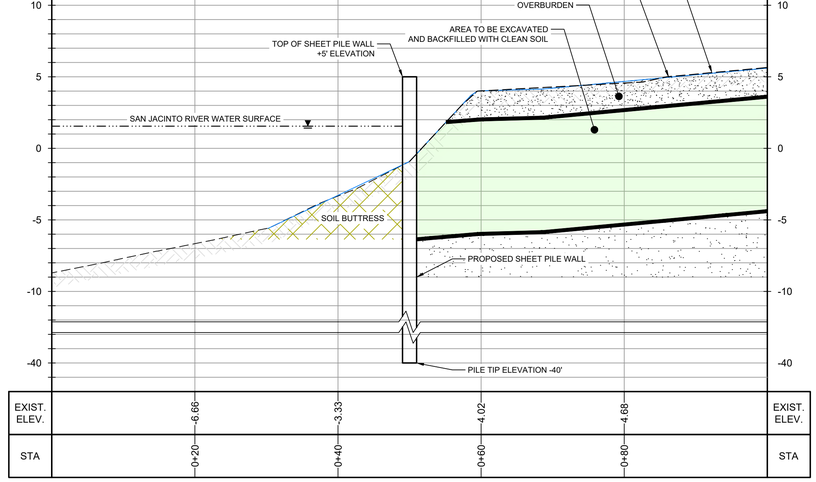
VERT: 1"=5'
C-45



SECTION D
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VERT: 1"=5'
C-45

SOURCE:

TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., 221222, APRIL 11,2023

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NOTES:

1. FOR THE AREAS REQUIRING SOIL REMOVAL ON THE SOUTHWEST PORTION OF THE SOUTHERN IMPOUNDMENT, A BULKHEAD WILL BE INSTALLED ADJACENT TO THE SAN JACINTO RIVER. THE EXCAVATION WILL BE COMPLETED UP TO THE LATERAL LIMIT OF THIS BULKHEAD.
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LEGEND
EXISTING GROUND 2023
EXISTING GROUND 2019

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-/-/----

Drawn MW	Designer RH
Drafting Check -	Design Check -
Project Coordinator CM	Date Apr 20, 2023
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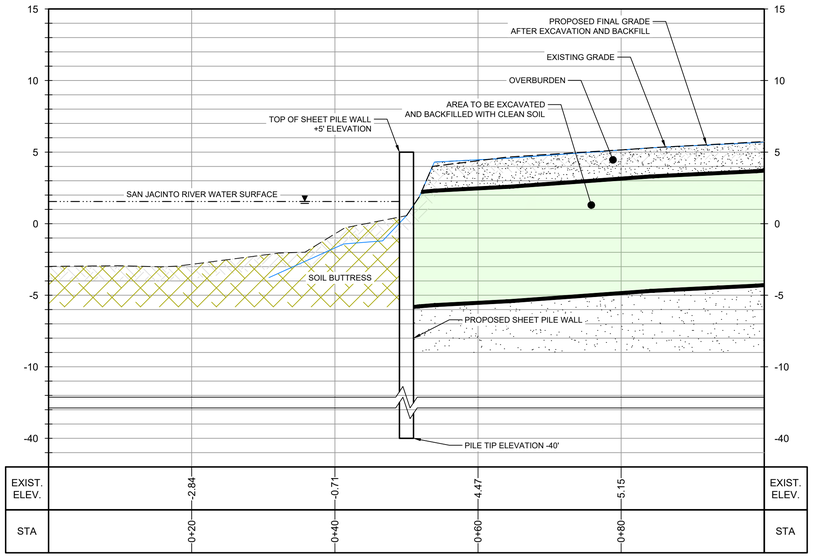
Project No. 11215131

Title
ADDITIONAL SHEET PILE SECTIONS AND DETAILS

Sheet No.
C-46
Sheet - of -



SECTION E

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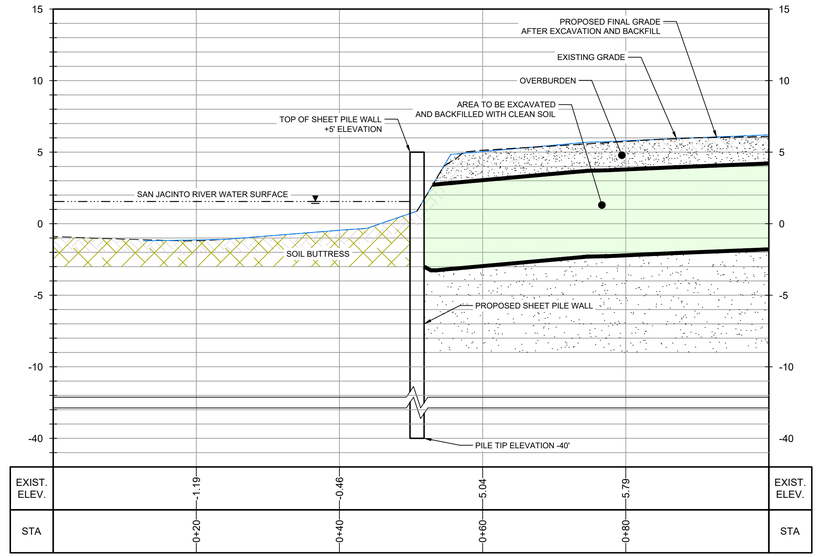
VERT: 1"=5'

C-45



SECTION F

HORIZ: 1"=10'
VERT: 1"=5'

C-45

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HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., 221222, APRIL 11,2023

PARCELS 1, 2 & 3 & PRIVATE ROAD SURVEYED FOR GHD SITUATED IN THE J. T. HARRELL SURVEY, A-330 HARRIS COUNTY, TEXAS HUTCHISON & ASSOCIATES - 20-6417 - 6417.bdry - 07-24-2020

NOTES:

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2. THE WATER ELEVATION AT THE TIME OF SURVEY VARIED BUT GENERALLY RANGED BETWEEN +0.5' TO +2.6'. DATE OF SURVEY: JULY 6, 2019 TO AUGUST 2, 2019.

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EXISTING GROUND 2023

EXISTING GROUND 2019

Client

SAN JACINTO RIVER WASTE PITS

Project

SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

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-	-	-	-	-/-/----

Drawn MW	Designer RH
Drafting Check -	Design Check -
Project Coordinator CM	Date Apr 20, 2023
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Project No. 11215131

Title

ADDITIONAL SHEET PILE SECTIONS AND DETAILS

Sheet No.

C-47

Sheet - of -

Plot Date: 21 April 2023 - 2:07 PM Plotted By: Matt Wolfer Filename: N:\US\Baton Rouge\Projects\562\11215131\Digital_Design\ACAD 2019\Sheets\11215131-01-DWG-C-039.dwg

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Houston, Texas 77079
United States
www.GHD.com

Our Ref.: 12599404-Poulos-35

August 28, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

Southwest Excavation Area – Shoreline Design Deliverable
San Jacinto Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), GHD Services Inc. (GHD) submits to the United States Environmental Protection Agency (USEPA) this design deliverable related to the Southwest Excavation Area shoreline in connection with the Remedial Action (RA) for the Southern Impoundment of the San Jacinto Waste Pits Superfund Site in Harris County, Texas. This deliverable is being submitted to address USEPA's request for additional stabilization measures in the June 8, 2023, letter from the USEPA.

As shown on Drawing C-36 from the 100% Remedial Design (RD) Addendum, dated June 2, 2022, a temporary sheet pile wall was designed to support the removal of impacted soils to a depth of up to 10-feet below existing grade at the San Jacinto River shoreline in the Southwest Excavation Area. The design intent was for the sheet pile wall to be installed at the edge of water (shoreline), as defined by the topographic and hydrographic survey conducted by Morrison Surveying, Inc. (Morrison) between July and August 2019.

As part of the ongoing implementation of the RA, supplemental surveys were completed by Morrison on April 11, June 22, and July 7, 2023 to support excavation planning in the Southwest Excavation Area. These additional bathymetric and topographic surveys were used to field-adjust the alignment for the temporary sheet pile wall to reflect the Site-specific topographic and hydrographic conditions at this time of the RA.

GHD has revised Drawing C-45 (see Attachment 1) presenting a plan view of the western portion of the Southwest Excavation Area incorporating the additional survey data and the revised sheet pile wall alignment. It should be noted that the design intent has always been to install the sheet pile wall at the top-of-slope (i.e., shoreline), so the revised Drawing C-45 adjusts the alignment to more recent and more accurate survey data and field conditions. Drawing C-45 replaces Drawing C-36 in the 100% Design Addendum.

The following comments were provided by USEPA in their June 8, 2023 letter regarding additional stabilization along the southwest shoreline.

– "… the agency has determined that additional stabilization measures are needed along the southwest shoreline of the Southern Impoundment to ensure the remedy remains protective of human health into the long term. The bank slope that remains once the bulkhead is removed is steep in some areas."
– "If the bulkhead is removed, EPA recommends that rip rap and a strong vegetative cap be utilized for additional erosion control and bank stabilization along the shoreline in the area of the bulkhead to improve erosion protection after it is removed."

– “EPA expects components in the bank stabilization design would include but are not limited to: keying the structure at a proper angle into a toe below water line to support the weight of the rip rap; layered stabilization approaches potentially with geotextile to contain fine particle sized soil materials; and the use of silt fencing or other erosion-control measures while native vegetation establishes on the riverbank slope.”

To address USEPA’s comments, the following modifications have been made to the design:

– A rip-rap embankment will be constructed as part of backfilling and site restoration across the length of the Southwest Excavation Area that requires soil removal to the toe-of-slope.
– The placed backfill will be graded at approximately 3:1 slope and covered by geotextile, and approximately 24 inches of rip rap. Soil will be placed within the rip rap void spaces to allow vegetation to re-establish.
– The top of the rip rap slope will be seeded with grasses to provide further vegetation stabilized top of slope.

GHD prepared six cross sections at various locations perpendicular to the sheet pile wall, as shown on Drawings C-46, C-47, and C-48 (also in Attachment 1). The cross sections show excavation of impacted soil and placement of clean backfill as specified in the remedial design. The revised shoreline drawings incorporate the bank stability components of the design and replaces Drawing C-41 included in the 100% RD Addendum.

In addition, the tenant utilizing this property, Kirby Marine, stages barges adjacent to the river along the Southwest Excavation Area using subsurface concrete deadman connected to anchor chains that extend into the water for barge fleeting. Two concrete aprons have been added to the remedial design to allow for use of these anchor chains, yet protect the backfill placed following excavation. The concrete apron design is presented on Drawings S-01 and S-02 of Attachment 1.

These remedial design modifications to the Southwest Excavation Area shoreline have been reviewed by the property owner and the tenant, Kirby Marine, and have been accepted. Should you have any questions regarding this submittal, please contact GHD at (832) 380-7655.

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

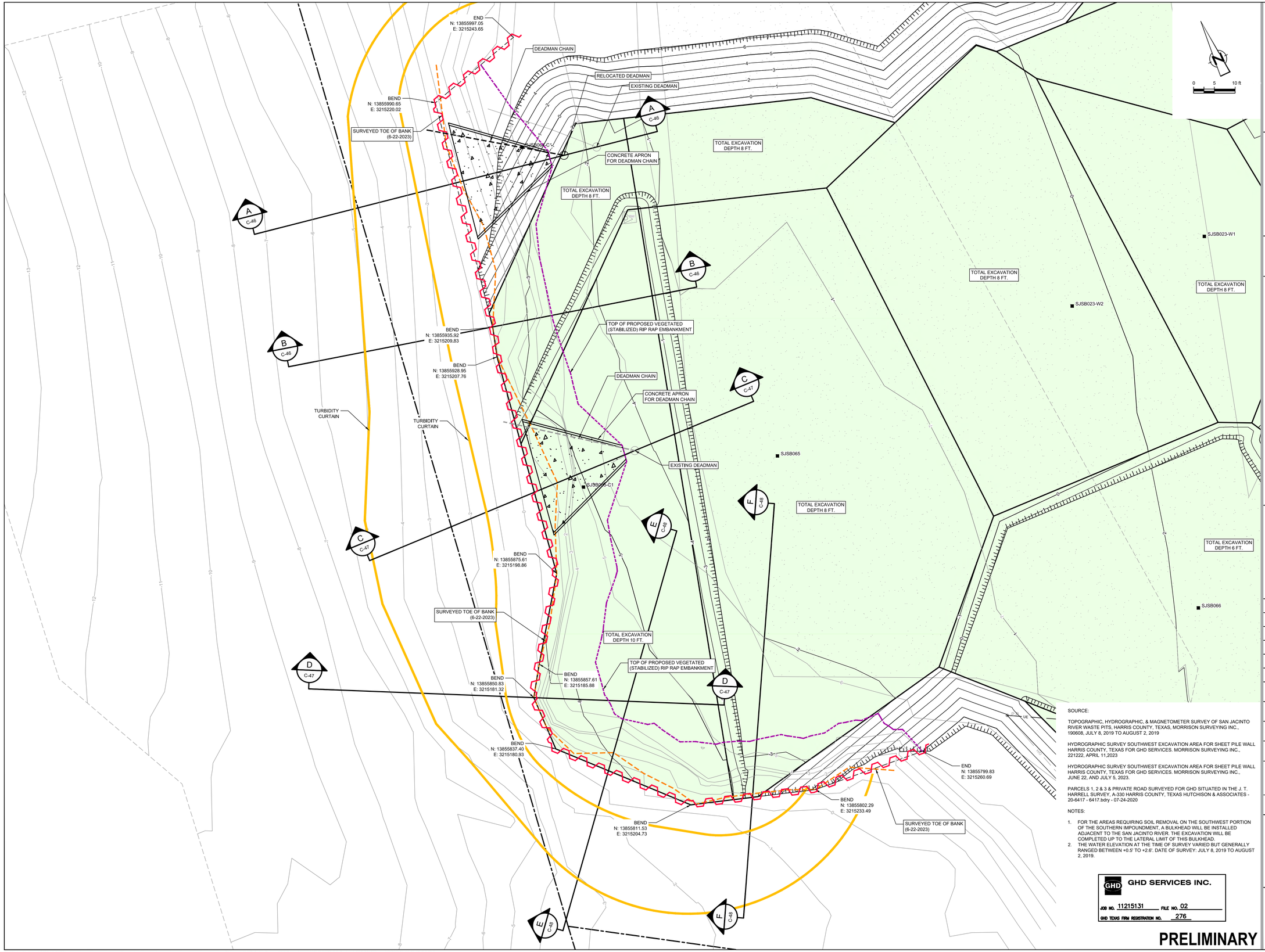
NWR/kdn/35

Encl.: Attachment 1 – Southwest Excavation Area Shoreline Drawings

Copy to: Brent Sasser, IPC
Katie Delbecq, TCEQ
Xiaoxia Lu, TCEQ

Attachment 1

Revised Southwest Excavation Area Shoreline Drawings



SOURCE:

TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., 221222, APRIL 11,2023

HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., JUNE 22. AND JULY 5, 2023.

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NOTES:

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2. THE WATER ELEVATION AT THE TIME OF SURVEY VARIED BUT GENERALLY RANGED BETWEEN +0.5' TO +2.6'. DATE OF SURVEY: JULY 8, 2019 TO AUGUST 2, 2019.

GHD SERVICES INC.

JOB NO. 11215131 FILE NO. 02

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- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- UG UNDERGROUND AT&T LINE
- SJSB002 PDI/RI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- ORIGINAL SHEET PILE WALL ALIGNMENT
- PROPOSED SHEET PILE WALL ALIGNMENT
- SURVEYED TOE OF BANK (6-22-2023)
- VEGETATED RIPRAP ENBANKMENT
- TURBIDITY CURTAIN

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-

Drawn **MW** | Designer **RH**

Drafting Check - | Design Check -

Project Coordinator **CM** | Date **Aug 24, 2023**

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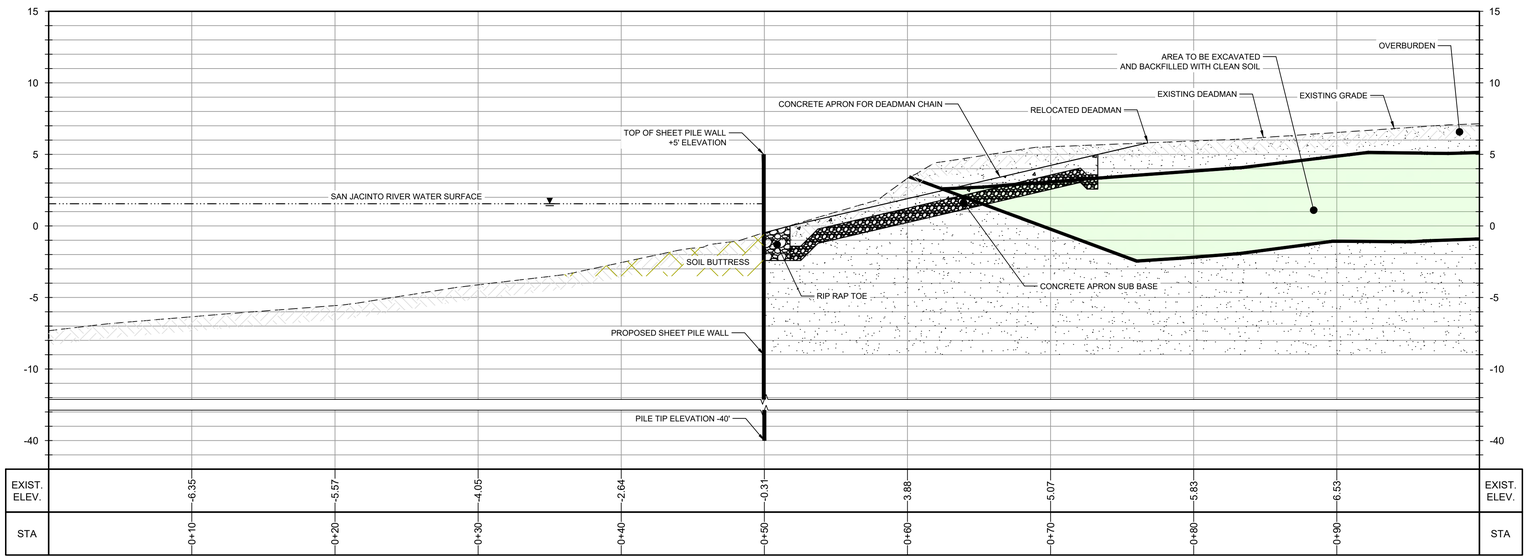
Original Size **Arch D** | Bar is one inch on original size drawing (0 — 1")

Project No. **11215131**

Title
SOUTHWEST EXCAVATION AREA ADDITIONAL SHEET PILE WALL EXCAVATION PLAN

Sheet No.
C-45

Sheet - of -



SECTION A
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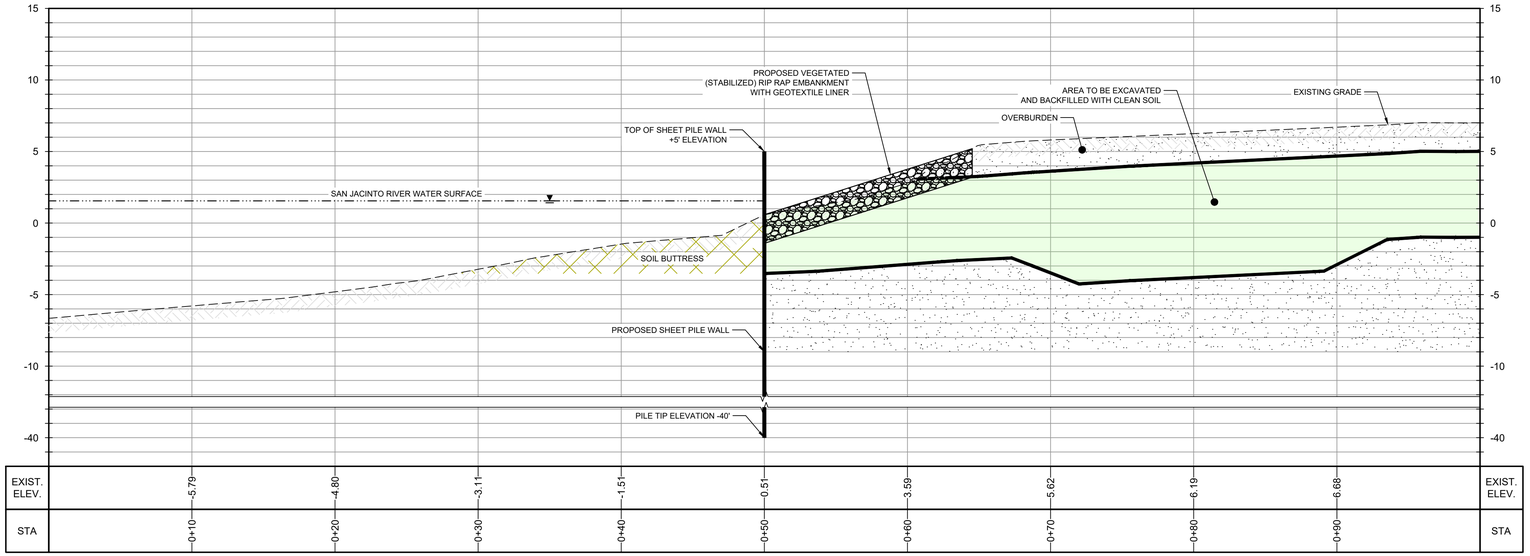

SECTION B
SCALE: 1"=5'
C-45

SOURCE:

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HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., JUNE 22, AND JULY 5, 2023.

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EXISTING GROUND 2023

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-/-/----

Drawn MW	Designer RH
Drafting Check -	Design Check -
Project Coordinator CM	Date Aug 11, 2023
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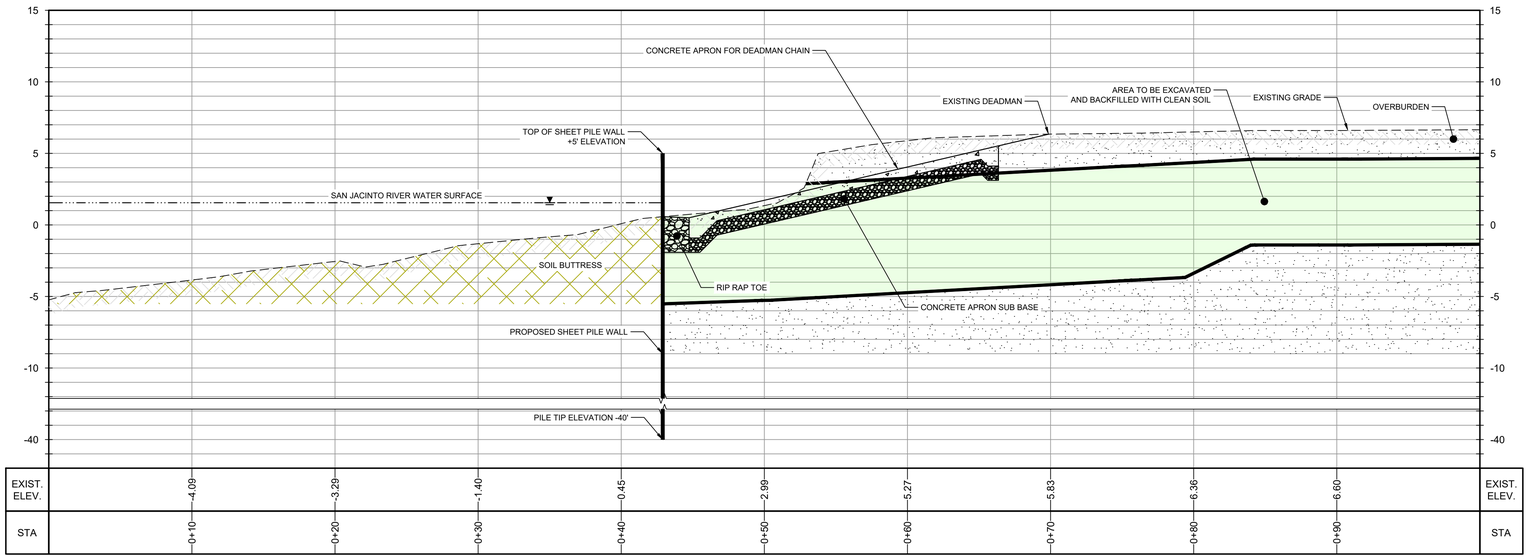
Original Size Arch D	Bar is one inch on original size drawing 0 1"

Project No. 11215131

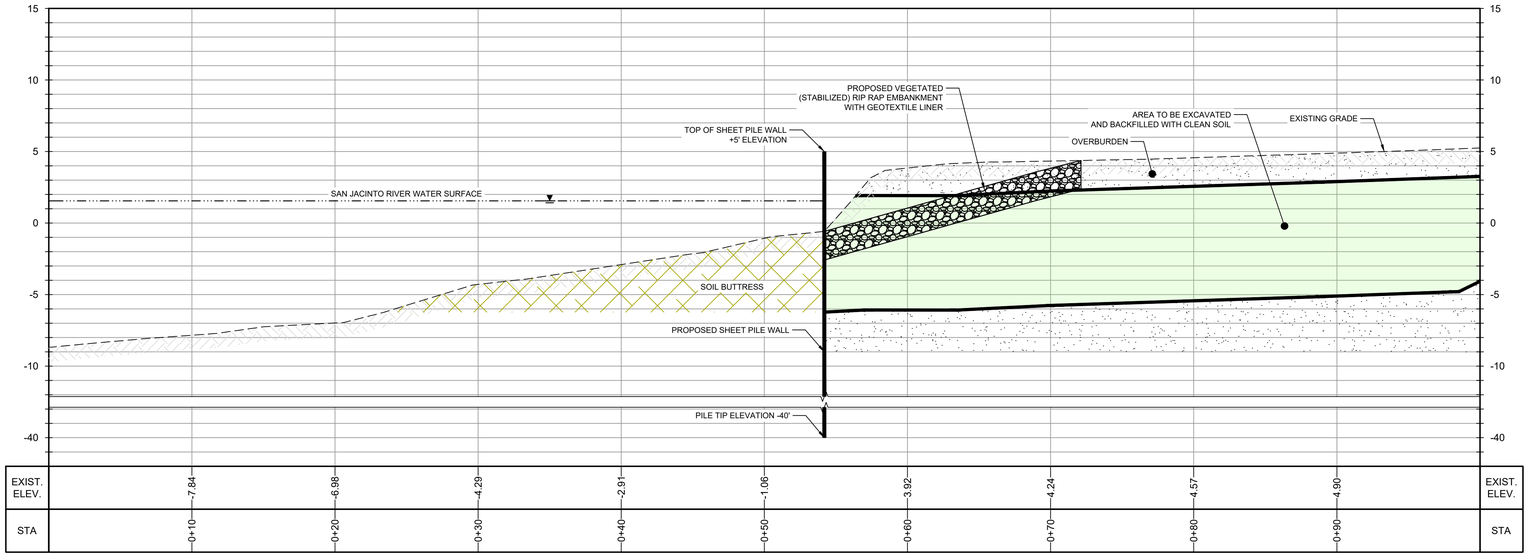
Title
ADDITIONAL SHEET PILE SECTIONS AND DETAILS

Sheet No.
C-46

Sheet - of -



SECTION C
SCALE: 1"=5'
C-45



SECTION D
SCALE: 1"=5'
C-45

SOURCE:

TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

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HYDROGRAPHIC SURVEY SOUTHWEST EXCAVATION AREA FOR SHEET PILE WALL HARRIS COUNTY, TEXAS FOR GHD SERVICES. MORRISON SURVEYING INC., JUNE 22, AND JULY 5, 2023.

PARCELS 1, 2 & 3 & PRIVATE ROAD SURVEYED FOR GHD SITUATED IN THE J. T. HARRELL SURVEY, A-330 HARRIS COUNTY, TEXAS HUTCHISON & ASSOCIATES - 20-6417 - 6417.bdry - 07-24-2020

NOTES:

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2. THE WATER ELEVATION AT THE TIME OF SURVEY VARIED BUT GENERALLY RANGED BETWEEN +0.5' TO +2.6'. DATE OF SURVEY: JULY 8, 2019 TO AUGUST 2, 2019.

GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
GHD TEXAS FIRM REGISTRATION NO. 276

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LEGEND
EXISTING GROUND 2023

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-/-/----

Drawn MW	Designer RH
Drafting Check -	Design Check -
Project Coordinator CM	Date Aug 11, 2023
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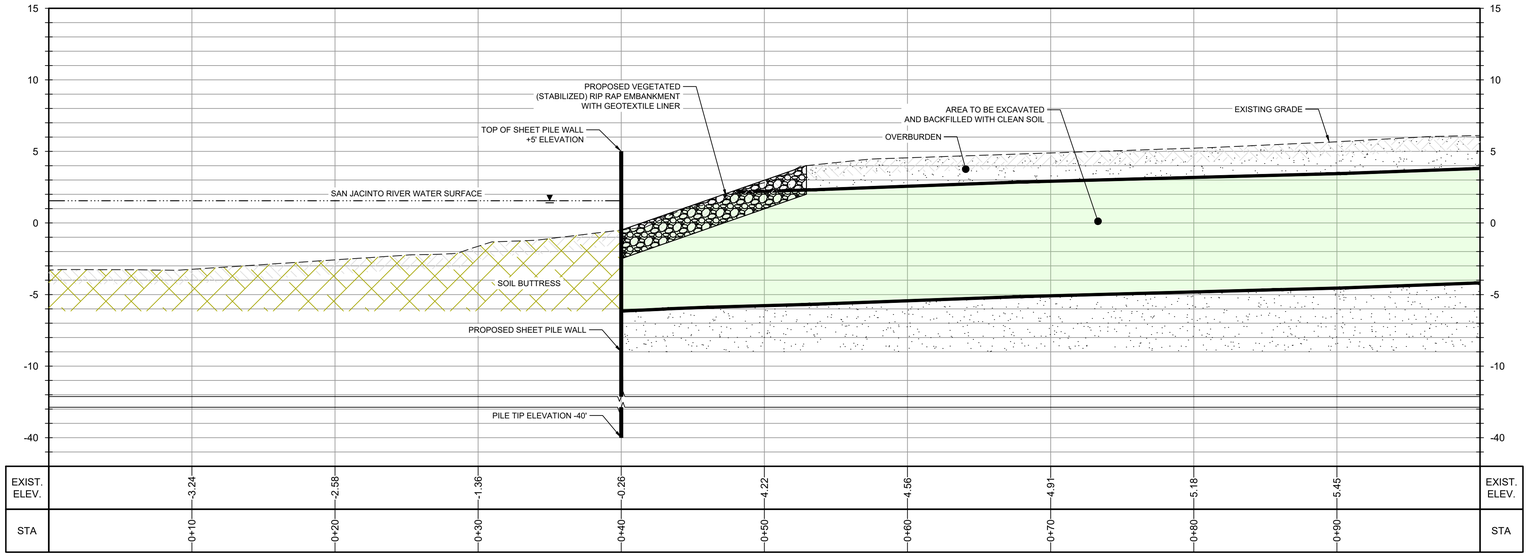
Project No. 11215131

Title
ADDITIONAL SHEET PILE SECTIONS AND DETAILS

Sheet No.
C-47

Sheet - of -



SECTION E
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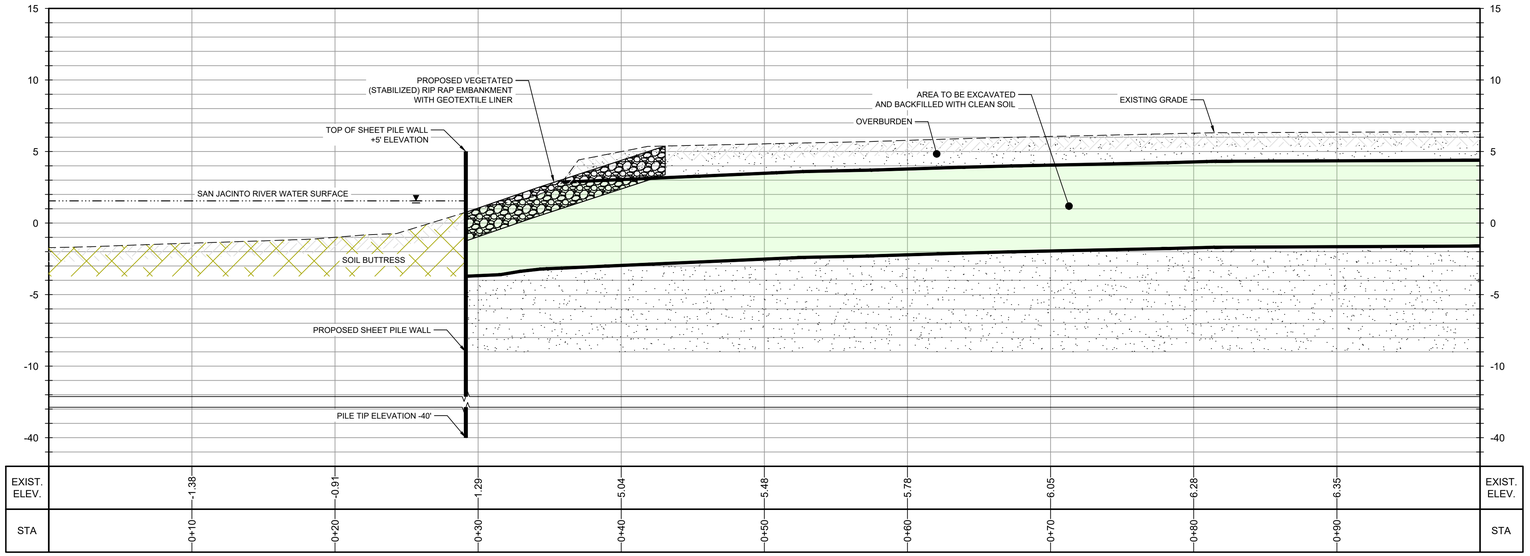
C-45



SECTION F
SCALE: 1"=5'
C-45

SOURCE:

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LEGEND
EXISTING GROUND 2023
EXISTING GROUND 2019

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-/-/----

Drawn MW	Designer RH
Drafting Check -	Design Check -
Project Coordinator CM	Date Aug 11, 2023
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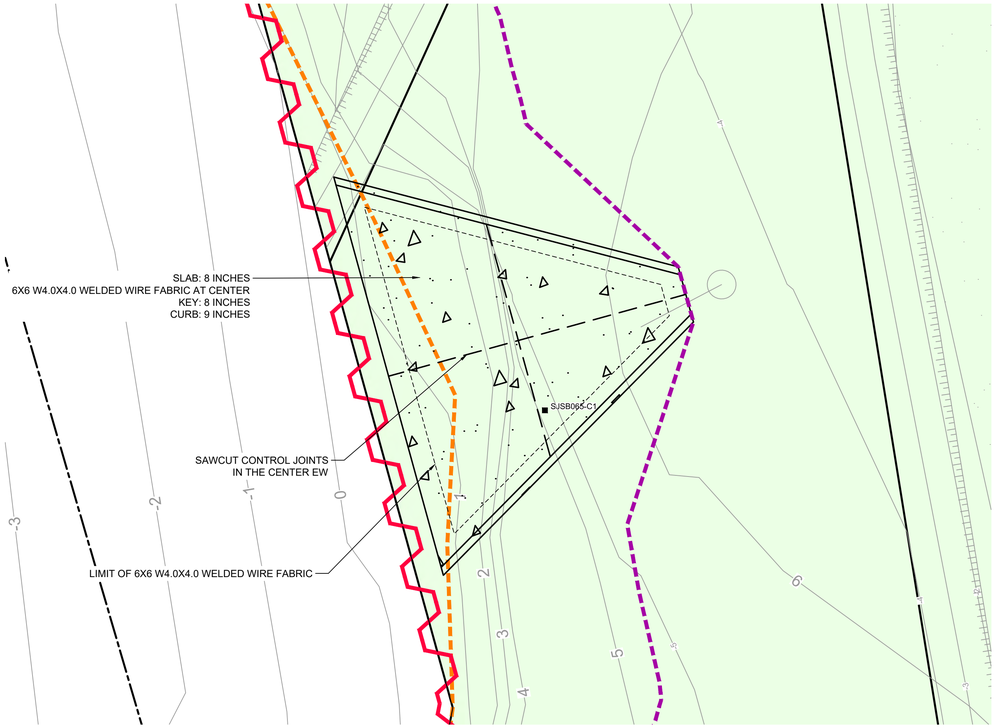
Project No. 11215131

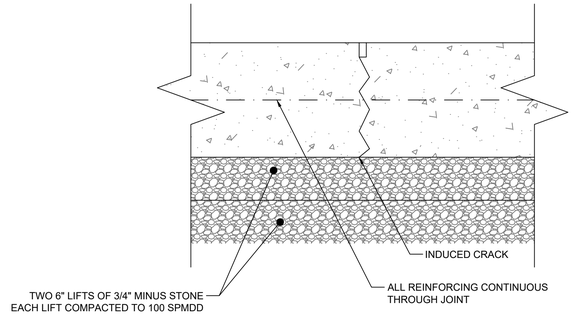
Title
ADDITIONAL SHEET PILE SECTIONS AND DETAILS

Sheet No.
C-48
Sheet - of -



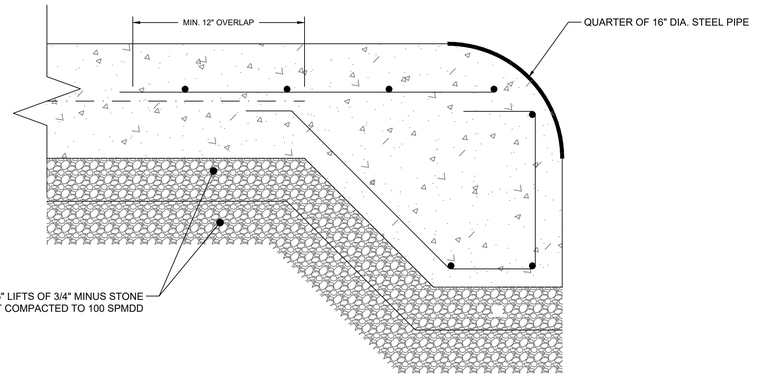
PLAN

SCALE 1" = 5'



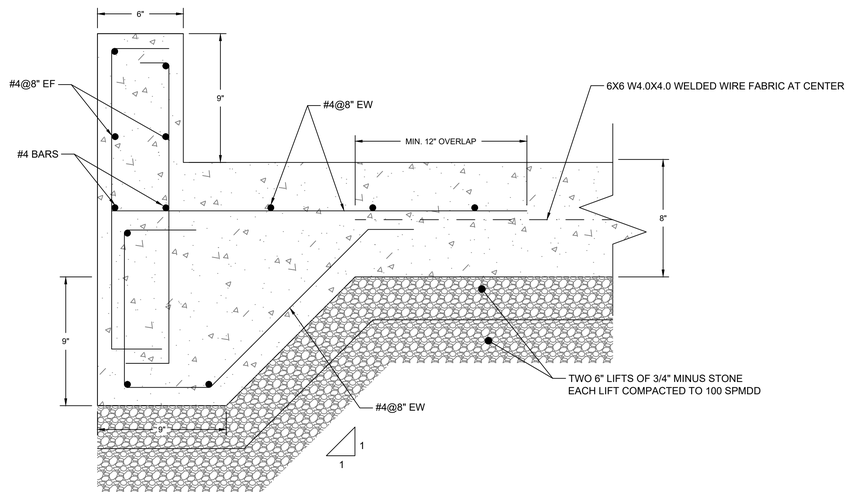
SAWCUT CONTROL JOINTS IN THE CENTER EW

N.T.S.



CONCRETE CHAIN PROTECTION

N.T.S.



ANCHOR KEY

N.T.S.

NOTES:

1. PROVIDE KEY ON THREE SIDES - FRONT, TOWARDS SEE AND TWO SIDES.
2. PROVIDE CURB ON TWO SIDES

NOTES:

1. SAW CUT CONTROL JOINTS SHALL BE PLACED AS SHOWN ON THE DRAWINGS, TYPICALLY AT A MAXIMUM SPACING OF 30' IN EACH DIRECTION.
2. JOINTS SHALL BE SAW CUT AS SOON AS PRACTICAL AFTER CONCRETE HAS HARDENED AND TYPICALLY WITHIN 4 TO 12 HOURS AFTER FINAL FINISHING

MATERIALS:

1. CONCRETE: CONCRETE = 35MPa - 56 DAYS MIN. COMP. STRENGTH, EXPOSURE CATEGORY C2 TO ACI 318-19

2. REINFORCING STEEL: CARBON STL. BARS TO ASTM 615 GRADE 60

SOURCE:

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JOB NO. 11215131 FILE NO. 02

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHI OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- UG UNDERGROUND AT&T LINE
- SJSB002 PDI/RI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL WELL
- AREA OF IMPACT
- ASPHALT
- CONCRETE
- GRAVEL
- 620 EXCAVATION CONTOUR INTERVAL
- EXCAVATION TOP OF BANK
- EXCAVATION TOE OF SLOPE
- ORIGINAL SHEET PILE WALL ALIGNMENT
- PROPOSED SHEET PILE WALL ALIGNMENT
- SURVEYED TOE OF BANK (6-22-2023)
- VEGETATED RIPRAP ENBANKMENT
- TURBIDITY CURTAIN

Client
SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
-	-	-	-	-

Drawn	MW	Designer	RH
Drafting Check	-	Design Check	-
Project Coordinator	CM	Date	Aug 11, 2023
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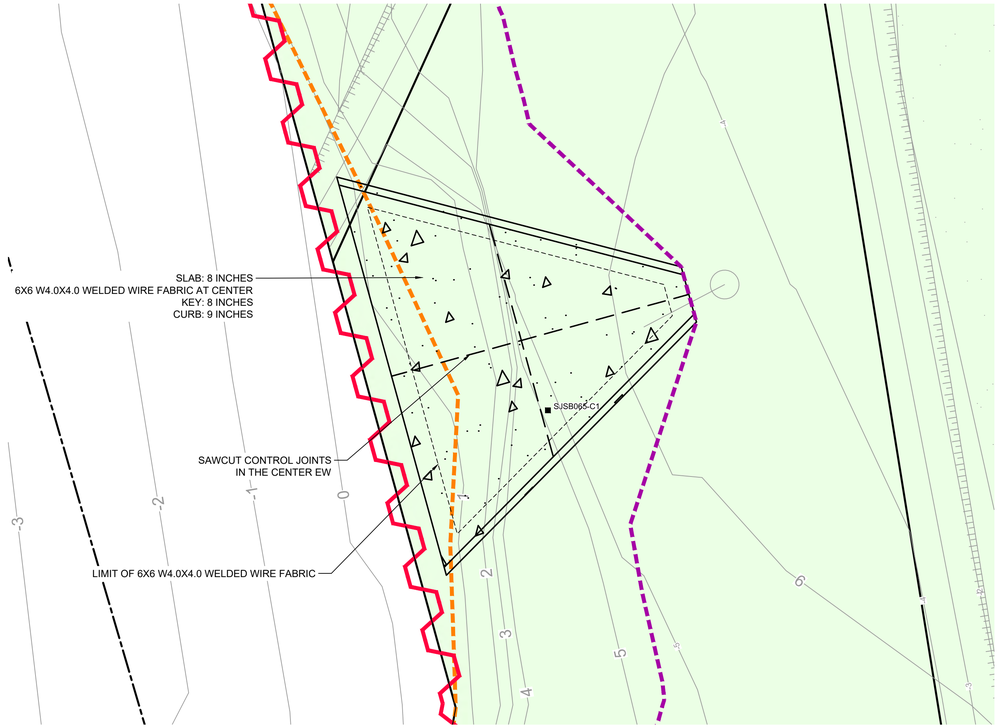
Original Size	Arch D	Bar is one inch on original size drawing	0 1"

Project No. **11215131**

Title
SOUTHWEST EXCAVATION AREA PROPOSED DEADMAN

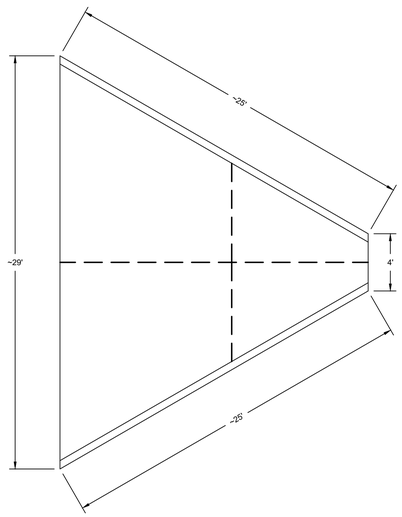
Sheet No.
S-01

Sheet - of -



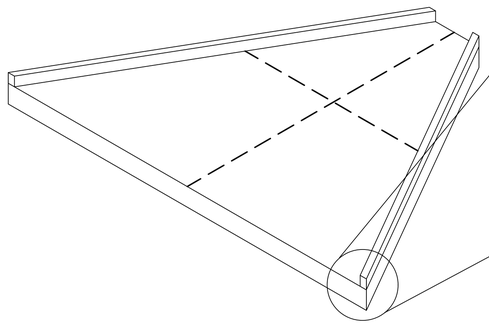
PLAN

SCALE 1" = 5'



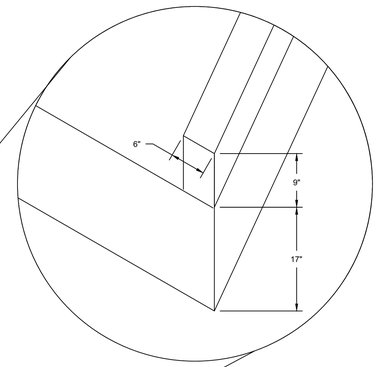
DEADMAN CHAIN SHORELINE PROTECTION PLAN

N.T.S.



DEADMAN CHAIN SHORELINE PROTECTION SECTION

N.T.S.



DEADMAN CHAIN SHORELINE PROTECTION CURB

N.T.S.

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SAN JACINTO RIVER WASTE PITS

Project
SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

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Drawn MW	Designer RH
Drafting Check -	Design Check -
Project Coordinator CM	Date Aug 11, 2023
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Project No. 11215131

Title
SOUTHWEST EXCAVATION AREA PROPOSED DEADMAN

Sheet No.
S-02

Sheet - of -

Plot Date: 24 August 2023 - 1:58 PM Plotted By: Matt Wolfer Filename: N:\US\Baton Rouge-CEG\Projects\662\11215131\Digital_Design\ACAD 2019\Sheets\11215131-01-DWG-S-001.dwg

Appendix B

SWPPP Inspections

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 11-21-2022 Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: 7 Yrs Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
11/20/22	Throughout day	15 hours	~~1.5~~ 1.25"	No

Weather Information at the Time of Inspection

Temperature: 48 d Climate (Sunny, Cloudy, Rain)? Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☐	☐	☒

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☐	☐	☒
2. Is the stone greater than 2-inch diameter?	☐	☐	☒
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☐	☐	☒
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

NA

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☐	☐	☒
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Silt curtain in impacted areas not dug into ground for now

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☐	☐	☒
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☐	☐	☒
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☒	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☐	☐	☒
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
NA	NA	☐	☐	NA
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Continue to expand silt fence along boundary	11/22/22

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate	Date
	11-21-22

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 11/22/22 Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: 7 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
11/21/22	0700	12 hrs	0.5"	N

Weather Information at the Time of Inspection

Temperature: 49° Climate (Sunny, Cloudy, Rain)? Overcast, no rain

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☐	☒	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☐	☐	☒
2. Is the stone greater than 2-inch diameter?	☐	☐	☒
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☐	☐	☒
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

NA

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☐	☐	☒
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Trenching along northern boundary to extend silt fence completed in the morning

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

N/A

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☐	☒
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☐	☐	☒
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☐	☐	☒
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☐	☐	☒
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

NA

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
- Extend silt fence at northern boundary	11/22/22	☐	☒	Work in progress at time of this report
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

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NO INCIDENTS OF NON-COMPLIANCE

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

11/22/22
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 11/28/22 Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: 7 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
11/24/2022	0900	through 11/27/22	6"	N

Weather Information at the Time of Inspection

Temperature: 65° Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? N If yes, describe: —

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☐	☒	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☐	☐	☒
2. Is the stone greater than 2-inch diameter?	☐	☐	☒
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☐	☐	☒
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☐	☐	☒
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☐	☒
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☐	☐	☒
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☐	☐	☒
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☒	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☐	☐	☒
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Continue silt fence	Ongoing	☐	☐	extending fence today
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

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NO INCIDENTS OF NON-COMPLIANCE

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

11/28/22
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 12-12-22 Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: 7 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
12-11-22	1400	5- hours	3/4"	N

Weather Information at the Time of Inspection

Temperature: 75° Climate (Sunny, Cloudy, Rain)? Overcast

Is Stormwater Being Discharged? — If yes, describe: —

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☐	☐	☒
2. Is the stone greater than 2-inch diameter?	☐	☐	☒
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☐	☐	☒
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☐	☐	☒
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Fence 4-6" into ground all areas except impacted soil region

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☐	☐	☒
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
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6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☐	☐	☒
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☐	☐	☒
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
- Will discharge water once heavy rains stop.	12/14/22	☐	☐	Expected to discharge on Wed
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or ~~Authorized Delegate~~	Date
	12-12-2022

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 12/30/22 Inspector Name: ~~Marc Kemper~~ Nick Neil

Inspector Title: Field Engineer Qualifications: ~~7 Years' Experience~~ 13 years of experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
12/29/22	1200 PM	15 hours	2 inches	N

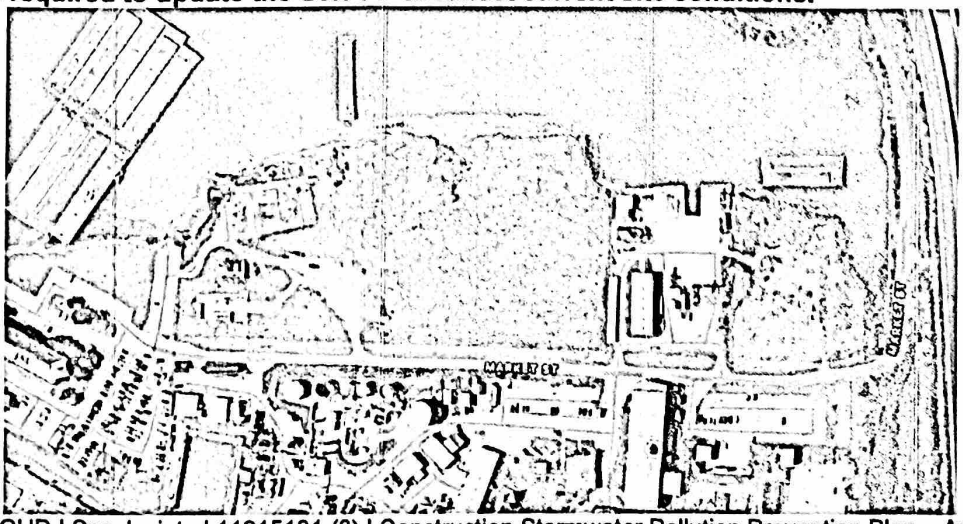
Weather Information at the Time of Inspection

Temperature: 63°F Climate (Sunny, Cloudy, Rain)? Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☐	☐	☒
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

No sediment built up and no fence blowouts.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☐	☐	☒
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☒	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented? Hay bales	☒	☐	☐
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed		Comments
		Yes	No	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

12/30/22
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: _____ Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: 7 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
01-08-2023	20:00	8-10 hrs	2"	Y

Weather Information at the Time of Inspection

Temperature: 65° Climate (Sunny, Cloudy, Rain)? Sunny / Cloudy

Is Stormwater Being Discharged? Yes If yes, describe: Stormwater in low-lying areas being discharged to silt fence. No impacted material, using a filter

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☐	☐	☒
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

NA

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☐	☐	☒
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

None observed

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☐	☐	☒
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☐	☐	☒
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

N/A

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Yes, a filter bag was applied at the discharge location

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
2° containment at water frac tanks needed slight readjustment. Addressed immediately	9/09/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate	01-09-23 Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 1/25/2023 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: 13 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
1/24/2023	0800	7.5 hours	2.25"	N

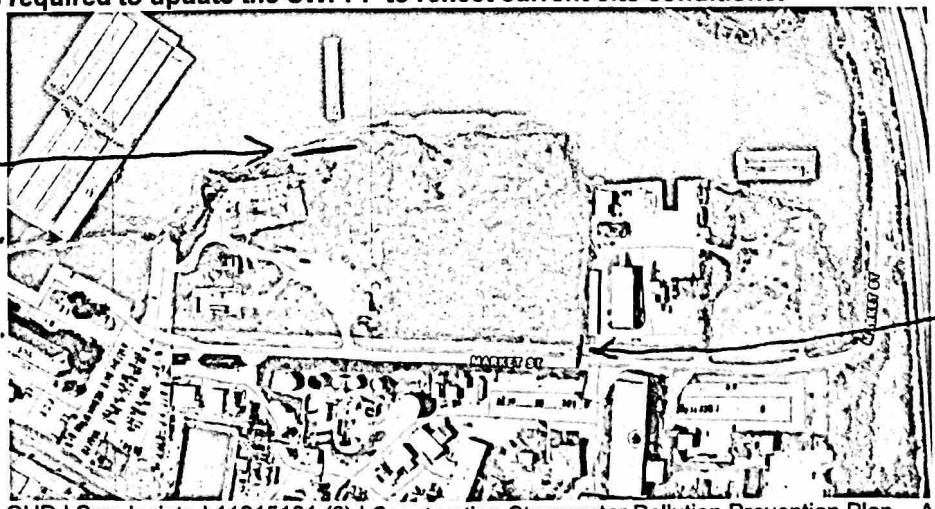
Weather Information at the Time of Inspection

Temperature: 44°F Climate (Sunny, Cloudy, Rain)? cloudy

Is Stormwater Being Discharged? — If yes, describe: —

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Silt fence section down and needs repair. Approximately a 30' section down.

Remove hay bales causing street flooding.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

A 30' section of silt fence is down on the west side of the site. Scope of Work today includes repairs to this area.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Hay bales stacked in the ditch along Market Street will be removed to allow water to drain. The GHD Construction Superintendent will consult with GHD Engineers for a better plan or BMP. The hay bales are holding back water and causing street flooding.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Silt fence repair on the west side of the site.	1/25/2023
Hay bale removal along Market Street.	1/25/2023

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

1/25/2023
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 1/30/2023 Inspector Name: ~~Marc Komper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: 13 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
1/29/2023	0700	12 hours	0.75"	N

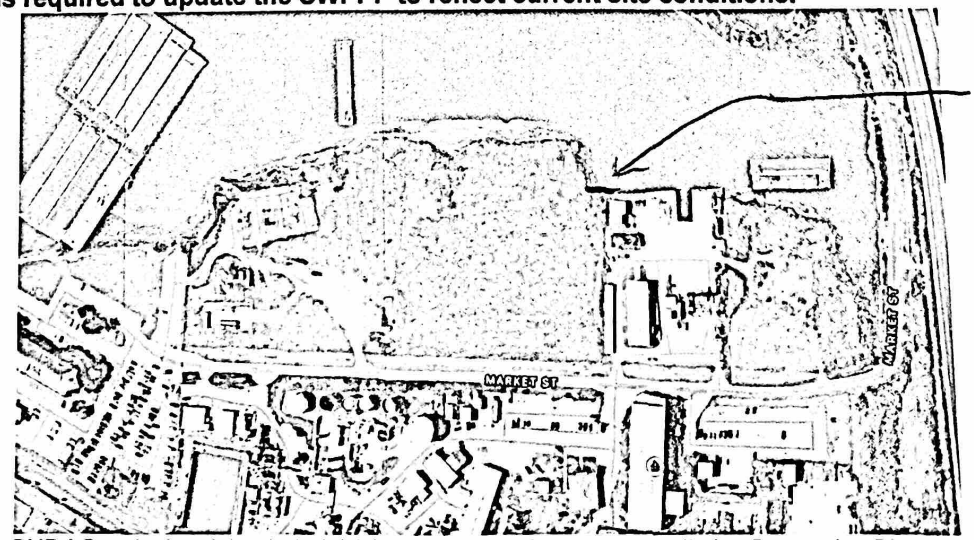
Weather Information at the Time of Inspection

Temperature: 47°F Climate (Sunny, Cloudy, Rain)? Overcast

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



20' section of silt fence needs more soil against the flap.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

A 20' section near the southwest corner of Glendale needs more soil placed on the flap of the silt fence. It's hanging and showing a gap under the fence.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Silt fence repair on the west side of the site.	1/25/2023	☒	☐	
		☐	☐	
		☐	☐	
Hay bale removal along Market Street.	1/25/2023	☒	☐	Check dams still need to be installed in place of hay bales, 5" rock will be used.
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Place soil to anchor silt fence at SW corner of Glendale.	1/31/2023
Install rock check dams in place of hay bales.	1/31/2023

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

1/30/2023
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 2/11/23 Inspector Name: ~~Marc Kemper~~ Nick Nail

Inspector Title: Field Engineer Qualifications: 15 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
No storm event. Just routine inspection.				

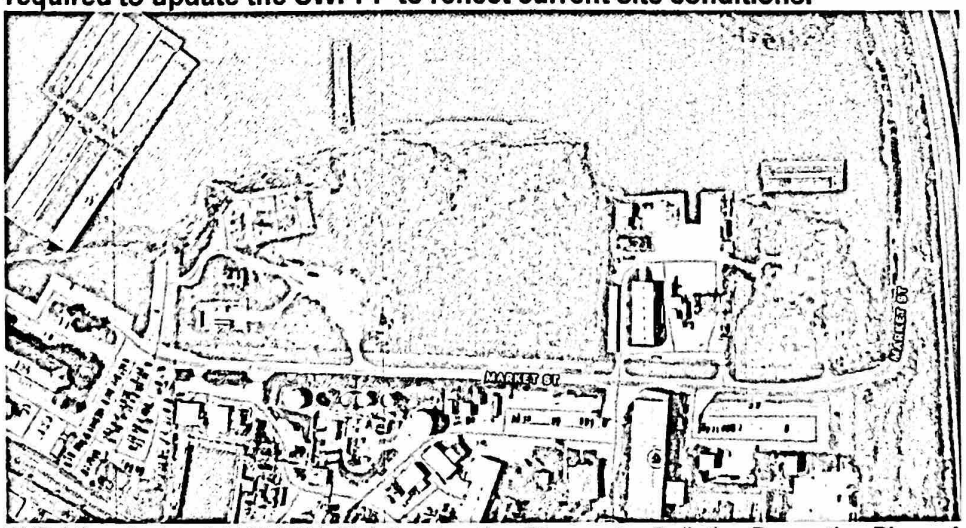
Weather Information at the Time of Inspection

Temperature: 67°F Climate (Sunny, Cloudy, Rain)? clear

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

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ADDITIONAL NOTES

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Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Place soil to anchor silt fence at the SW corner of Glendale.		☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☒	
Install rock check dams in place of hay bales		☐	☐	Waiting for HDPE line to be completed.
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

2/11/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the Inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 2/23/23 Inspector Name: ~~Marc Kemper~~ Nicle Neill

Inspector Title: Field Engineer Qualifications: 13 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
2/16/23			1/8"	No
2/22/23			1/8"	No

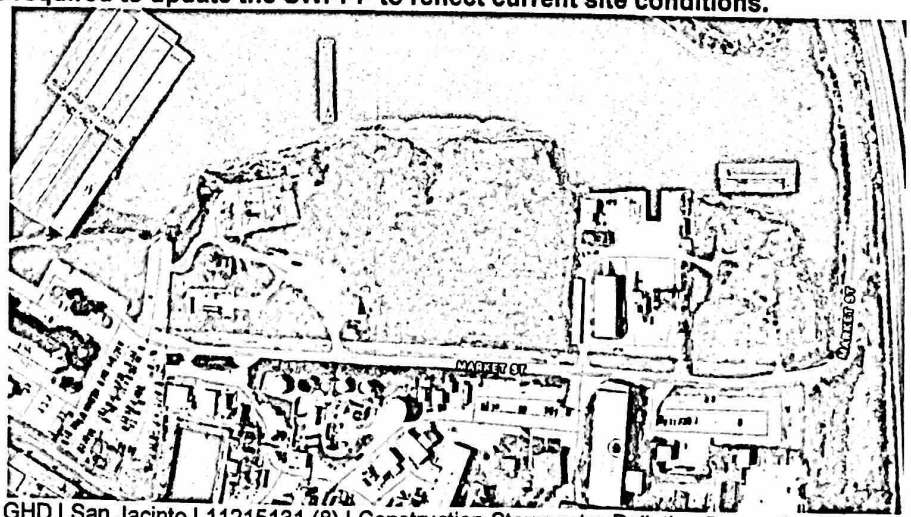
Weather Information at the Time of Inspection

Temperature: 70'F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Place soil to anchor silt fence at the SW corner of Glendale.	2/27/23	☐	☒	
		☐	☐	
		☐	☐	
		☐	☐	
Install rock check dams in place of hay bales.	2/27/23	☐	☒	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

2/23/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 3/2/23 Inspector Name: Nick Neill ~~Mara Kemper~~

Inspector Title: Field Engineer Qualifications: 13 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
Routine	Inspection			

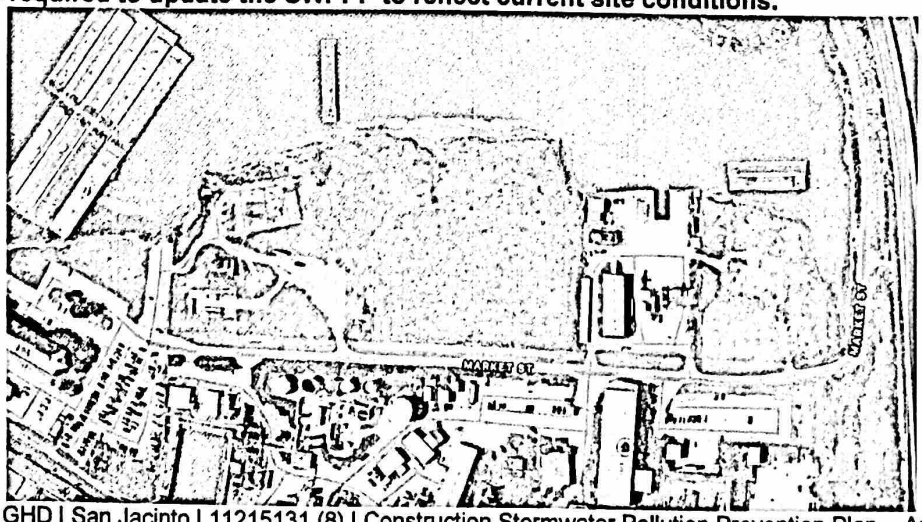
Weather Information at the Time of Inspection

Temperature: 75°F Climate (Sunny, Cloudy, Rain)? Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☑	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Place soil to anchor silt	2/27/23	☒	☐	
fence at the SW corner		☐	☐	
of the Glendale yard.		☐	☐	
		☐	☐	
		☐	☐	
Install rock checks dams	2/27/23	☒	☐	
in place of hay bales.		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

[signature] 3/2/23

Signatory or Authorized Delegate — Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 3/14/23 Inspector Name: Nicle Neill ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 13 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
Routine Inspection				

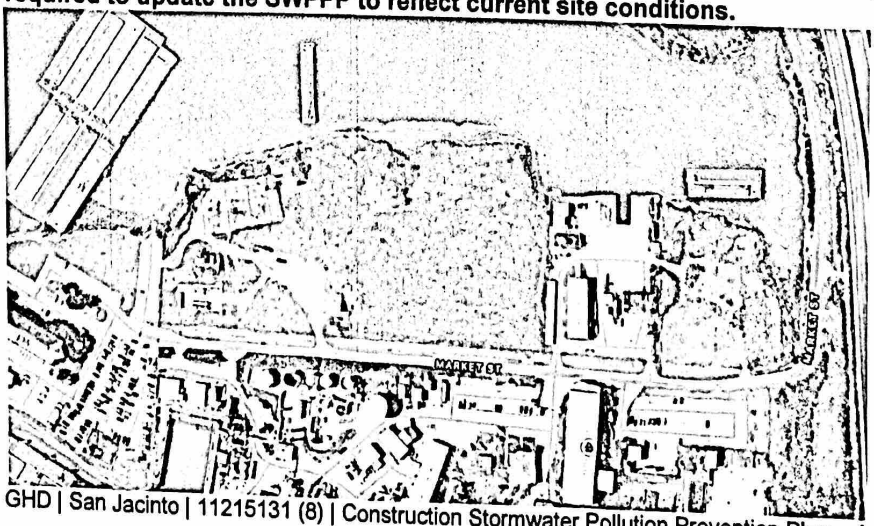
Weather Information at the Time of Inspection

Temperature: 62°F Climate (Sunny, Cloudy, Rain)? Mostly Cloudy

Is Stormwater Being Discharged? _____ If yes, describe: _____

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
No action items.	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

3/14/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 3/18/23 Inspector Name: Nick Neill ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 13 years ~~7 Years' Experience~~

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
3/17/23	02:00	12 hours	1.5"	N

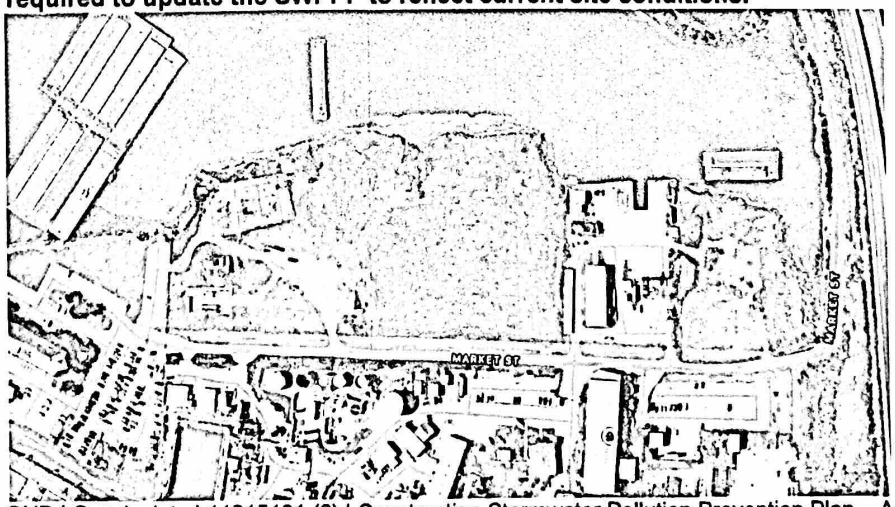
Weather Information at the Time of Inspection

Temperature: 50 Climate (Sunny, Cloudy, Rain)? cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

No repairs needed

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed		Comments
		Yes	No	
None identified.		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None identified.	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

3/18/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 3/31/23 Inspector Name: Nick Neill ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 13 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
None				

Weather Information at the Time of Inspection

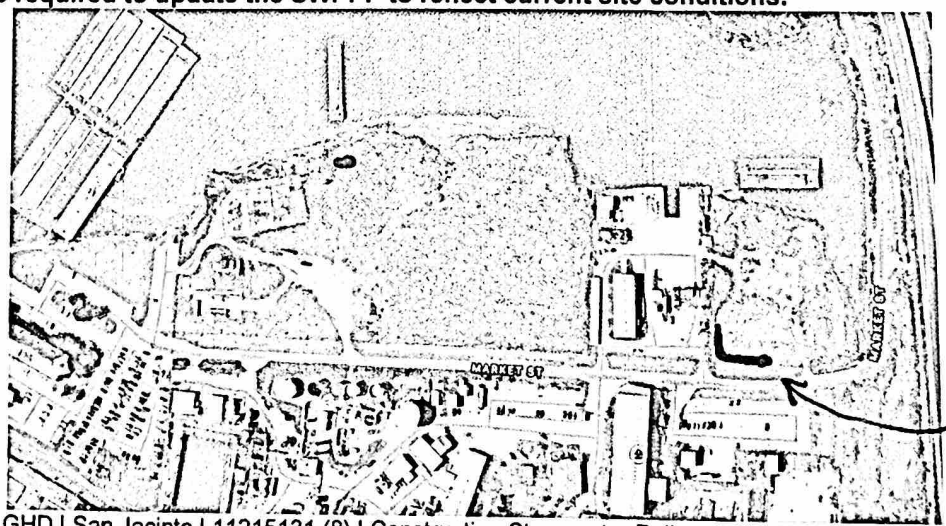
Temperature: 82 Climate (Sunny, Cloudy, Rain)? Cloudy, Calm

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.

Silt fence down and waddle will be used as replacement.



Waddle will soon be added here.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

West site access near the SW corner of the southern containment has silt fence down. This will be replaced with waddle so it can be removed if UTV's or equipment need to use the path.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Waddles will also be placed in areas at the NE excavation area. See the map on the front page.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Place waddles as seen on the ~~map~~ map and noted in this inspection.	4/3/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

3/31/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 4/8/23 Inspector Name: Nick Neill ~~Mara Kemper~~

Inspector Title: Field Engineer Qualifications: 13 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
4/7/23		24 hours	1.75"	No

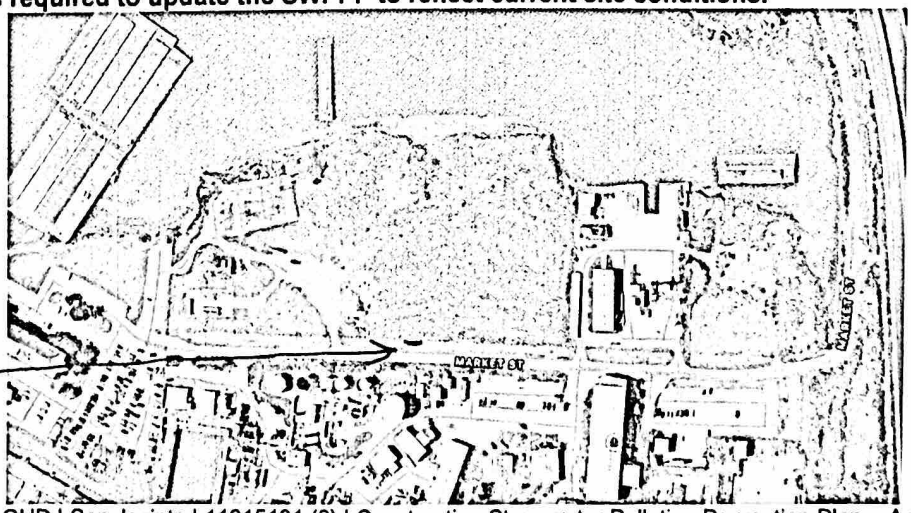
Weather Information at the Time of Inspection

Temperature: 53°F Climate (Sunny, Cloudy, Rain)? Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Small 4' section of silt fence needs repair. It's east of the clean fill stockpile.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

A 4' section of silt fence needs repair just east of the clean fill stockpile.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Place waddle where shown on previous inspection.	4/3/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
The 4' section of silt fence needs repair just east of the clean fill stockpile.	4/10/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

4/8/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 4/22/23 Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: 13 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
4/21/23	12 AM	4 hours	1.75"	N

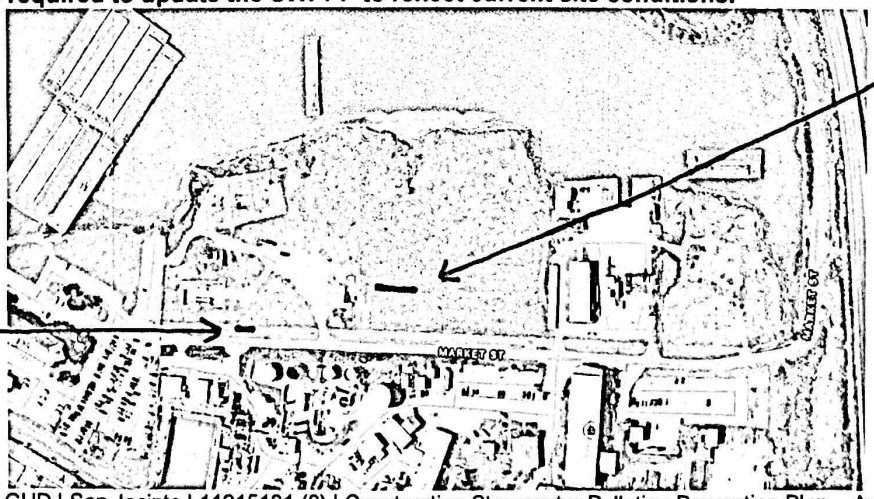
Weather Information at the Time of Inspection

Temperature: 66°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

- Repairs needed on the west side of the clean fill stockpile. This is the stockpile near office trailers.
- Fabric down on 5' section near driveway east of the WTS.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
- Repair silt fence on the west side of the clean fill stockpile near office trailers.	4/22/23
- 5' section of fabric down near a driveway east of the WTS.	4/22/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

4/22/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 5/6/2023 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 13 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
4/29/23			0.45"	N
5/6/23			0.125"	N

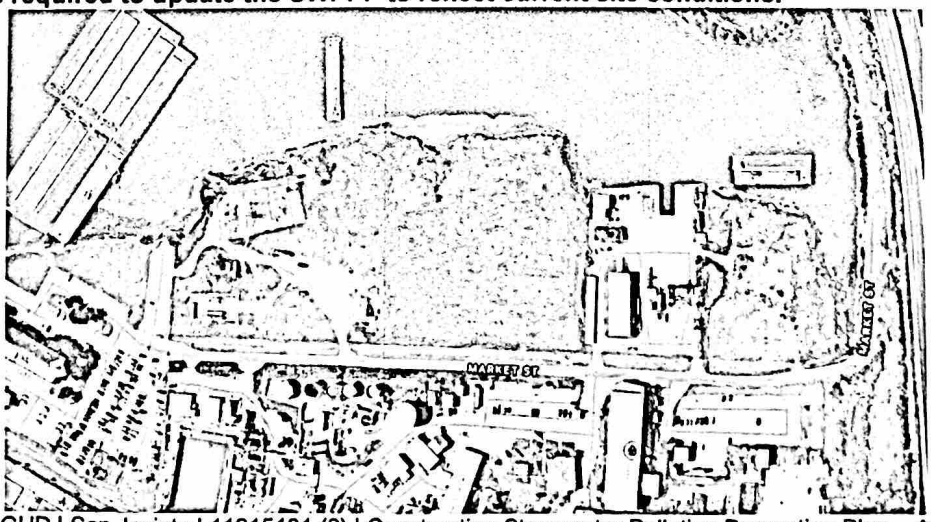
Weather Information at the Time of Inspection

Temperature: 87°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
- Silt fence repair on the west side of the clean fill stockpile, near office trailers.	4/22/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
- 5' section of fabric down near driveway east of the Water Treatment System.	4/22/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

5/6/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 5/11/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7 Years' Experience~~ 14

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
5/9/23			1"	N
5/10/23			1.5"	N

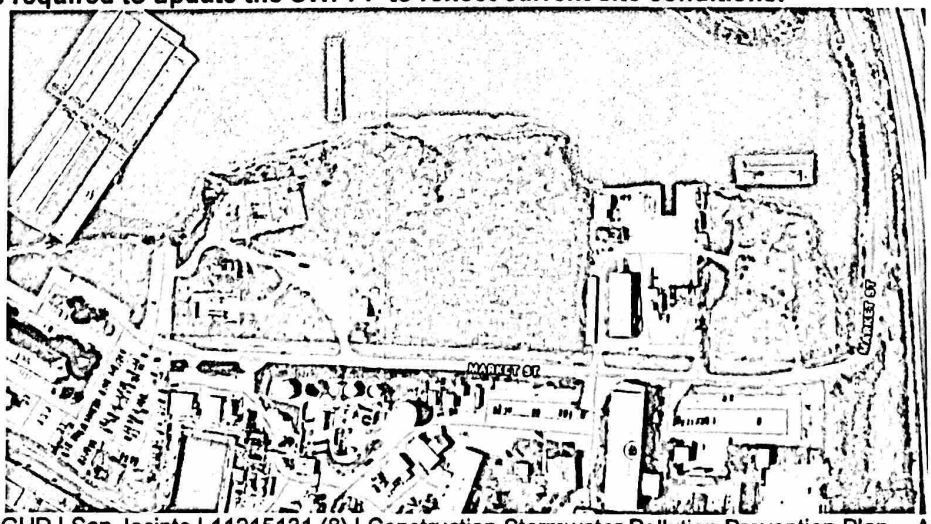
Weather Information at the Time of Inspection

Temperature: 70°F Climate (Sunny, Cloudy, Rain)? Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
No repairs needed.	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

5/11/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 5/15/23 Inspector Name: Nick Neill ~~Mare Kemper~~

Inspector Title: Field Engineer Qualifications: 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
5/14/23	0700	12 hours	2.5"	N

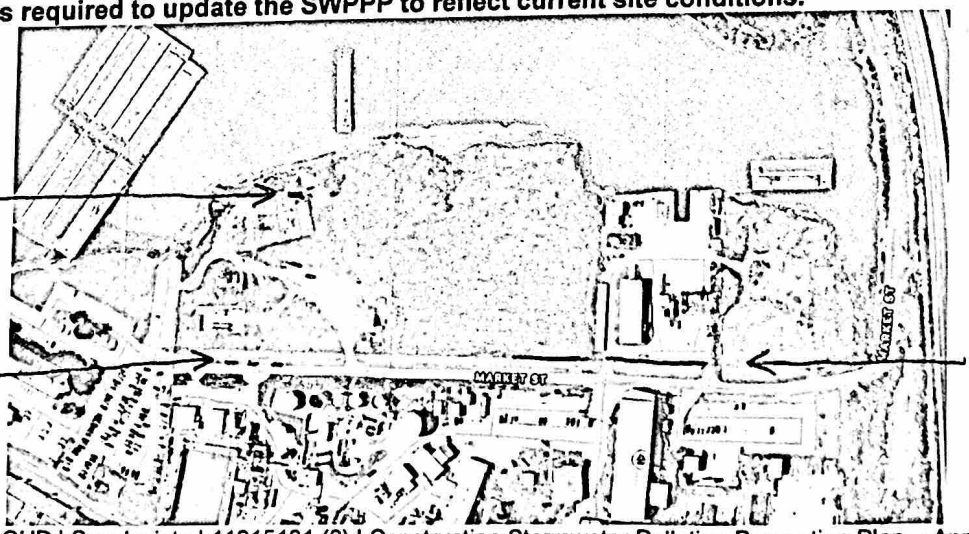
Weather Information at the Time of Inspection

Temperature: 80°F Climate (Sunny, Cloudy, Rain)? mostly cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Repairs needed as shown on map.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
- Silt fence fabric loose at four areas marked on the first page of this inspection.	5/15/23
- Add stakes to waddle areas along Market Street.	5/15/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

5/15/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 5/17/23 Inspector Name: ~~Marc Komper~~ Nick Neiv

Inspector Title: Field Engineer Qualifications: 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
5/16/23	1600	2 hours	0.5"	N

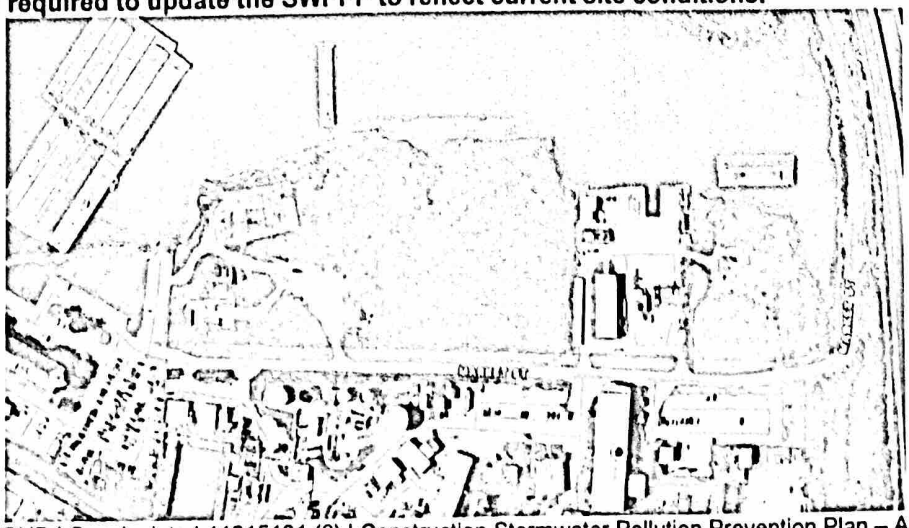
Weather Information at the Time of Inspection

Temperature: 86°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☑	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☑	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☑	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☑	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☑	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☑	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☑	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☑	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

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_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☑
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☑
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☑
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☑
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☑
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☑
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☑
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☑

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
- Silt fence fabric loose at four areas southeast of the guard shack.	5/15/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
- Add stakes to waddle areas along Market Street.		☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

5/17/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 5/30/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7 Years~~ 14' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
5/23/23		1 hour	0.125"	N

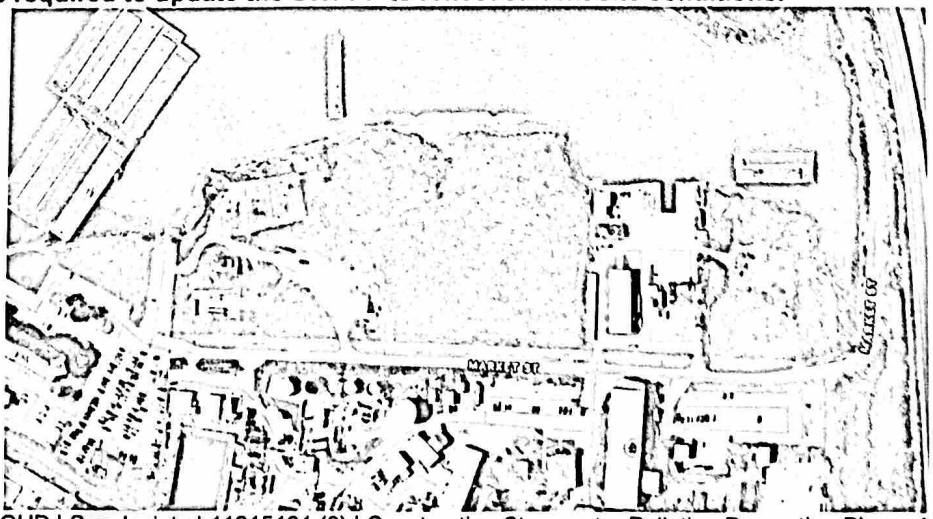
Weather Information at the Time of Inspection

Temperature: 85°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

5/30/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 6/7/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7 Years~~ 14 Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
6/4/23	late afternoon	2 hrs	0.25"	N
6/5/23	↓	2 hrs	0.50"	N
6/6/23	↓	3 hrs	0.25"	N

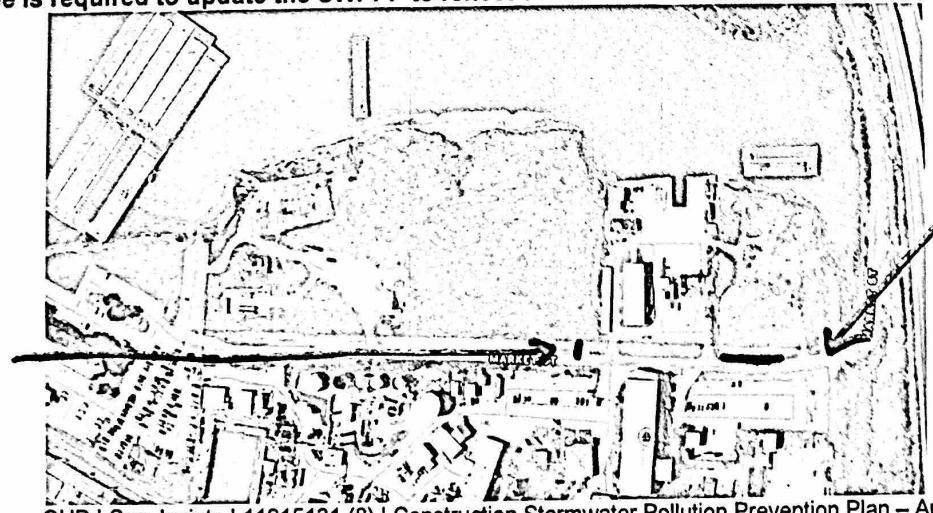
Weather Information at the Time of Inspection

Temperature: 89°F Climate (Sunny, Cloudy, Rain)? partly cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☑	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Silt fence or waddle needs to be placed ~~at~~ as shown on the first page of this inspection.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

_____

_____

_____

_____

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

_____

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Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Rock check dam damage. Needs rock added.	6/9/23
Silt fence or waddle placement near ditch at north excavation area.	6/9/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

6/7/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 6/9/2023 Inspector Name: ~~Mare Komper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
6/8/23	5:30 PM	2 hours	1"	No

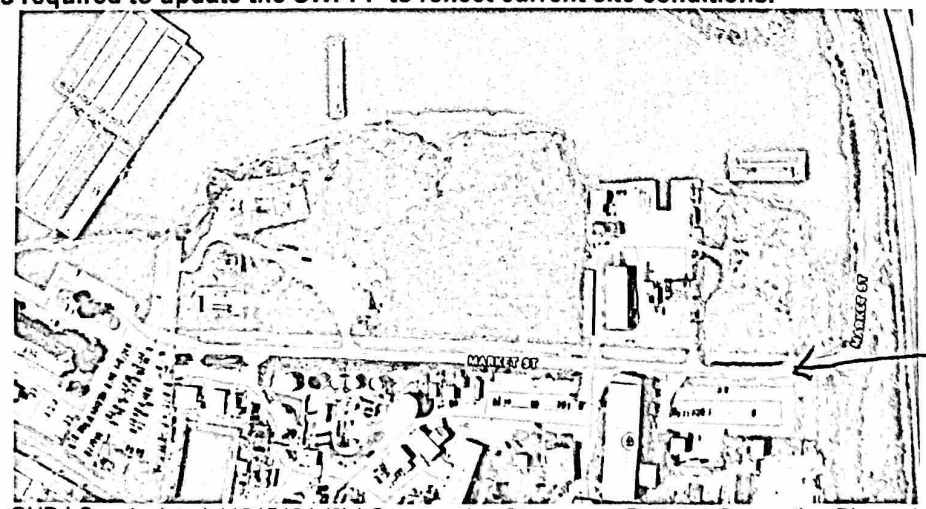
Weather Information at the Time of Inspection

Temperature: 91°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Add rock to check dam.	6/9/23	☒	☐	
		☐	☐	
Waddle placement near the ditch at the north excavation area.	6/9/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Repair waddle at the north excavation area as shown on the map, on the first page.	6/9/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

6/9/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 6/24/2023 Inspector Name: Nick Neill ~~Marc Komper~~

Inspector Title: Field Engineer Qualifications: 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
6/23/2023	19:00	3 hours	0.50"	N

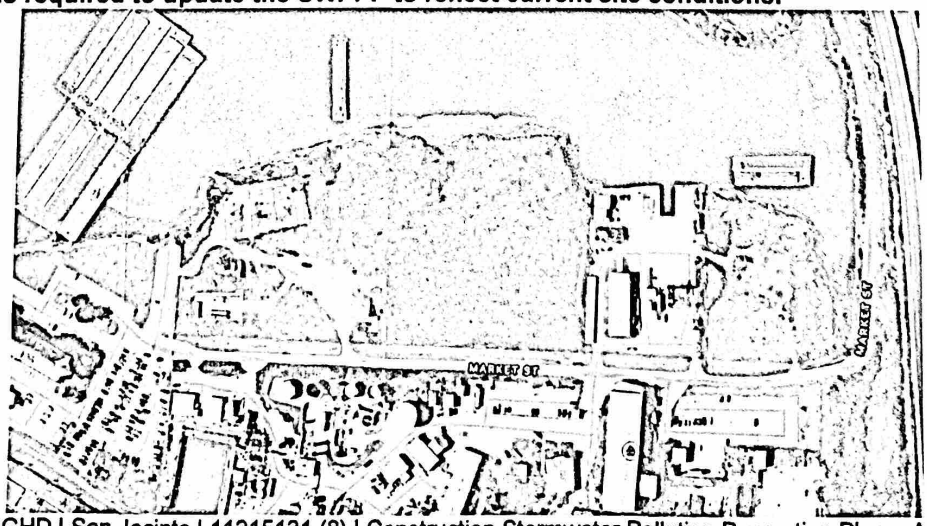
Weather Information at the Time of Inspection

Temperature: 98°F Climate (Sunny, Cloudy, Rain)? partly cloudy

Is Stormwater Being Discharged? N If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Waddle repair at north excavation area.	6/9/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

6/24/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 7/7/23 Inspector Name: Nick Neill ~~Mara Kemper~~

Inspector Title: Field Engineer Qualifications: 14 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
7/6/23	1230	3.5 hrs	1.25"	N

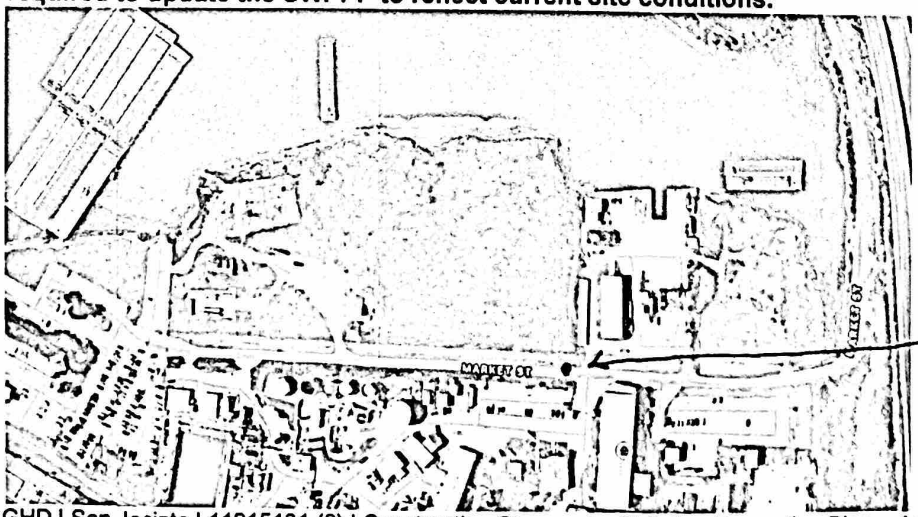
Weather Information at the Time of Inspection

Temperature: 86°F Climate (Sunny, Cloudy, Rain)? Mostly Cloudy

Is Stormwater Being Discharged? N If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Extra rock check dam added between SWPPP inspections.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	
Noted a new rock check dam that was placed, as shown on the first page of this inspection checklist.	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

7/7/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 7/22/23 Inspector Name: ~~Mara Kemper~~ Nicki Noill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
None				

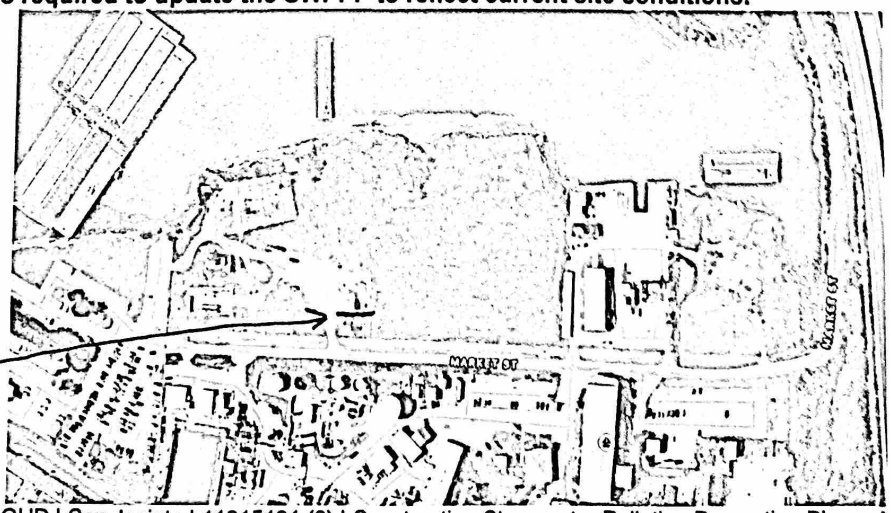
Weather Information at the Time of Inspection

Temperature: 94 Climate (Sunny, Cloudy, Rain)? partly cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



New clean fill stockpile area moved for season 2. Silt fence added along west side.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None - See attached new site layout.	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

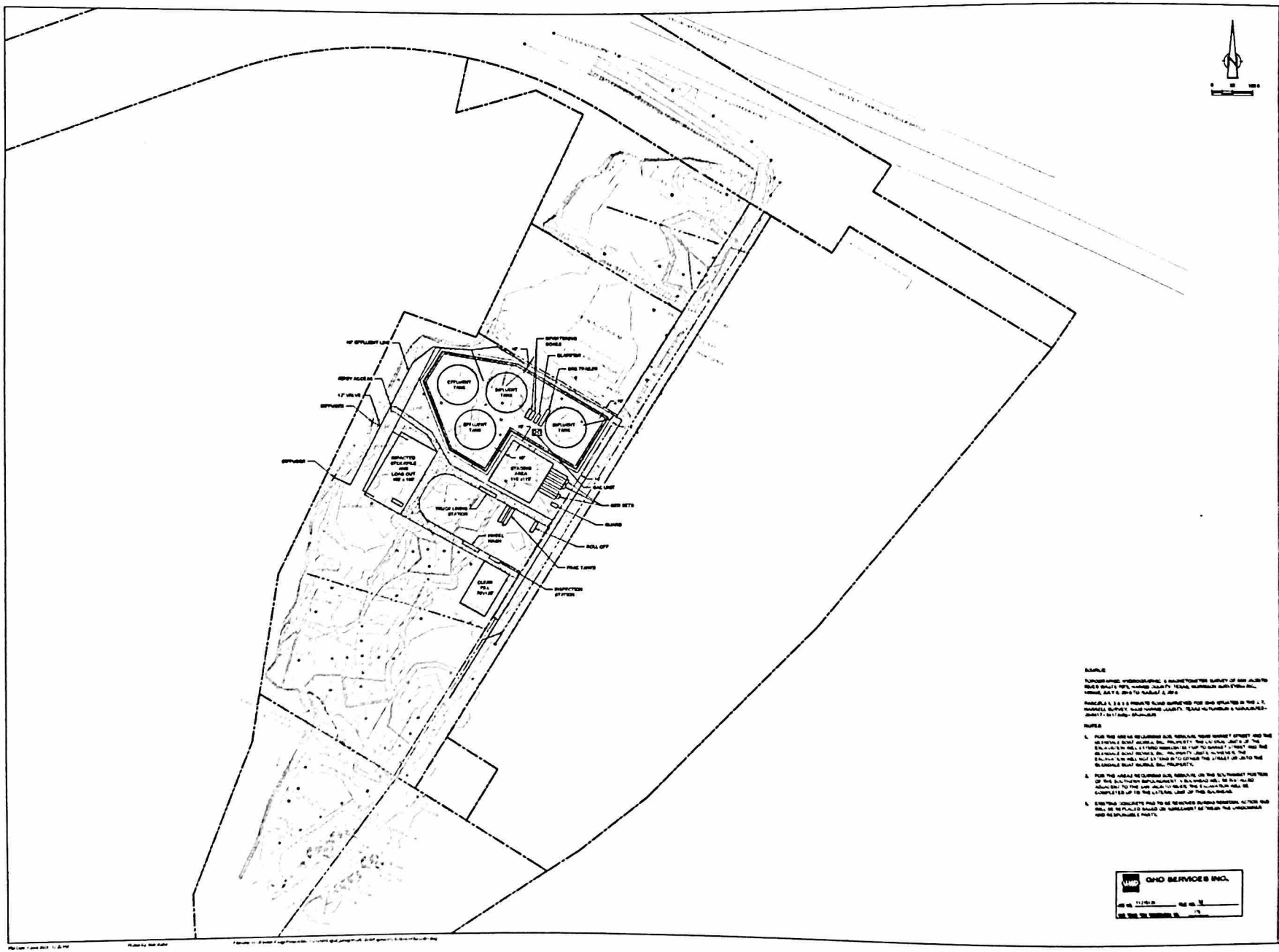
NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

Date 7/22/23



GHD

GHD
1894 Commerce Boulevard Suite 200
Baton Rouge Louisiana 70809
T 225 293 0997 F 225 754 2676 W www.ghd.com

Notice of Confidentiality

LEGEND

SAN JACINTO RIVER
WASTE PITS

REMEDIAL DESIGN
SOUTHERN IMPOUNDMENT
HARRIS COUNTY, TEXAS

Rev	Description	Drawn	Reviewed	Date

Drawn MB	Designer MB
Original Check JK	Check MB
Project Coordinator DB	Date June 5, 2008
Original Size Arch D	Scale 1" = 100'
Project No. 11215139	

SITE WORKS
WATER AND MATERIAL HANDLING
SEASON 2

Sheet No.

FIGURE 1

Sheet 1 of 1

GHD SERVICES INC.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 8/5/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
None				

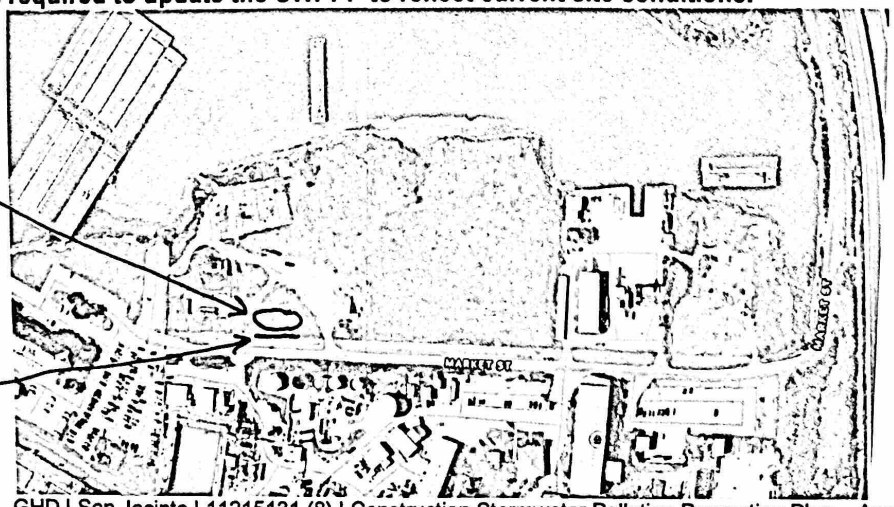
Weather Information at the Time of Inspection

Temperature: 94° Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Entire section of silt fence needs to be replaced along the ditch just east of the new clean fill stockpile area.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Replace entire section of silt fence that is east of the new clean fill stockpile area.	8/5/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

8/5/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 8/19/23 Inspector Name: Nick Neily ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 14 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
None				

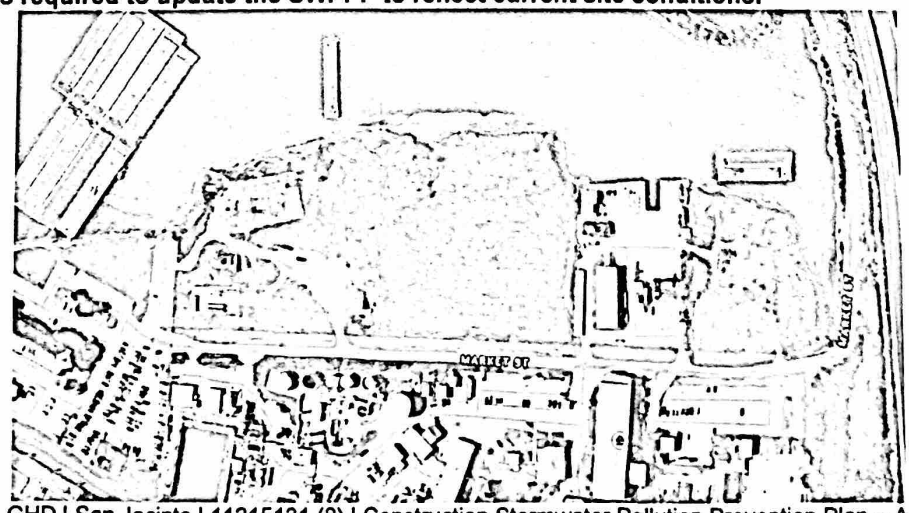
Weather Information at the Time of Inspection

Temperature: 98° Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☑	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☑	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Replace section of silt fence east of the new clean fill stockpile area.	8/5/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

8/19/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 9/16/23 Inspector Name: Nicle Neill ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 14 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
9-9-23			0.125"	N
9-14-23			0.125"	N
9-15-23			1.4"	N

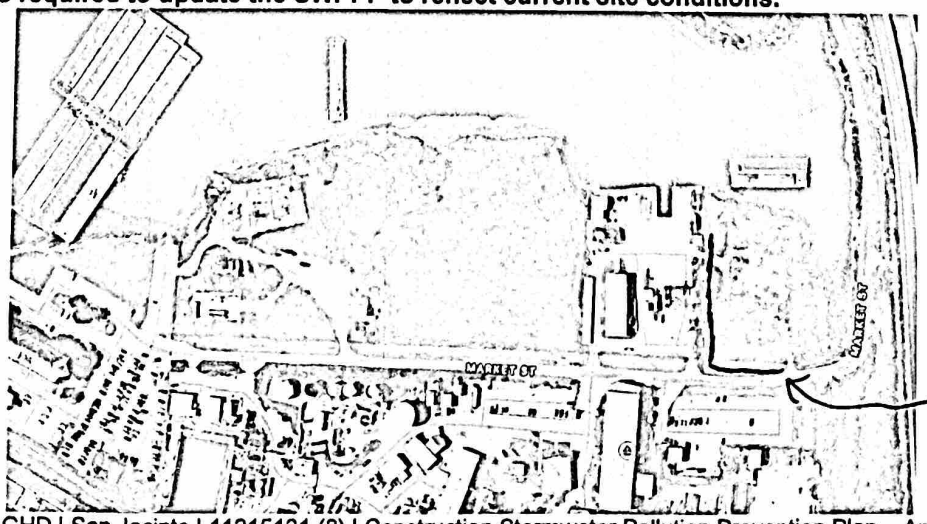
Weather Information at the Time of Inspection

Temperature: 90 Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Areas where waddle will be placed.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☑	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Waddle will be placed at the north end (cell 1) of the site, where shown on the front page map.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
Place waddle at the north end (cell 1) as shown on the map.	9/18/23

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 9/26/23 Inspector Name: ~~Mara Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
9/25/23			0.60"	N
9/26/23			1.10"	N

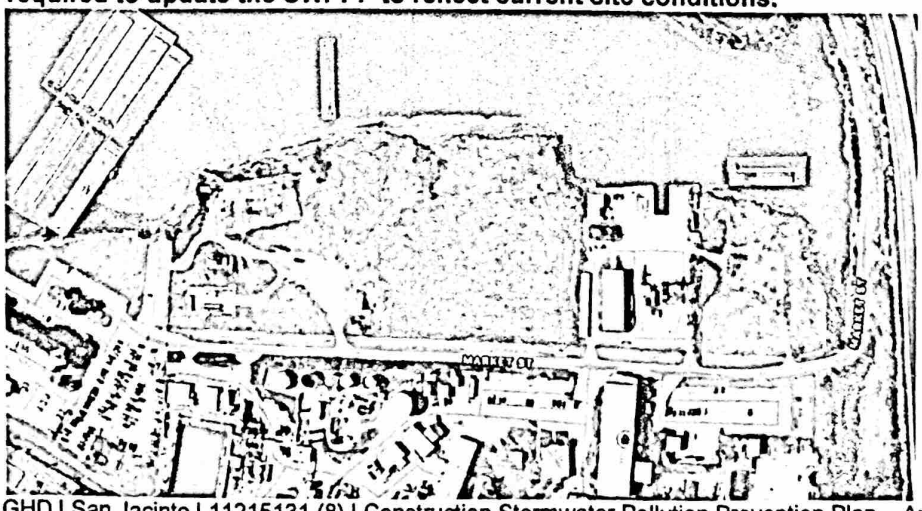
Weather Information at the Time of Inspection

Temperature: 86°F Climate (Sunny, Cloudy, Rain)? cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

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_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
Place waddle at the north end of the site (cell 1).	9/18/23	☒	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

9/26/2023
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 10/4/23 Inspector Name: Nick Nei11 ~~Marc Komper~~

Inspector Title: Field Engineer Qualifications: 14 7 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
10/3/23			1.25"	N

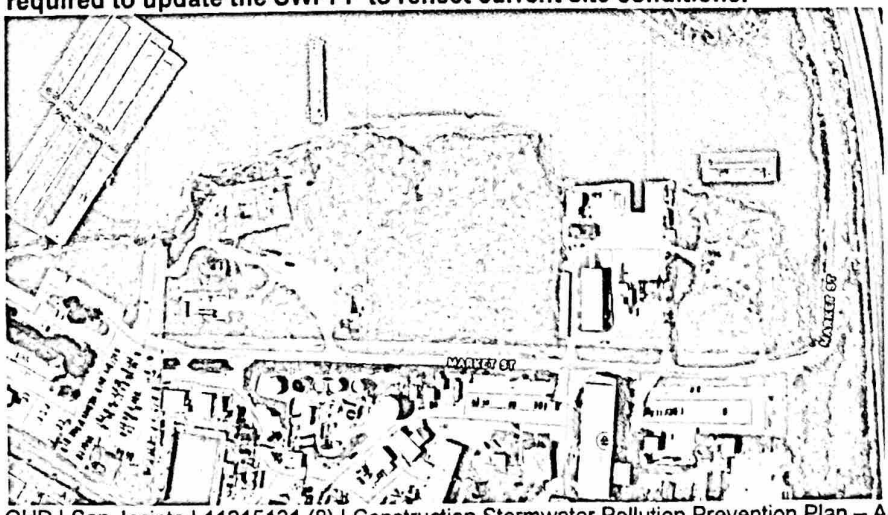
Weather Information at the Time of Inspection

Temperature: 81°F Climate (Sunny, Cloudy, Rain)? cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☑	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☑	☐	☐
2. Is the stone greater than 2-inch diameter?	☑	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☑	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
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6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
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Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

10/4/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 10/6/23 Inspector Name: ~~Marc Kemper~~ Nicki Neill

Inspector Title: Field Engineer Qualifications: 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
10/5/23			1.25"	N

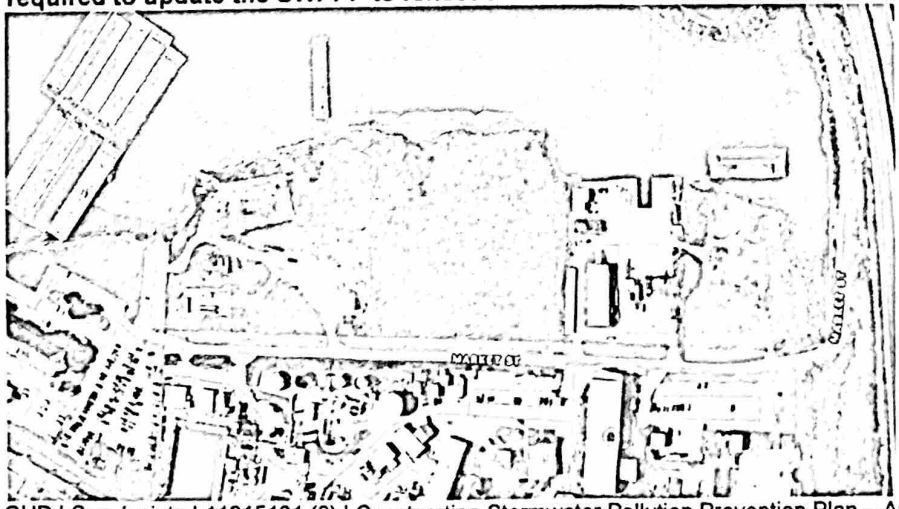
Weather Information at the Time of Inspection

Temperature: 74°F Climate (Sunny, Cloudy, Rain)? clear

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
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5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

10/6/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 10/20/23 Inspector Name: Nick Neill ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 14 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
10/11/23			0.25"	N

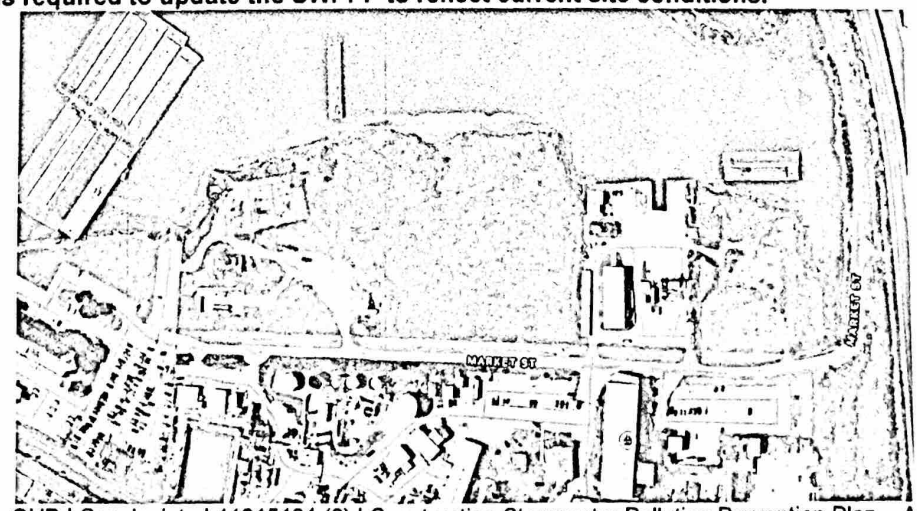
Weather Information at the Time of Inspection

Temperature: 84°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
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		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

10/20/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 11/3/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
10/23/23			0.20"	N
10/26/23			0.125"	N

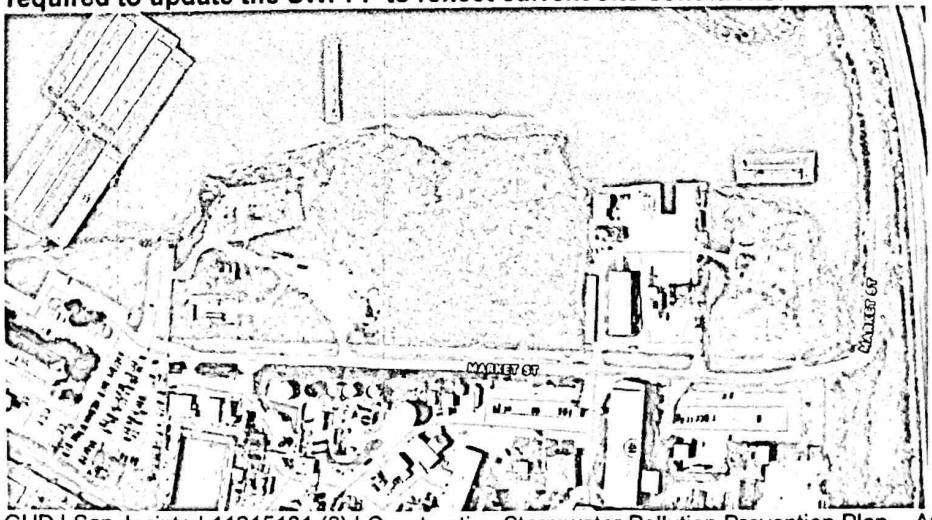
Weather Information at the Time of Inspection

Temperature: 52°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
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Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
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		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
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Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
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2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
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5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

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ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
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		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

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Signatory or Authorized Delegate

11/3/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the Inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 11/14/23 Inspector Name: ~~Marc Kemper~~ Nicle Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
11/10/23		4 days	2.25"	N

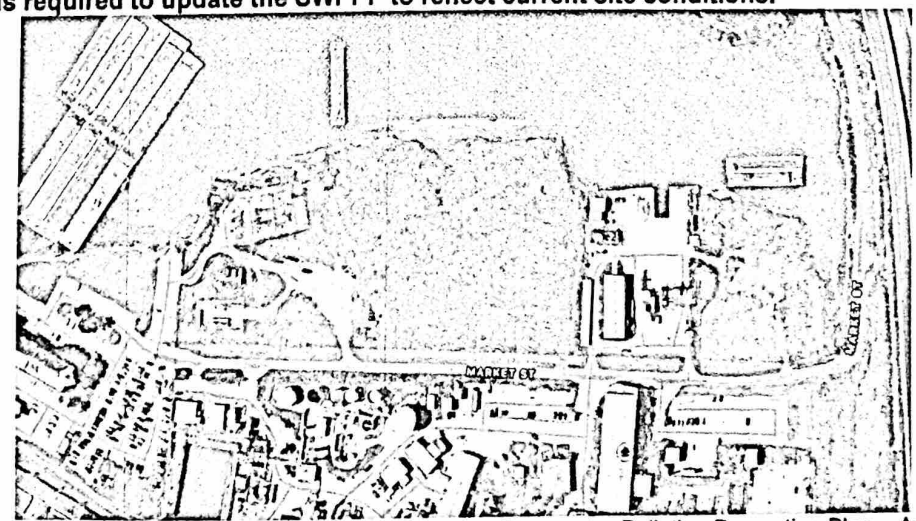
Weather Information at the Time of Inspection

Temperature: 61°F Climate (Sunny, Cloudy, Rain)? Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
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Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
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6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
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Note areas where repairs or maintenance is needed or where this practice needs to be applied:

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

11/14/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 11/28/23 Inspector Name: Marc Kemper

Inspector Title: Field Engineer Qualifications: ~14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
11/20/23			0.25"	N

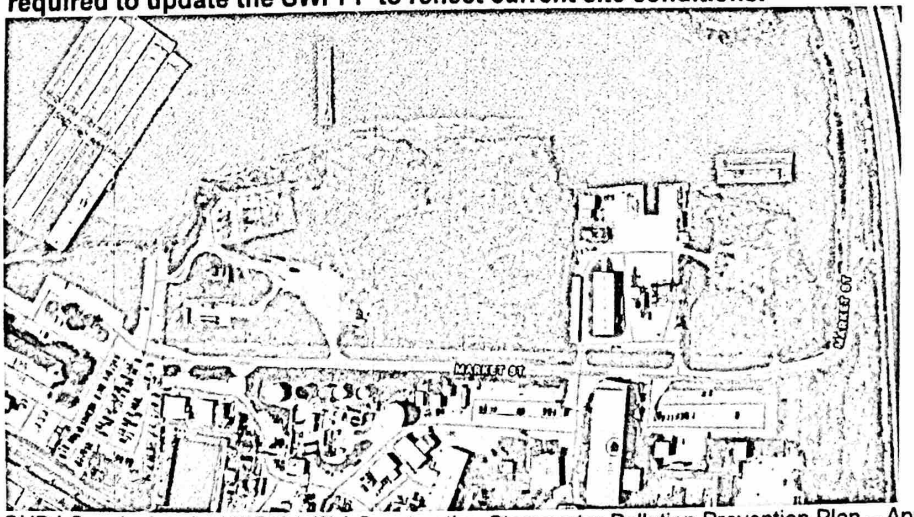
Weather Information at the Time of Inspection

Temperature: 55°F Climate (Sunny, Cloudy, Rain)? Partly Cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☐	☐	☒
2.	Has the soil been properly prepared to accept permanent seeding?	☐	☐	☒
3.	Has seed and mulch been applied at the appropriate rate?	☐	☐	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☐	☐	☒
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☑	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☑	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

11/28/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 12/1/23 Inspector Name: ~~Mare Kemper~~ Nicki Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
11/30/23	0630	13 hours	2.75"	N

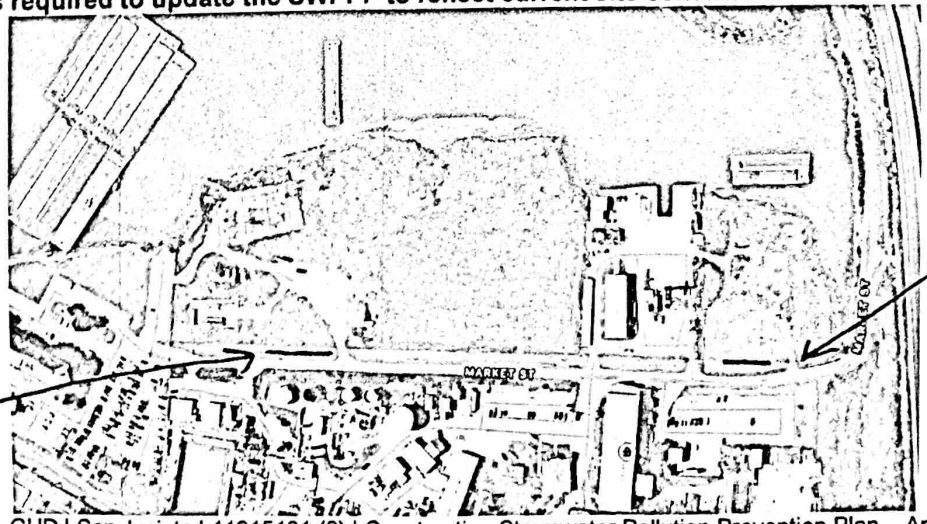
Weather Information at the Time of Inspection

Temperature: 70°F Climate (Sunny, Cloudy, Rain)? overcast

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Silt fence needs repair in the area shown on the first page of this inspection.

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☒	☐	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☒	☐	☐
3.	Has seed and mulch been applied at the appropriate rate?	☐	☒	☒
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☒	☐	☐
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
- Waddle repair as shown on the map or front page of this inspection report.	12/4/23
- Silt fence repair as shown on the map or front page of this inspection report.	12/4/23

SWPPP Modification

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I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

12/1/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 12/11/23 Inspector Name: ~~Mare Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
12/8/23		4 hours	0.4"	N
12/9/23		2 hours	0.5"	N

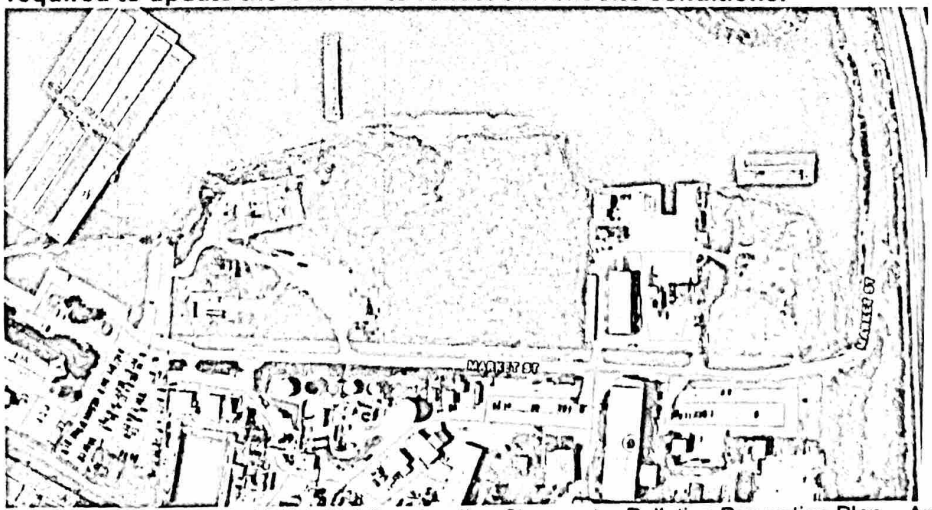
Weather Information at the Time of Inspection

Temperature: 60°F Climate (Sunny, Cloudy, Rain)? Sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☐	☐	☒
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☐	☐	☒
6.	Has seed or mulch blown away? If so, repair.	☐	☐	☒

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☒	☐	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☒	☐	☐
3.	Has seed and mulch been applied at the appropriate rate?	☒	☐	☐
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☒	☐	☐
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
- Waddle repair at the cell 1 area drainage ditch.	12/4/23	☑	☐	
		☐	☐	
		☐	☐	
		☐	☐	
- Silt fence repair along Market Street before getting to the Kirby entrance.	12/4/23	☑	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

12/11/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 12/16/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7 Years~~ 14 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
12/15/23		Evening and overnight.	1.0"	N

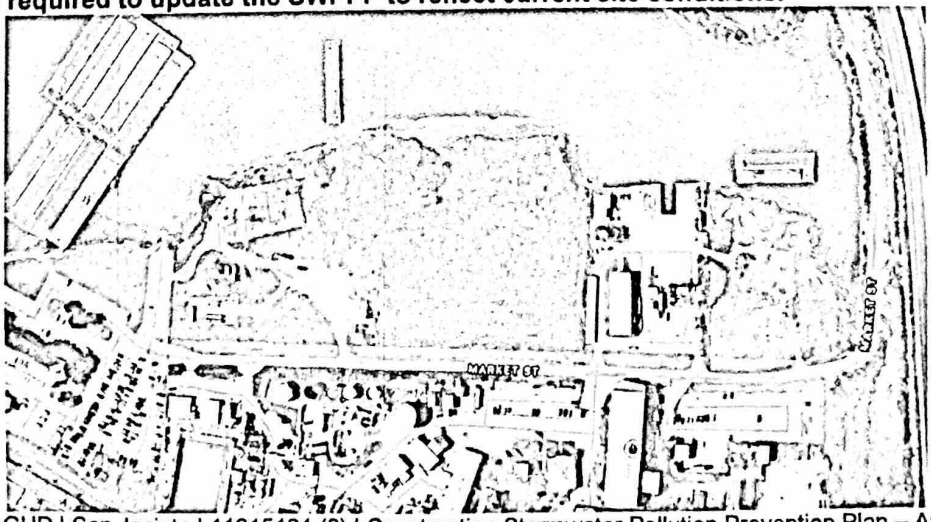
Weather Information at the Time of Inspection

Temperature: 58° Climate (Sunny, Cloudy, Rain)? mostly cloudy

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☒	☐	☐
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☒	☐	☐
6.	Has seed or mulch blown away? If so, repair.	☐	☒	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☒	☐	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☒	☐	☐
3.	Has seed and mulch been applied at the appropriate rate?	☒	☐	☐
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☒	☐	☐
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☒	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

12/16/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 12/21/23 Inspector Name: ~~Marc Kemper~~ Nick Neill

Inspector Title: Field Engineer Qualifications: ~~7 Years' Experience~~ 14 years

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)

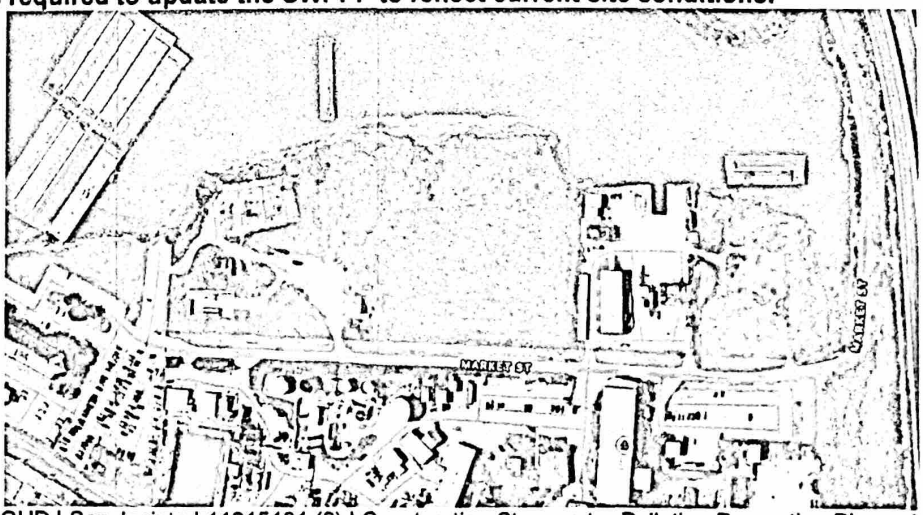
Weather Information at the Time of Inspection

Temperature: 62°F Climate (Sunny, Cloudy, Rain)? mostly cloudy

Is Stormwater Being Discharged? _____ If yes, describe: _____

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
7.	Is the tube controlling an appropriate drainage area?	☐	☐	☒
8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☒	☐	☐
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☒	☐	☐
6.	Has seed or mulch blown away? If so, repair.	☐	☒	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☒	☐	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☒	☐	☐
3.	Has seed and mulch been applied at the appropriate rate?	☒	☐	☐
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☒	☐	☐
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

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Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

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Signatory or Authorized Delegate

12/21/23
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 1/3/24 Inspector Name: ~~Marc Kemper~~ Nick Neil

Inspector Title: Field Engineer Qualifications: 7 Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
12/24/23			1.5"	N
1/3/24			1.75"	N

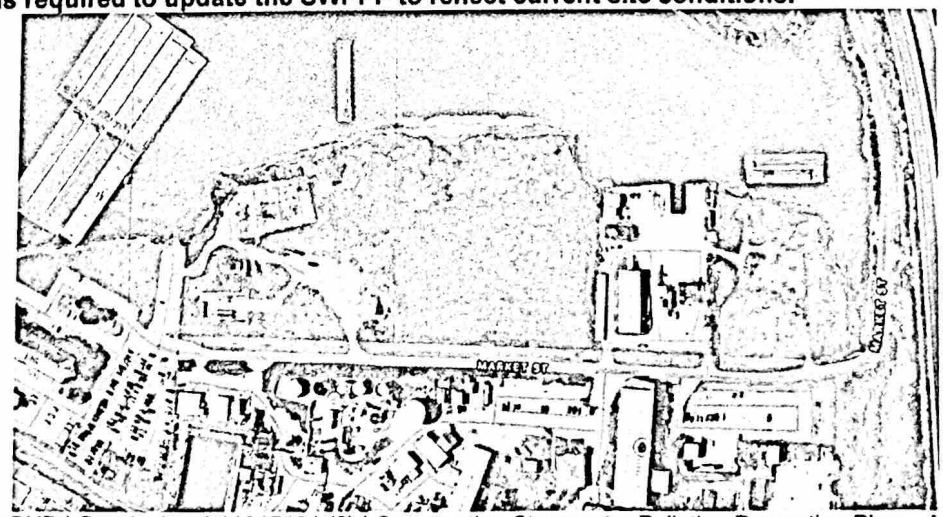
Weather Information at the Time of Inspection

Temperature: 46 Climate (Sunny, Cloudy, Rain)? mostly cloudy

Is Stormwater Being Discharged? If yes, describe:

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☑	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☑	☐	☐
2. Is the stone greater than 2-inch diameter?	☑	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☑	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☑
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☑	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
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4.	Are the ends turned upslope to prevent runoff from going around the ends?	☐	☐	☒
5.	Is the tube placed on a level contour? If not, the tube will only act as a diversion.	☐	☐	☒
6.	Have any gaps and tears in the tube been eliminated.	☐	☐	☒
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8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

_____

_____

_____

TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☒	☐	☐
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☒	☐	☐
6.	Has seed or mulch blown away? If so, repair.	☐	☒	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☒	☐	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☒	☐	☐
3.	Has seed and mulch been applied at the appropriate rate?	☒	☐	☐
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
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7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NON-SEDIMENT POLLUTION CONTROL

		Yes	No	N/A
1.	Has an area been designated for washing out concrete trucks? Washings must be contained on site within a lined, bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	☐	☐	☒
2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☑	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
4.	Are fuel tanks and drums of toxic and hazardous materials stored within adequate secondary containment?	☒	☐	☐
5.	Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	☒	☐	☐
6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☑	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

Items previously identified for action:	Target Date	Completed Yes	Completed No	Comments
None		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
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		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

SWPPP Modification

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff within seven calendar days. Results that require a modification in the SWPPP may include instances of non-conformance, BMPs which have failed to operate as designed or proved inadequate, and locations where additional BMPs are needed. Modifications to the SWPPP will be noted in Appendix I.

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

NO INCIDENTS OF NON-COMPLIANCE

Where an inspection report does not identify any incidents of non-compliance, it shall be certified that the facility is in compliance TPDES Construction General Permit TXR150000. The report shall be signed in accordance with Part III.F.7.(f)(ii) of the permit.

I certify that the Enterprise - Colorado River Project LLC site is in compliance with the TPDES Construction General Permit TXR150000.

Signatory or Authorized Delegate

Date 1/3/24

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

Inspections must be conducted once every 7 days OR every 14 days and within 24 hours of a 0.5 inches or greater rainfall. This report must be completed within 24 hours following the inspection.

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 1/6/24 Inspector Name: Nick Neill ~~Marc Kemper~~

Inspector Title: Field Engineer Qualifications: 14 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
1/5/24	12:00 AM	10 hours	1.5"	N

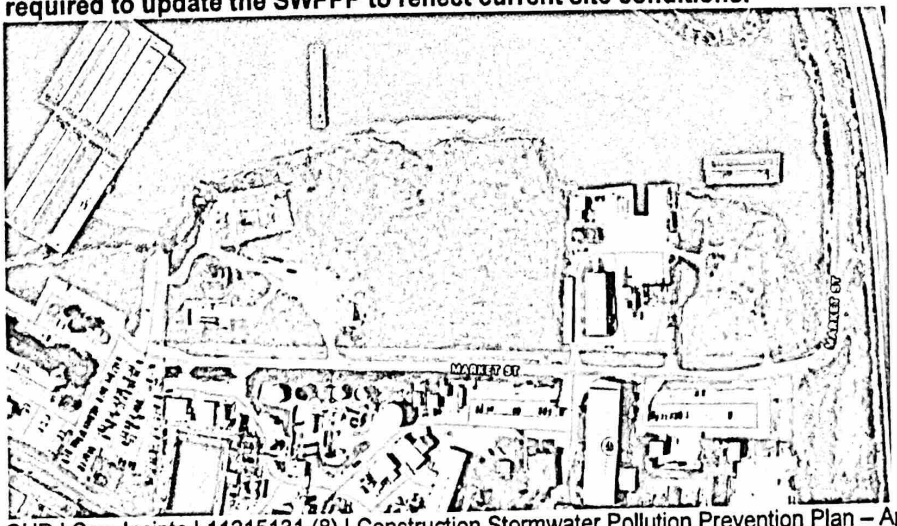
Weather Information at the Time of Inspection

Temperature: 62°F Climate (Sunny, Cloudy, Rain)? partly cloudy

Is Stormwater Being Discharged? _____ If yes, describe: _____

Sketch or Small Site Map

Along with a narrative inspection log, use a sketch or a reduced photocopy of the site plan showing the location of stormwater outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWPPP to reflect current site conditions.



Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

CONSTRUCTION ENTRANCES/EXITS

Construction Site Notices

	Yes	No	N/A
1. Is a complete Construction Site Notice posted in a publicly visible location?	☒	☐	☐

Stone Construction Entrances

	Yes	No	N/A
1. Has the drive been constructed by placing geotextile fabric under the stone?	☒	☐	☐
2. Is the stone greater than 2-inch diameter?	☒	☐	☐
3. Has the stone been placed to a depth of 6 inches, with a width of 30 feet and a length of at least 50 feet?	☒	☐	☐
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	☐	☐	☒
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SEDIMENT CONTROLS

Silt Fence

		Yes	No	N/A
1.	Is the fence at least 4" to 6" into the ground?	☒	☐	☐
2.	Is the trench backfilled to prevent runoff from cutting underneath the fence?	☒	☐	☐
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☒	☐	☐
4.	Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	☒	☐	☐
5.	Is the fence placed on a level contour? If not, the fence will only act as a diversion.	☒	☐	☐
6.	Have any gaps and tears in the fence been eliminated.	☒	☐	☐
7.	Is the fence controlling an appropriate drainage area?	☒	☐	☐
8.	Has sediment buildup been removed before it reaches half the height of the fence?	☒	☐	☐

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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Filter Tubes

		Yes	No	N/A
1.	Is the tube staked or otherwise secured to the ground?	☐	☐	☒
2.	Are the ends of tubes overlapped to prevent breakthrough?	☐	☐	☒
3.	Is the fence pulled tight so it won't sag when water builds up behind it?	☐	☐	☒
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8.	Has sediment buildup been removed before it reaches half the height of the tube?	☐	☐	☒

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

_____

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TEMPORARY STABILIZATION

		Yes	No	N/A
1.	Are there any areas of the site that are disturbed, but will likely lie dormant for over 21 days?	☐	☒	☐
2.	Have all dormant, disturbed areas been temporarily stabilized in their entireties?	☒	☐	☐
3.	Have disturbed areas outside the perimeter controls been seeded or mulched?	☒	☐	☐
4.	Have soil stockpiles that will sit for over 21 days been stabilized?	☒	☐	☐
5.	Has seed and mulch been applied at the proper rate?	☒	☐	☐
6.	Has seed or mulch blown away? If so, repair.	☐	☒	☐

Note areas where repairs or maintenance are needed or where this practice needs to be applied:

PERMANENT STABILIZATION

		Yes	No	N/A
1.	Are any areas at final grade?	☒	☐	☐
2.	Has the soil been properly prepared to accept permanent seeding?	☒	☐	☐
3.	Has seed and mulch been applied at the appropriate rate?	☒	☐	☐
4.	If rainfall has been inadequate, are seeded areas being watered?	☐	☐	☒
5.	For drainage ditches with high velocity flow, have additional stabilization practices been implemented?	☒	☐	☐
6.	Has rock riprap or equivalent been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	☐	☐	☒
7.	For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	☒	☐	☐

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Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

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2.	Is waste and packaging disposed of in a dumpster? Do not burn them on site.	☒	☐	☐
3.	Are fuel tanks and drums of toxic and hazardous materials stored within a protected area or trailer and away from any watercourse, ditch or storm drain?	☒	☐	☐
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Note areas where repairs or maintenance are needed or where this practice needs to be applied:

ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

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None		☐	☐	
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Signatory or Authorized Delegate

1/6/24
Date

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

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GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: 1/9/24 Inspector Name: Nick Noill ~~Mare Kemper~~

Inspector Title: Field Engineer Qualifications: 14 ~~7~~ Years' Experience

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount	Discharge Occur? (Y/N)
1/8/24	6:00 AM	12 hours	1.75"	N

Weather Information at the Time of Inspection

Temperature: 45°F Climate (Sunny, Cloudy, Rain)? windy, sunny

Is Stormwater Being Discharged? No If yes, describe:

Sketch or Small Site Map

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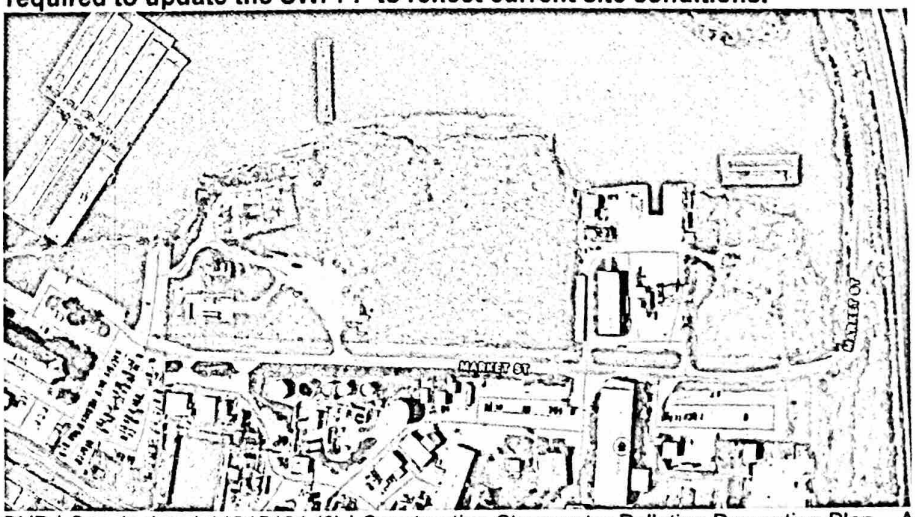

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
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6.	Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	☒	☐	☐
7.	If an area of the site is being dewatered, is it being pumped using a dewatering bag or other adequate BMP?	☒	☐	☐

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ADDITIONAL NOTES

Inspection Checklist
San Jacinto Waste Pits Superfund Site - Southern Impoundment
Channelview, Texas

SWPPP Action Items

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None		☐	☐	
		☐	☐	
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		☐	☐	
		☐	☐	

Items Identified in this inspection for action:	Target Date
None	

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Appendix C

Photograph Log

Site Photographs

Photo 1 *Constructing a trench to place the silt curtain around the excavation area, as required by the SWPPP.*

Photo 2 *Temporary fencing and silt curtain installed along the western boundary of the Site.*

Photo 3 ***Contractor removing asbestos from the building located in the southwest corner of the Site.***

Photo 4 ***Inspection of the building to confirm all asbestos was removed before demolition.***

Photo 5 ***Demolishing the building after asbestos removal.***

Photo 6 ***Finishing grading and earthen berms at the WTS pad during Phase 1.***

Photo 7 ***Lining the WTS pad and surrounding berms during Phase 1.***

Photo 8 ***Boot welded around the outfall pipe exiting the Phase 1 WTS pad.***

Photo 9 ***Sand layer placed after the WTS pad was fully lined***

Photo 10 ***One of four 600,000 gallon lake tanks being installed for the Phase 1 WTS.***

Photo 11 ***Fully installed 600,000 gallon lake tank in the lined WTS pad showing HDPE liner covering the surrounding earthen berms.***

Photo 12 ***The Solids Removal System (SRS) mobile unit used to control all pumps and systems within the WTS. In-line pH, turbidity, and flow meters were used to monitor the system during treatment.***

Photo 13 Workers conduct a shakedown of the WTS to ensure it was running properly before beginning excavation.

Photo 14 Welding double-walled HDPE pipeline along Market Street.

Photo 15 ***A cross-section of double-walled HDPE pipeline. This section of piping was a 4-inch pipe inside an 8-inch pipe.***

Photo 16 ***Plastic liner being placed against the sidewalls of excavation prior to backfill to prevent recontamination of backfill from adjacent, impacted material.***

Photo 17 ***Clean fill being placed behind liner hanging over the excavation sidewall.***

Photo 18 ***Excavation in the Northeast area beginning on February 20, 2023.***

Photo 19 *Heavy debris encountered upon breaking ground in the Northeast area.*

Photo 20 *Perforated pipe surrounded by rock filters installed in a pothole dug around the NE area to drain water from the surrounding excavation areas.*

Photo 21 ***The skeleton bucket that was used to quickly drain the water while excavating in the saturated debris.***

Photo 22 ***Waste tired retrieved during the excavation in the Northeast area.***

Photo 23 ***Sheet pile wall installed around the CenterPoint Energy power poles in the NC excavation area. The wall was removed after the power poles were replaced, and the material within was excavated.***

Photo 24 ***Significant debris was present throughout the Northeast area, including the cement mixer shown here.***

Photo 25 *The area where contact water was released in the Northeast excavation area. Work was immediately stopped to excavate the wet material in the area.*

Photo 26 *Flags marking the locations of the 90 soil borings within the spill area. Three sets of 30 borings were homogenized and sent to separate laboratories for analysis. Yellow, green, and red flags indicate which borings were homogenized.*

Photo 27 *Excavation in the North Central area beginning on March 21, 2023. The excavation began one foot off the Glendale fenceline.*

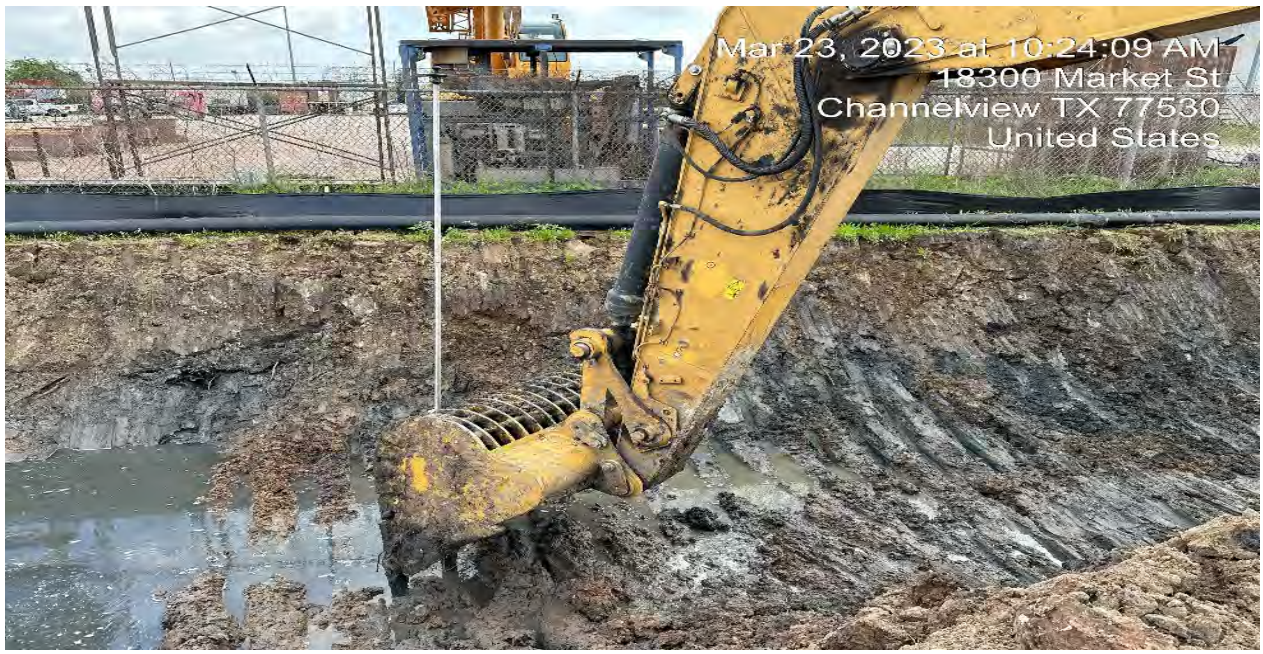

Photo 28 *The excavation along the Glendale fenceline. The slope was cut to reach the design toe of slope.*

Photo 29 ***Debris removed from the North Central excavation area. No overburden was deemed acceptable for reuse.***

Photo 30 ***Debris removed from the North Central excavation area.***

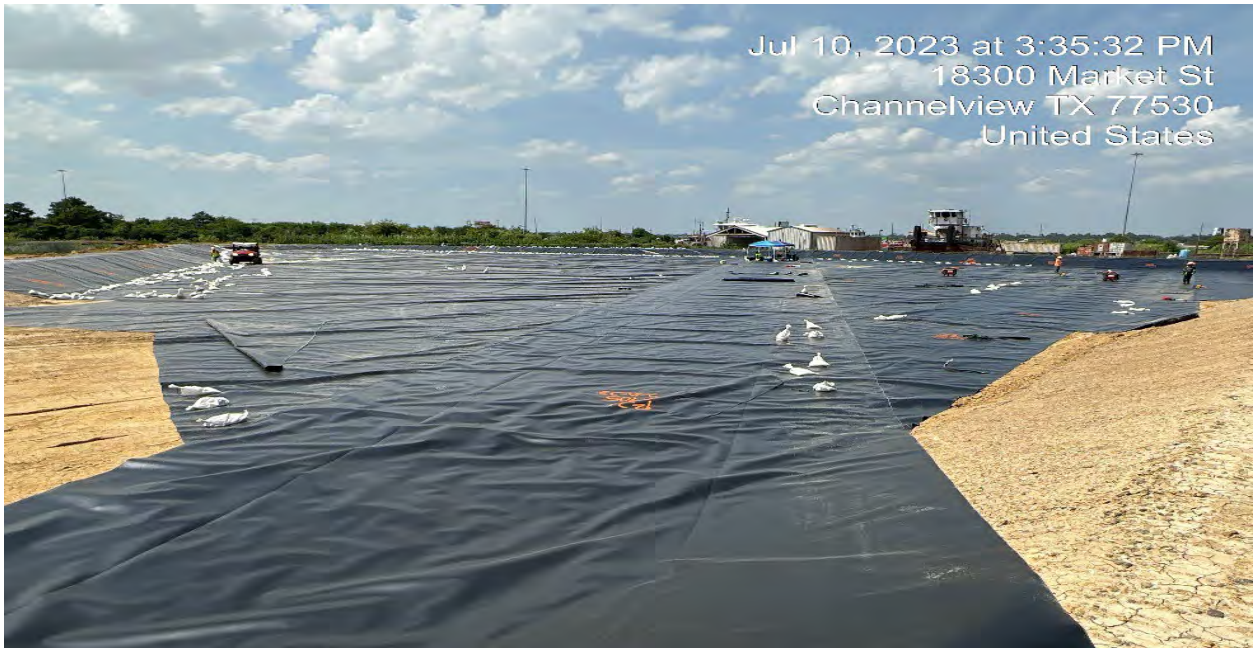

Photo 31 ***Contractors lining the WTS pad for Phase 2. This was located over the remediated North Central area.***

Photo 32 ***The WTS setup during Phase 2.***

Photo 33 *Vertical sidewalls were cut when achievable at all excavation areas. Sloping was used when the excavation ran against sensitive areas such as Market Street and the Glendale fence line.*

Photo 34 *Debris encountered within the South Central excavation area.*

Photo 35 ***Excavation in the Southwest excavation area beginning on August 8, 2023.***

Photo 36 ***Drainage culver that was replaced in the Southwest excavation area.***

Photo 37 Debris encountered within the Southwest excavation area. No overburden was deemed acceptable for reuse.

Photo 38 Installing one of two silt curtains in the southwest corner of the Southwest excavation area.

Photo 39 *The double-walled silt curtain prior to installation of the sheet pile wall.*

Photo 40 *Installing the sheet pile wall before the final section of excavation was completed.*

Photo 41 ***Sheet pile wall being pushed to its final elevation, with the double-walled silt curtain surrounding the work.***

Photo 42 ***Area behind the sheet pile wall after installation was complete. Standing water behind the wall was pumped to the WTS prior to beginning excavation. Pumps ran continuously during excavation to minimize buildup of water during the excavation.***

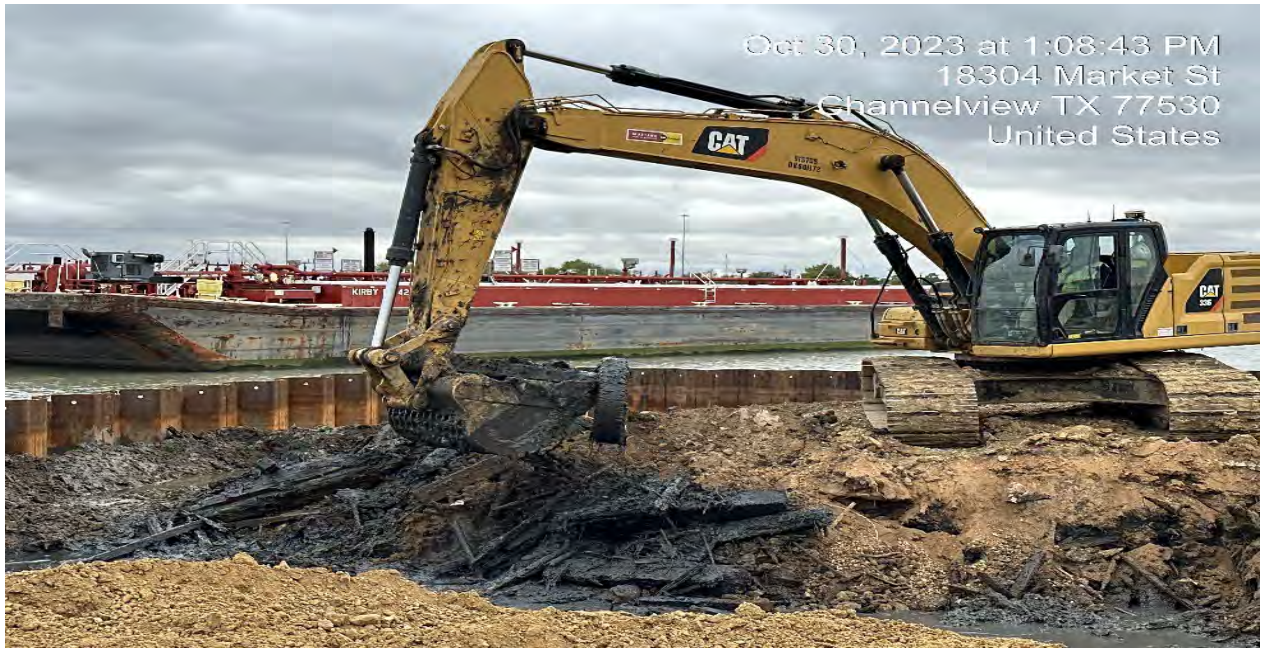

Photo 43 *Excavation behind the sheet pile wall. Heavy debris and waste tires were found throughout the area.*

Photo 44 *Completion of Excavation work at the South Impoundment on November 1, 2023.*

Photo 45 The final confirmation survey excavation point taken.

Photo 46 Fully excavated and backfilled area along the sheet pile wall.

Photo 47 ***Replacement mooring points installed within the SW Excavation Area. The sheet pile wall was removed, the area was sloped down to the mudline, and rip rap was placed near the water.***

Photo 48 ***A layer of topsoil placed over the rip rap to complete the area.***

Photo 49 ***Solar-powered air monitoring stations collected PM10 readings every minute. Units were placed upwind, downwind, and adjacent to areas of activity throughout the project.***

Photo 50 ***WTS compliance sample collection point.***

Photo 51 ***WTS discharge location to the San Jacinto River after passing through a diffuser covered by a rock cap. The diffuser slowed the discharged to minimize bank erosion.***

Photo 52 ***Six inches of topsoil placed over backfill material throughout the Site. The topsoil was hydroseeded at the end of the project.***

Photo 53 Replacement mooring point and concrete apron along the shoreline.

Appendix D

Analytical Laboratory Reports

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/en/terms_and_conditions.htm. Attention is drawn to the limitation of liability,indemnification and jurisdiction issues defined therein.

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120122-S-MTK-WC-24 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.57 L	Lab Sample ID	B7409_19724_DF_003	Date Extracted:	21-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:33:59

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.7			ES 2378-TCDD	94.8	
12378-PeCDD	ND	2.53			ES 12378-PeCDD	119	
123478-HxCDD	ND	3.67			ES 123478-HxCDD	93.5	
123678-HxCDD	ND	3.96			ES 123678-HxCDD	82	
123789-HxCDD	ND	3.6			ES 123789-HxCDD	91	
1234678-HpCDD	4.44			J	ES 1234678-HpCDD	102	
OCDD	53.2			J	ES OCDD	88.1	
2378-TCDF	ND	7.45			ES 2378-TCDF	98.8	
12378-PeCDF	ND	2.59			ES 12378-PeCDF	114	
23478-PeCDF	ND	2.4			ES 23478-PeCDF	114	
123478-HxCDF	ND	2.62			ES 123478-HxCDF	78.4	
123678-HxCDF	ND	2.42			ES 123678-HxCDF	74.8	
234678-HxCDF	ND	2.49			ES 234678-HxCDF	79.5	
123789-HxCDF	ND	3.16			ES 123789-HxCDF	87.6	
1234678-HpCDF	ND	2.15			ES 1234678-HpCDF	86.3	
1234789-HpCDF	ND	2.45			ES 1234789-HpCDF	96.4	
OCDF	ND	3.54			ES OCDF	79.2	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	99.3	
Total TCDD	ND	6.7	ND		CS 12347-PeCDD	129	
Total PeCDD	ND	2.53	ND		CS 12346-PeCDF	119	
Total HxCDD	ND	3.73	ND		CS 123469-HxCDF	81.9	
Total HpCDD	4.44		11.9		CS 1234689-HpCDF	94.7	
Total TCDF	ND	7.45	ND				
Total PeCDF	ND	2.5	ND				
Total HxCDF	ND	2.66	ND				
Total HpCDF	ND	2.29	ND				
Total PCDD/Fs	**57.6**		**65.1**				
WHO-2005 TEQs							
TEQ: ND=0	0.0603		0.0603				
TEQ: ND=DL/2	6.57	6.52	6.57				
TEQ: ND=DL	13.1	13	13.1				

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Sample ID: 12599404-120122-S-MTK-WC-24 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.57 L	Lab Sample ID:	B7409_19724_DF_003	Date Extracted:	21-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No.:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:33:59

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.7)		12479/12468D	(2.53)		124679/124689D	(3.73)		1234679D	[7.45]	J
1379D	(6.7)		12469D	(2.53)		123468D	(3.73)		1234678D	4.44	J
1369D	(6.7)		12368D	(2.53)		123679/123689D	(3.73)				
1469D	(6.7)		12478D	(2.53)		123469D	(3.73)				
1247D...[4]	(6.7)		12379D	(2.53)		123478D	(3.67)				
1378D	(6.7)		12369D...[3]	(2.53)		123678D	(3.96)				
1268D	(6.7)		12346/12347D	(2.53)		123467D	(3.73)				
1478D	(6.7)		12378D	(2.53)		123789D	(3.6)		**Conc.**	4.44	
1279D	(6.7)		12367D	(2.53)					**EMPC**	11.9	
1234/1269D	(6.7)		12389D	(2.53)							
1236D	(6.7)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(6.7)									(pg/L)	
1239D	(6.7)								OCDD	53.2	J
2378D	(6.7)										
1278D	(6.7)										
1267D	(6.7)										
1289D	(6.7)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0603	0.0603
TEQ: ND=DL/2	6.57	6.57
TEQ: ND=DL	13.1	13.1

	Conc.	EMPC
Total PCDD/Fs	57.6	65.1

Checkcode: 140-748-LXK

Report Created: 04-Jan-2023 13:52 Analyst: TF

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Sample ID: 12599404-120122-S-MTK-WC-24 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.57 L	Lab Sample ID:	B7409_19724_DF_003	Date Extracted:	21-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No.:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:33:59

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(7.45)		13468/12468F	(2.49)		123468F	(2.66)		1234678F	(2.15)	
1468F	(7.45)		13678F...[3]	(2.5)		124678/134678F	(2.66)		1234679F	(2.29)	
2468F	(7.45)		12368F...[3]	(2.5)		134679F	(2.66)		1234689F	(2.29)	
1346/1246F	(7.45)		14678F	(2.5)		124679F	(2.66)		1234789F	(2.45)	
1347F...[3]	(7.45)		13479F	(2.5)		124689F	(2.66)				
1348F	(7.45)		13469/12479F	(2.5)		123467F	(2.66)				
1248F...[3]	(7.45)		12346F	(2.5)		123478F	(2.62)				
1268F	(7.45)		23468/12469F	(2.5)		123678F	(2.42)				
1467F	(7.45)		12347F	(2.5)		123479F	(2.66)				
1478F	(7.45)		12348F	(2.5)		123469F	(2.66)				
1369/1237F	(7.45)		12378F	(2.59)		123679F	(2.66)				
2467F	(7.45)		12678/12367F	(2.5)		234678F	(2.49)		**Conc.**	0	
2368F	(7.45)		12379F	(2.5)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(7.45)		12679F	(2.5)		123689F	(2.66)				
1278F	(7.45)		23467/12369F	(2.5)		123789F	(3.16)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(7.45)		23478F	(2.4)		123789/123489F	0				
1267F	(7.45)		23478/12489F	0		123489F	(2.66)		OCDF	(3.54)	
2346/1249F	(7.45)		12489F	(2.5)							
2347/1279F	(7.45)		12349F	(2.5)							
2348F	(7.45)		12389F	(2.5)							
2378F	(7.45)										
2367/3467F	(7.45)										
1269F	(7.45)										
1239F	(7.45)										
1289F	(7.45)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 140-748-LXK

Report Created: 04-Jan-2023 13:52 Analyst: TF

Sample ID: 12599404-120122-S-MTK-WC-24 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7409_19724_DF_003
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.57 L	QC Batch No.:	19724
Date Collected:	01-Dec-2022	Split:	-	Date Extracted:	21-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	01-Jan-2023 04:33
Lab Project No:	B7409	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.7)		6.7	(6.7)	(6.7)	(6.7)
12378-PeCDD	(2.53)		2.53	(1.27)	(2.53)	(2.53)
123478-HxCDD	(3.67)		3.67	(0.367)	(0.367)	(0.367)
123678-HxCDD	(3.96)		3.96	(0.396)	(0.396)	(0.396)
123789-HxCDD	(3.6)		3.6	(0.36)	(0.36)	(0.36)
1234678-HpCDD	4.44	J	2.28	0.0444	0.0444	0.0444
OCDD	53.2	J	5.55	0.0532	0.00532	0.016
2378-TCDF	(7.45)		7.45	(0.745)	(0.745)	(0.745)
12378-PeCDF	(2.59)		2.59	(0.129)	(0.129)	(0.0776)
23478-PeCDF	(2.4)		2.4	(1.2)	(1.2)	(0.721)
123478-HxCDF	(2.62)		2.62	(0.262)	(0.262)	(0.262)
123678-HxCDF	(2.42)		2.42	(0.242)	(0.242)	(0.242)
234678-HxCDF	(2.49)		2.49	(0.249)	(0.249)	(0.249)
123789-HxCDF	(3.16)		3.16	(0.316)	(0.316)	(0.316)
1234678-HpCDF	(2.15)		2.15	(0.0215)	(0.0215)	(0.0215)
1234789-HpCDF	(2.45)		2.45	(0.0245)	(0.0245)	(0.0245)
OCDF	(3.54)		3.54	(0.00354)	(0.000354)	(0.00106)

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TEQ Summaries			
EMPC = 0, ND = 0	0.0975	0.0497	0.0603
EMPC = 0, ND = DL / 2	6.24	6.83	6.57
EMPC = 0, ND = DL	12.4	13.6	13.1
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.0975	0.0497	0.0603
EMPC = EMPC, ND = DL / 2	6.24	6.83	6.57
EMPC = EMPC, ND = DL	12.4	13.6	13.1
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 140-748-LXK

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Sample ID: 12599404-120122-S-MTK-WC-25 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.63 L	Lab Sample ID	B7409_19724_DF_004	Date Extracted:	21-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:21:40

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	13.3				ES 2378-TCDD	91.1	
12378-PeCDD	ND	3.14			ES 12378-PeCDD	115	
123478-HxCDD	ND	3.76			ES 123478-HxCDD	94.8	
123678-HxCDD	ND	3.98			ES 123678-HxCDD	86.4	
123789-HxCDD	ND	3.98			ES 123789-HxCDD	92.5	
1234678-HpCDD	EMPC		4.58	J	ES 1234678-HpCDD	100	
OCDD	EMPC		37.6	J	ES OCDD	83.5	
2378-TCDF	24.2				ES 2378-TCDF	95.7	
12378-PeCDF	ND	2.48			ES 12378-PeCDF	111	
23478-PeCDF	ND	2.22			ES 23478-PeCDF	105	
123478-HxCDF	EMPC		6.07	J	ES 123478-HxCDF	79.3	
123678-HxCDF	ND	2.64			ES 123678-HxCDF	75.9	
234678-HxCDF	ND	2.64			ES 234678-HxCDF	78.4	
123789-HxCDF	ND	3.46			ES 123789-HxCDF	81.8	
1234678-HpCDF	EMPC		6.4	J	ES 1234678-HpCDF	87.6	
1234789-HpCDF	ND	2.86			ES 1234789-HpCDF	89.9	
OCDF	ND	5.93			ES OCDF	74.9	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	101	
Total TCDD	13.3		13.3		CS 12347-PeCDD	130	
Total PeCDD	ND	3.14	ND		CS 12346-PeCDF	111	
Total HxCDD	ND	3.9	ND		CS 123469-HxCDF	82.4	
Total HpCDD	11.6		16.1		CS 1234689-HpCDF	94.5	
Total TCDF	24.2		35.9				
Total PeCDF	ND	2.35	ND				
Total HxCDF	3.73		9.8				
Total HpCDF	ND		6.4				
Total PCDD/Fs	**52.8**		**119**				
WHO-2005 TEQs							
TEQ: ND=0	15.7		16.4				
TEQ: ND=DL/2	18.7	6.66	19.4				
TEQ: ND=DL	21.6	13.3	22.4				

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Sample ID: 12599404-120122-S-MTK-WC-25 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.63 L	Lab Sample ID:	B7409_19724_DF_004	Date Extracted:	21-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No.:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:21:40

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.67)		12479/12468D	(3.14)		124679/124689D	(3.9)		1234679D	11.6	J
1379D	(6.67)		12469D	(3.14)		123468D	(3.9)		1234678D	[4.58]	J
1369D	(6.67)		12368D	(3.14)		123679/123689D	(3.9)				
1469D	(6.67)		12478D	(3.14)		123469D	(3.9)				
1247D...[4]	(6.67)		12379D	(3.14)		123478D	(3.76)				
1378D	(6.67)		12369D...[3]	(3.14)		123678D	(3.98)				
1268D	(6.67)		12346/12347D	(3.14)		123467D	(3.9)				
1478D	(6.67)		12378D	(3.14)		123789D	(3.98)		**Conc.**	11.6	
1279D	(6.67)		12367D	(3.14)					**EMPC**	16.1	
1234/1269D	(6.67)		12389D	(3.14)							
1236D	(6.67)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(6.67)									**(pg/L)**	
1239D	(6.67)								OCDD	[37.6]	J
2378D	13.3										
1278D	(6.67)										
1267D	(6.67)										
1289D	(6.67)										
Conc.	13.3		**Conc.**	0		**Conc.**	0				
EMPC	13.3		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	15.7	16.4
TEQ: ND=DL/2	18.7	19.4
TEQ: ND=DL	21.6	22.4

	Conc.	EMPC
Total PCDD/Fs	52.8	119

Checkcode: 498-504-CKC

Report Created: 04-Jan-2023 13:52 Analyst: TF

Sample ID: 12599404-120122-S-MTK-WC-25 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.63 L	Lab Sample ID:	B7409_19724_DF_004	Date Extracted:	21-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No.:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:21:40

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(3.99)		13468/12468F	(3.1)		123468F	(2.79)		1234678F	[6.4]	J
1468F	(3.99)		13678F...[3]	(2.35)		124678/134678F	3.73	J	1234679F	(2.58)	
2468F	(3.99)		12368F...[3]	(2.35)		134679F	(2.79)		1234689F	(2.58)	
1346/1246F	(3.99)		14678F	(2.35)		124679F	(2.79)		1234789F	(2.86)	
1347F...[3]	(3.99)		13479F	(2.35)		124689F	(2.79)				
1348F	(3.99)		13469/12479F	(2.35)		123467F	(2.79)				
1248F...[3]	(3.99)		12346F	(2.35)		123478F	[6.07]	J			
1268F	(3.99)		23468/12469F	(2.35)		123678F	(2.64)				
1467F	(3.99)		12347F	(2.35)		123479F	(2.79)				
1478F	(3.99)		12348F	(2.35)		123469F	(2.79)				
1369/1237F	(3.99)		12378F	(2.48)		123679F	(2.79)				
2467F	(3.99)		12678/12367F	(2.35)		234678F	(2.64)		**Conc.**	0	
2368F	(3.99)		12379F	(2.35)		234678/123689F	0		**EMPC**	6.4	
1238F...[5]	(3.99)		12679F	(2.35)		123689F	(2.79)				
1278F	[11.6]		23467/12369F	(2.35)		123789F	(3.46)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(3.99)		23478F	(2.22)		123789/123489F	0				
1267F	(3.99)		23478/12489F	0		123489F	(2.79)		OCDF	(5.93)	
2346/1249F	(3.99)		12489F	(2.35)							
2347/1279F	(3.99)		12349F	(2.35)							
2348F	(3.99)		12389F	(2.35)							
2378F	24.2										
2367/3467F	(3.99)										
1269F	(3.99)										
1239F	(3.99)										
1289F	(3.99)										
Conc.	24.2		**Conc.**	0		**Conc.**	3.73				
EMPC	35.9		**EMPC**	0		**EMPC**	9.8				

Checkcode: 498-504-CKC

Report Created: 04-Jan-2023 13:52 Analyst: TF

Sample ID: 12599404-120122-S-MTK-WC-25 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7409_19724_DF_004
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.63 L	QC Batch No.:	19724
Date Collected:	01-Dec-2022	Split:	-	Date Extracted:	21-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	01-Jan-2023 05:21
Lab Project No:	B7409	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	13.3		6.67	13.3	13.3	13.3
12378-PeCDD	(3.14)		3.14	(1.57)	(3.14)	(3.14)
123478-HxCDD	(3.76)		3.76	(0.376)	(0.376)	(0.376)
123678-HxCDD	(3.98)		3.98	(0.398)	(0.398)	(0.398)
123789-HxCDD	(3.98)		3.98	(0.398)	(0.398)	(0.398)
1234678-HpCDD	[4.58]	J	2.46	[0.0458]	[0.0458]	[0.0458]
OCDD	[37.6]	J	4.16	[0.0376]	[0.00376]	[0.0113]
2378-TCDF	24.2		3.99	2.42	2.42	2.42
12378-PeCDF	(2.48)		2.48	(0.124)	(0.124)	(0.0745)
23478-PeCDF	(2.22)		2.22	(1.11)	(1.11)	(0.665)
123478-HxCDF	[6.07]	J	2.54	[0.607]	[0.607]	[0.607]
123678-HxCDF	(2.64)		2.64	(0.264)	(0.264)	(0.264)
234678-HxCDF	(2.64)		2.64	(0.264)	(0.264)	(0.264)
123789-HxCDF	(3.46)		3.46	(0.346)	(0.346)	(0.346)
1234678-HpCDF	[6.4]	J	2.35	[0.064]	[0.064]	[0.064]
1234789-HpCDF	(2.86)		2.86	(0.0286)	(0.0286)	(0.0286)
OCDF	(5.93)		5.93	(0.00593)	(0.000593)	(0.00178)

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TEQ Summaries			
EMPC = 0, ND = 0	15.7	15.7	15.7
EMPC = 0, ND = DL / 2	18.1	18.9	18.7
EMPC = 0, ND = DL	20.6	22.1	21.6
EMPC = 0, < J-level = 0	15.7	15.7	15.7
EMPC = EMPC, ND = 0	16.4	16.4	16.4
EMPC = EMPC, ND = DL / 2	18.9	19.6	19.4
EMPC = EMPC, ND = DL	21.3	22.9	22.4
EMPC = EMPC, < J-level = 0	15.7	15.7	15.7

Checkcode: 498-504-CKC

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Sample ID: 12599404-120122-S-MTK-WC-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.30 L	Lab Sample ID	B7409_19724_DF_005	Date Extracted:	21-Dec-2022
Date Collected:	07-Dec-2022	pH:	5	QC Batch No:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:09:16

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10.4			ES 2378-TCDD	89.8	
12378-PeCDD	ND	5.3			ES 12378-PeCDD	111	
123478-HxCDD	ND	6.47			ES 123478-HxCDD	87.7	
123678-HxCDD	ND	6.34			ES 123678-HxCDD	80.6	
123789-HxCDD	ND	6.58			ES 123789-HxCDD	87.2	
1234678-HpCDD	ND	5.04			ES 1234678-HpCDD	100	
OCDD	31.7			J	ES OCDD	89.1	
2378-TCDF	ND	6.37			ES 2378-TCDF	94.2	
12378-PeCDF	ND	4.57			ES 12378-PeCDF	109	
23478-PeCDF	ND	4.69			ES 23478-PeCDF	101	
123478-HxCDF	EMPC		8.04	J	ES 123478-HxCDF	71.9	
123678-HxCDF	ND	4.38			ES 123678-HxCDF	70.9	
234678-HxCDF	ND	4.92			ES 234678-HxCDF	71.9	
123789-HxCDF	ND	5.9			ES 123789-HxCDF	73	
1234678-HpCDF	ND	6.08			ES 1234678-HpCDF	83.3	
1234789-HpCDF	ND	7.27			ES 1234789-HpCDF	84.2	
OCDF	ND	8.88			ES OCDF	72.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	97	
Total TCDD	ND	10.4	ND		CS 12347-PeCDD	122	
Total PeCDD	ND	5.3	ND		CS 12346-PeCDF	111	
Total HxCDD	ND	6.44	ND		CS 123469-HxCDF	78	
Total HpCDD	ND	5.04	ND		CS 1234689-HpCDF	90.5	
Total TCDF	ND	6.37	ND				
Total PeCDF	ND	4.63	ND				
Total HxCDF	ND		8.04				
Total HpCDF	ND	6.62	ND				
Total PCDD/Fs	**31.7**		**39.7**				
WHO-2005 TEQs							
TEQ: ND=0	0.00951		0.813				
TEQ: ND=DL/2	10.8	11	11.6				
TEQ: ND=DL	21.5	22	22.3				

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Sample ID: 12599404-120122-S-MTK-WC-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.30 L	Lab Sample ID:	B7409_19724_DF_005	Date Extracted:	21-Dec-2022
Date Collected:	07-Dec-2022	pH:	5	QC Batch No.:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:09:16

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(10.4)		12479/12468D	(5.3)		124679/124689D	(6.44)		1234679D	(5.04)	
1379D	(10.4)		12469D	(5.3)		123468D	(6.44)		1234678D	(5.04)	
1369D	(10.4)		12368D	(5.3)		123679/123689D	(6.44)				
1469D	(10.4)		12478D	(5.3)		123469D	(6.44)				
1247D...[4]	(10.4)		12379D	(5.3)		123478D	(6.47)				
1378D	(10.4)		12369D...[3]	(5.3)		123678D	(6.34)				
1268D	(10.4)		12346/12347D	(5.3)		123467D	(6.44)				
1478D	(10.4)		12378D	(5.3)		123789D	(6.58)		**Conc.**	0	
1279D	(10.4)		12367D	(5.3)					**EMPC**	0	
1234/1269D	(10.4)		12389D	(5.3)							
1236D	(10.4)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(10.4)									**(pg/L)**	
1239D	(10.4)								OCDD	31.7	J
2378D	(10.4)										
1278D	(10.4)										
1267D	(10.4)										
1289D	(10.4)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.00951	0.813
TEQ: ND=DL/2	10.8	11.6
TEQ: ND=DL	21.5	22.3

	Conc.	EMPC
Total PCDD/Fs	31.7	39.7

Checkcode: 405-062-YMV

Report Created: 04-Jan-2023 13:52 Analyst: TF

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Sample ID: 12599404-120122-S-MTK-WC-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.30 L	Lab Sample ID:	B7409_19724_DF_005	Date Extracted:	21-Dec-2022
Date Collected:	07-Dec-2022	pH:	5	QC Batch No.:	19724	Date Analyzed:	01-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:09:16

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(6.37)		13468/12468F	(5.59)		123468F	(4.8)		1234678F	(6.08)	
1468F	(6.37)		13678F...[3]	(4.63)		124678/134678F	(4.8)		1234679F	(6.62)	
2468F	(6.37)		12368F...[3]	(4.63)		134679F	(4.8)		1234689F	(6.62)	
1346/1246F	(6.37)		14678F	(4.63)		124679F	(4.8)		1234789F	(7.27)	
1347F...[3]	(6.37)		13479F	(4.63)		124689F	(4.8)				
1348F	(6.37)		13469/12479F	(4.63)		123467F	(4.8)				
1248F...[3]	(6.37)		12346F	(4.63)		123478F	[8.04]	J			
1268F	(6.37)		23468/12469F	(4.63)		123678F	(4.38)				
1467F	(6.37)		12347F	(4.63)		123479F	(4.8)				
1478F	(6.37)		12348F	(4.63)		123469F	(4.8)				
1369/1237F	(6.37)		12378F	(4.57)		123679F	(4.8)				
2467F	(6.37)		12678/12367F	(4.63)		234678F	(4.92)		**Conc.**	0	
2368F	(6.37)		12379F	(4.63)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(6.37)		12679F	(4.63)		123689F	(4.8)				
1278F	(6.37)		23467/12369F	(4.63)		123789F	(5.9)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(6.37)		23478F	(4.69)		123789/123489F	0				
1267F	(6.37)		23478/12489F	0		123489F	(4.8)		OCDF	(8.88)	
2346/1249F	(6.37)		12489F	(4.63)							
2347/1279F	(6.37)		12349F	(4.63)							
2348F	(6.37)		12389F	(4.63)							
2378F	(6.37)										
2367/3467F	(6.37)										
1269F	(6.37)										
1239F	(6.37)										
1289F	(6.37)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	8.04				

Checkcode: 405-062-YMV

Report Created: 04-Jan-2023 13:52 Analyst: TF

Sample ID: 12599404-120122-S-MTK-WC-TCLP L TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7409_19724_DF_005
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.30 L	QC Batch No.:	19724
Date Collected:	07-Dec-2022	Split:	-	Date Extracted:	21-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	01-Jan-2023 06:09
Lab Project No:	B7409	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(10.4)		10.4	(10.4)	(10.4)	(10.4)
12378-PeCDD	(5.3)		5.3	(2.65)	(5.3)	(5.3)
123478-HxCDD	(6.47)		6.47	(0.647)	(0.647)	(0.647)
123678-HxCDD	(6.34)		6.34	(0.634)	(0.634)	(0.634)
123789-HxCDD	(6.58)		6.58	(0.658)	(0.658)	(0.658)
1234678-HpCDD	(5.04)		5.04	(0.0504)	(0.0504)	(0.0504)
OCDD	31.7	J	9.72	0.0317	0.00317	0.00951
2378-TCDF	(6.37)		6.37	(0.637)	(0.637)	(0.637)
12378-PeCDF	(4.57)		4.57	(0.229)	(0.229)	(0.137)
23478-PeCDF	(4.69)		4.69	(2.35)	(2.35)	(1.41)
123478-HxCDF	[8.04]	J	4.23	[0.804]	[0.804]	[0.804]
123678-HxCDF	(4.38)		4.38	(0.438)	(0.438)	(0.438)
234678-HxCDF	(4.92)		4.92	(0.492)	(0.492)	(0.492)
123789-HxCDF	(5.9)		5.9	(0.59)	(0.59)	(0.59)
1234678-HpCDF	(6.08)		6.08	(0.0608)	(0.0608)	(0.0608)
1234789-HpCDF	(7.27)		7.27	(0.0727)	(0.0727)	(0.0727)
OCDF	(8.88)		8.88	(0.00888)	(0.000888)	(0.00266)

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TEQ Summaries			
EMPC = 0, ND = 0	0.0317	0.00317	0.00951
EMPC = 0, ND = DL / 2	9.99	11.3	10.8
EMPC = 0, ND = DL	20	22.6	21.5
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.835	0.807	0.813
EMPC = EMPC, ND = DL / 2	10.8	12.1	11.6
EMPC = EMPC, ND = DL	20.8	23.4	22.3
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 405-062-YMV

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Sample ID: Method Blank B7409_19724 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19724_DF_TLX	Date Extracted:	21-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19724	Date Analyzed:	31-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	23:00:44

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	3.82			ES 2378-TCDD	89.3	
12378-PeCDD	ND	1.86			ES 12378-PeCDD	112	
123478-HxCDD	ND	1.88			ES 123478-HxCDD	85.3	
123678-HxCDD	ND	2.08			ES 123678-HxCDD	76.5	
123789-HxCDD	ND	2.16			ES 123789-HxCDD	82.5	
1234678-HpCDD	ND	1.59			ES 1234678-HpCDD	95.8	
OCDD	ND	5.45			ES OCDD	85.6	
2378-TCDF	ND	2.33			ES 2378-TCDF	89.7	
12378-PeCDF	ND	1.41			ES 12378-PeCDF	113	
23478-PeCDF	ND	1.44			ES 23478-PeCDF	107	
123478-HxCDF	ND	1.35			ES 123478-HxCDF	68.5	
123678-HxCDF	ND	1.23			ES 123678-HxCDF	70.2	
234678-HxCDF	ND	1.25			ES 234678-HxCDF	69.8	
123789-HxCDF	ND	1.55			ES 123789-HxCDF	74.8	
1234678-HpCDF	ND	1.36			ES 1234678-HpCDF	81.3	
1234789-HpCDF	ND	1.48			ES 1234789-HpCDF	84.1	
OCDF	ND	2.93			ES OCDF	73.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	ND	3.82	ND		CS 12347-PeCDD	132	V
Total PeCDD	ND	1.86	ND		CS 12346-PeCDF	115	
Total HxCDD	ND	2.03	ND		CS 123469-HxCDF	76.6	
Total HpCDD	ND	1.59	ND		CS 1234689-HpCDF	95.4	
Total TCDF	ND	2.33	ND				
Total PeCDF	ND	1.42	ND				
Total HxCDF	ND	1.34	ND				
Total HpCDF	ND	1.42	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.79	3.79	3.79				
TEQ: ND=DL	7.58	7.58	7.58				

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Sample ID: Method Blank B7409_19724 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19724_DF_TLX	Date Extracted:	21-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19724	Date Analyzed:	31-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	23:00:44

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(3.82)		12479/12468D	(1.86)		124679/124689D	(2.03)		1234679D	(1.59)	
1379D	(3.82)		12469D	(1.86)		123468D	(2.03)		1234678D	(1.59)	
1369D	(3.82)		12368D	(1.86)		123679/123689D	(2.03)				
1469D	(3.82)		12478D	(1.86)		123469D	(2.03)				
1247D...[4]	(3.82)		12379D	(1.86)		123478D	(1.88)				
1378D	(3.82)		12369D...[3]	(1.86)		123678D	(2.08)				
1268D	(3.82)		12346/12347D	(1.86)		123467D	(2.03)				
1478D	(3.82)		12378D	(1.86)		123789D	(2.16)		**Conc.**	0	
1279D	(3.82)		12367D	(1.86)					**EMPC**	0	
1234/1269D	(3.82)		12389D	(1.86)							
1236D	(3.82)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(3.82)										
1239D	(3.82)								OCDD	(5.45)	
2378D	(3.82)										
1278D	(3.82)										
1267D	(3.82)										
1289D	(3.82)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.79	3.79
TEQ: ND=DL	7.58	7.58

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 003-754-MLB

Report Created: 04-Jan-2023 13:53 Analyst: TF

Sample ID: Method Blank B7409_19724 — Method 1613B

Client Data		Sample Data		Laboratory Data		
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received: n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19724_DF_TLX	Date Extracted: 21-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19724	Date Analyzed: 31-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed: 23:00:44

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.33)		13468/12468F	(1.76)		123468F	(1.34)		1234678F	(1.36)	
1468F	(2.33)		13678F...[3]	(1.42)		124678/134678F	(1.34)		1234679F	(1.42)	
2468F	(2.33)		12368F...[3]	(1.42)		134679F	(1.34)		1234689F	(1.42)	
1346/1246F	(2.33)		14678F	(1.42)		124679F	(1.34)		1234789F	(1.48)	
1347F...[3]	(2.33)		13479F	(1.42)		124689F	(1.34)				
1348F	(2.33)		13469/12479F	(1.42)		123467F	(1.34)				
1248F...[3]	(2.33)		12346F	(1.42)		123478F	(1.35)				
1268F	(2.33)		23468/12469F	(1.42)		123678F	(1.23)				
1467F	(2.33)		12347F	(1.42)		123479F	(1.34)				
1478F	(2.33)		12348F	(1.42)		123469F	(1.34)				
1369/1237F	(2.33)		12378F	(1.41)		123679F	(1.34)				
2467F	(2.33)		12678/12367F	(1.42)		234678F	(1.25)		**Conc.**	0	
2368F	(2.33)		12379F	(1.42)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.33)		12679F	(1.42)		123689F	(1.34)				
1278F	(2.33)		23467/12369F	(1.42)		123789F	(1.55)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.33)		23478F	(1.44)		123789/123489F	0				
1267F	(2.33)		23478/12489F	0		123489F	(1.34)		OCDF	(2.93)	
2346/1249F	(2.33)		12489F	(1.42)							
2347/1279F	(2.33)		12349F	(1.42)							
2348F	(2.33)		12389F	(1.42)							
2378F	(2.33)										
2367/3467F	(2.33)										
1269F	(2.33)										
1239F	(2.33)										
1289F	(2.33)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 003-754-MLB

Report Created: 04-Jan-2023 13:53 Analyst: TF

Sample ID: Method Blank B7409_19724 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19724_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19724
Date Collected:	n/a	Split:	-	Date Extracted:	21-Dec-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	31-Dec-2022 23:00
Lab Project No:	B7409	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(3.82)		3.82	(3.82)	(3.82)	(3.82)
12378-PeCDD	(1.86)		1.86	(0.932)	(1.86)	(1.86)
123478-HxCDD	(1.88)		1.88	(0.188)	(0.188)	(0.188)
123678-HxCDD	(2.08)		2.08	(0.208)	(0.208)	(0.208)
123789-HxCDD	(2.16)		2.16	(0.216)	(0.216)	(0.216)
1234678-HpCDD	(1.59)		1.59	(0.0159)	(0.0159)	(0.0159)
OCDD	(5.45)		5.45	(0.00545)	(0.000545)	(0.00164)
2378-TCDF	(2.33)		2.33	(0.233)	(0.233)	(0.233)
12378-PeCDF	(1.41)		1.41	(0.0705)	(0.0705)	(0.0423)
23478-PeCDF	(1.44)		1.44	(0.718)	(0.718)	(0.431)
123478-HxCDF	(1.35)		1.35	(0.135)	(0.135)	(0.135)
123678-HxCDF	(1.23)		1.23	(0.123)	(0.123)	(0.123)
234678-HxCDF	(1.25)		1.25	(0.125)	(0.125)	(0.125)
123789-HxCDF	(1.55)		1.55	(0.155)	(0.155)	(0.155)
1234678-HpCDF	(1.36)		1.36	(0.0136)	(0.0136)	(0.0136)
1234789-HpCDF	(1.48)		1.48	(0.0148)	(0.0148)	(0.0148)
OCDF	(2.93)		2.93	(0.00293)	(0.000293)	(0.000878)

TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	3.49	3.95	3.79
EMPC = 0, ND = DL	6.97	7.9	7.58
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	3.49	3.95	3.79
EMPC = EMPC, ND = DL	6.97	7.9	7.58
EMPC = EMPC, < J-level = 0	0	0	0

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Checkcode: 003-754-MLB

SGS North America - DF v0.99

Sample ID: 0_19724_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19724_DF	Date Extracted:	21-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19724	Date Analyzed:	31-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	20:37:54

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.5				ES 2378-TCDD	89	
12378-PeCDD	48.4				ES 12378-PeCDD	108	
123478-HxCDD	52.1				ES 123478-HxCDD	85.4	
123678-HxCDD	55.9				ES 123678-HxCDD	76.7	
123789-HxCDD	54.4				ES 123789-HxCDD	83.3	
1234678-HpCDD	54.8				ES 1234678-HpCDD	93.6	
OCDD	107				ES OCDD	79.1	
2378-TCDF	11				ES 2378-TCDF	90.8	
12378-PeCDF	51.8				ES 12378-PeCDF	109	
23478-PeCDF	55.6				ES 23478-PeCDF	103	
123478-HxCDF	55.3				ES 123478-HxCDF	69.6	
123678-HxCDF	55.2				ES 123678-HxCDF	68.2	
234678-HxCDF	57.2				ES 234678-HxCDF	69.5	
123789-HxCDF	51.5				ES 123789-HxCDF	76.3	
1234678-HpCDF	53.3				ES 1234678-HpCDF	81.7	
1234789-HpCDF	54.7				ES 1234789-HpCDF	80	
OCDF	110				ES OCDF	65.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	96.9	
Total TCDD	55.3		55.3		CS 12347-PeCDD	119	
Total PeCDD	73.1		73.1		CS 12346-PeCDF	108	
Total HxCDD	176		176		CS 123469-HxCDF	77	
Total HpCDD	68		68		CS 1234689-HpCDF	89.1	
Total TCDF	58.8		58.8				
Total PeCDF	244		244				
Total HxCDF	356		356				
Total HpCDF	108		108				
Total PCDD/Fs	**1,360**		**1,360**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.252	119				
TEQ: ND=DL	119	0.505	119				

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Sample ID: 0_19724_OPR002

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7409	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19724_DF	Date Extracted:	21-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19724	Date Analyzed:	31-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	21:25:28

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.9				ES 2378-TCDD	87.1	
12378-PeCDD	46.6				ES 12378-PeCDD	119	
123478-HxCDD	53.3				ES 123478-HxCDD	86.8	
123678-HxCDD	54.5				ES 123678-HxCDD	80.3	
123789-HxCDD	51.2				ES 123789-HxCDD	88.5	
1234678-HpCDD	55.7				ES 1234678-HpCDD	97	
OCDD	109				ES OCDD	87.6	
2378-TCDF	10.6				ES 2378-TCDF	95.3	
12378-PeCDF	50.6				ES 12378-PeCDF	117	
23478-PeCDF	54.2				ES 23478-PeCDF	113	
123478-HxCDF	56				ES 123478-HxCDF	70	
123678-HxCDF	55.8				ES 123678-HxCDF	68.9	
234678-HxCDF	56.3				ES 234678-HxCDF	72.5	
123789-HxCDF	53.9				ES 123789-HxCDF	76	
1234678-HpCDF	55.1				ES 1234678-HpCDF	85.4	
1234789-HpCDF	53.9				ES 1234789-HpCDF	86	
OCDF	109				ES OCDF	75.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.2	
Total TCDD	58.1		58.1		CS 12347-PeCDD	125	
Total PeCDD	70.7		70.7		CS 12346-PeCDF	112	
Total HxCDD	173		173		CS 123469-HxCDF	77.3	
Total HpCDD	69.1		69.1		CS 1234689-HpCDF	92.4	
Total TCDF	58.1		58.1				
Total PeCDF	234		234				
Total HxCDF	359		359				
Total HpCDF	109		109				
Total PCDD/Fs	**1,350**		**1,350**				
WHO-2005 TEQs							
TEQ: ND=0	117		117				
TEQ: ND=DL/2	117	0.268	117				
TEQ: ND=DL	117	0.535	117				

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Sample DUP

Method 1613B

Sample ID: 0_19724_OPR001

Analyte	OPR1_19724_DF pg/uL	OPR2_19724_DF (DUP) pg/uL	RPD
2,3,7,8-TCDD	11.5	11.9	3.2%
1,2,3,7,8-PeCDD	48.4	46.6	3.8%
1,2,3,4,7,8-HxCDD	52.1	53.3	2.3%
1,2,3,6,7,8-HxCDD	55.9	54.5	2.6%
1,2,3,7,8,9-HxCDD	54.4	51.2	6.1%
1,2,3,4,6,7,8-HpCDD	54.8	55.7	1.6%
OCDD	107	109	2.6%
2,3,7,8-TCDF	11	10.6	3.6%
1,2,3,7,8-PeCDF	51.8	50.6	2.3%
2,3,4,7,8-PeCDF	55.6	54.2	2.5%
1,2,3,4,7,8-HxCDF	55.3	56	1.2%
1,2,3,6,7,8-HxCDF	55.2	55.8	1.0%
2,3,4,6,7,8-HxCDF	57.2	56.3	1.7%
1,2,3,7,8,9-HxCDF	51.5	53.9	4.4%
1,2,3,4,6,7,8-HpCDF	53.3	55.1	3.3%
1,2,3,4,7,8,9-HpCDF	54.7	53.9	1.3%
OCDF	110	109	1.3%
Totals			
Total TCDD	55.3	58.1	4.8%
Total PeCDD	73.1	70.7	3.3%
Total HxCDD	176	173	1.8%
Total HpCDD	68	69.1	1.7%
Total TCDF	58.8	58.1	1.3%
Total PeCDF	244	234	4.1%
Total HxCDF	356	359	0.9%
Total HpCDF	108	109	1.0%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*10-Dec-22 at 10:32*
AP Project name:	*B7409*
Requested TAT:	*15 business days*
Projected due date:	*4-Jan-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-002625*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120122-S-MTK-WC-24	B7409_003	Leachate	1	1L amber	01-Dec-22	14:20	3.1	1	589473693259
12599404-120122-S-MTK-WC-25	B7409_004	Leachate	1	1L amber	01-Dec-22	15:35	3.1	1	589473693259
12599404-120122-S-MTK-WC-TCLP LB	B7409_005	Leachate Blank	1	250mL amber	07-Dec-22	n/a	3.1	1	589473693259

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Greg Dickinson *Logged in by: Erin Cropsey-Sjursen* *QC'ed by:* AK 13 Dec 22

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

B7409

SO SME

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #: 3915-1685-7143
SGS Quote #: | SGS Job #: JD56547

Client / Reporting Information

Company Name: GHD Services Inc
Street Address: 5551 Corporate Blvd #200
City: B. Jan Rouge State: LA Zip: 70808
Project Contact: Alice Harpole E-mail: Alice.Harpole@ghd.com
Phone #:
Sampler(s) Name(s): Marc Kemper Phone #: 713-233-3016

Project Information

Project Name: San Jacinto Waste Pits
Street:
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Number of Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	TCLP Dioxins/Furans 1311	TCLP Metals 1311/6010	TCLP Mercury 1311/7470A	TPH	LAB USE ONLY
1	12599404-120122-S-MTK-WC-1		12/1/22	1030	MTK	C		S	3					3					X	X	X	X	D37
2	" - " - " - WC-2		"	1150	MTK	C		S	3					3					X	X	X	X	
3 *	" - " - " - WC-24		"	1420	MTK	C		S	3					3					X	X	X	X	
4 *	" - " - " - WC-25		"	1535	MTK	C		S	3					3					X	X	X	X	
	Temp Blank		—	—	—	—		W	1														

12-01-2022

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- [ ] 10 Business Days
- [x] ~~5~~ Business Days See comments
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

- TPH collected in bulk jar, not per TNRCC method
- See SSOW
- 5 Day TAT on WC-1 + WC-2, normal TAT on WC-24 + WC-25

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1		12-01-22 17:00	FX	FX	12/2/22 10:20	JD
2	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
3						
4	Relinquished by:	Date / Time:	Received By:	Custody Seal #	Intact / Not Intact / Absent	Therm ID: IR4 On Ice ✓ Cooler Temp. °C
5		12/10/22 10:32			See Sample Receipt Summary	3.2 3.1

EHSA-QAC-0023-05 Rev.Date:8/5/22

* = included in this project

B7409 1/2

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD56547X

Client / Reporting Information

Company Name:
Street Address:
City State Zip
Project Contact E-mail: Kelly.Ramos@sgs.com
Phone #:
Sampler(s) Name(s): MTK Phone:

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street:
City State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip
Attention:

Requested Analysis

Dioxin/Furans - leachate bottles

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	Dioxin/Furans	LAB USE ONLY
1A	12599404-120122-S-MTK-WC-1		12/1/22	10:30:00 AM	MTK	SO										X	
2A	12599404-120122-S-MTK-WC-2		12/1/22	11:50:00 AM	MTK	SO										X	
* 3A	12599404-120122-S-MTK-WC-24		12/1/22	2:20:00 PM	MTK	SO										X	
* 4A	12599404-120122-S-MTK-WC-25		12/1/22	3:35:00 PM	MTK	SO										X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] Other 1/7/1900

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other FULT1

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1		12/9	1 fedex	2 Red Ey	12-10-22 1037	2 Greg Dittmer
3			3	4		4
5			5	Custody Seal #	[X] Intact [ ] Not Intact	Preserved where applicable [ ] Absent

Thorm. ID: IR4 On Ice: X Cooler Temp. °C: 1.9°C 3.1°C

* = included in this project

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Date / Time: 12/8/2022 2:39:58 PM
CSR: KELLYR
Job #: JD56547X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: FULT1
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD56547-1A	12599404-120122-S-MTK-WC-1	Dioxin/Furans - leachate bottles!		MTK	12/1/2022	10:30:00 AM	
JD56547-2A	12599404-120122-S-MTK-WC-2	Dioxin/Furans - leachate bottles!	TCLP	MTK	12/1/2022	11:50:00 AM	
JD56547-3A	12599404-120122-S-MTK-WC-24	Dioxin/Furans - leachate bottles!		MTK	12/1/2022	2:20:00 PM	
JD56547-4A	12599404-120122-S-MTK-WC-25	Dioxin/Furans - leachate bottles!		MTK	12/1/2022	3:35:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: _____ Date: 12/12/22

B7409 11c

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2. **TC Batch ID: TCO769**

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	3.97		4.00	3.97	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	4.01
PH Buffer														7.00	6.99		7.00	6.99					7.00	7.00
PH Buffer														10.00	10.00		10.00	10.00					10.00	9.99
LB (fluid #1)	N	59	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.76
LB (fluid #2)	N	NA	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	NA
JD56516-1	N	8	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.38	100	100.38	NA	6.60	5 mins	NA	1.39	1	4.93	YES	2007.6	NA	4.80
JD56516-2	N	15	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.67	100	100.67	NA	6.54	5 mins	NA	1.41	1	4.93	YES	2013.4	NA	4.92
JD56428-1	N	18	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	78.50	100	78.50	NA	4.87	5 mins	NA	1.56	1	4.93	YES	1570	NA	4.77
JD56531-2A	N	48	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.71	100	100.71	NA	7.74	5 mins	NA	1.58	1	4.93	YES	2014.2	NA	4.83
JD56547-1A	N	49	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.86	100	100.86	NA	9.94	5 mins	NA	1.64	1	4.93	YES	2017.2	NA	4.85
JD56547-2A	N	50	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.55	100	100.55	NA	9.94	5 mins	NA	1.66	1	4.93	YES	2011	NA	6.52
JD56547-3A	N	52	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.44	100	100.44	NA	9.05	5 mins	NA	1.60	1	4.93	YES	2008.8	NA	5.08
JD56547-4A	N	58	M/E	9	6-Dec-22	7-Dec-22	13:36	5:36	9:36	7:36	100.67	100	100.67	NA	8.53	5 mins	NA	1.58	1	4.93	YES	2013.4	NA	5.01
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.00		2.00	2.02					4.00	4.02
PH Buffer														10.00	10.01		4.00	4.00					10.00	10.00
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.00		2.00	2.02					4.00	4.02
PH Buffer														10.00	10.01		4.00	4.00					7.00	7.01

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____ Set-up analyst: NF Take-down analyst: NF

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

TC Batch ID: TC0769

B7409 2/2

Temperature ranges during leaching. (Must be from 20.5-25.4 °C, and recorded for each leaching period).

Balance ID: B54

pH meter ID: PH 67

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	29-Oct-22
5	29	29-Oct-22
7	28	29-Oct-22
8	NA	22-Apr-21
9	32	29-Oct-22
10	32	29-Oct-22
11	NA	7-Sep-21
12	28	29-Oct-22

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID: 5624720

Expiration: 13-Jul-23

Recorded temperature: 50

Heating time: Start:

End:

Reagent Information	Reagent ID or Manufacturer Lot	Expiration Date
Reagent		
Extraction fluid 1	GNE10-72115-TCLP	15-Dec-2022
Extraction fluid 2	GNE10-72116-TCLP	15-Dec-2022
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE7-70898-TCLP	20-Jan-2023
pH 2 buffer	FISHER 210051	1-Mar-2023
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Sep-2023
pH 10 buffer	FISHER 210276	1-Feb-2023
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jan-2023
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	12/2/2022

B7409

1

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 08DEC22
ACTWGT: 48.25 LB
CAD: 0692838/CAFE3211

BILL SENDER

TO SAMPLE RECEIVING
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

12/10 10:32

WILMINGTON NC 28405

3.1°C

(910) 794-1613 REF:
INV:
PO: DEPT:

FedE
Expr

E

2 of 2

MPS# 0263 5894 7369 3259

SATURDAY 12:00
PRIORITY OVERNIGH

Mstr# 5894 7369 3248 0201

NO ILMA

284

NC-US RDU

Part # 156148-434 MTW EXP 03/23

3
59
0

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120222-S-MTK-WC-26 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.09 L	Lab Sample ID	B7410_19730_DF_001	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	8:27:15

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	7.55				ES 2378-TCDD	89.3	
12378-PeCDD	ND	1.26			ES 12378-PeCDD	107	
123478-HxCDD	ND	1.43			ES 123478-HxCDD	86.5	
123678-HxCDD	ND	1.46			ES 123678-HxCDD	82.6	
123789-HxCDD	ND	1.5			ES 123789-HxCDD	83.7	
1234678-HpCDD	EMPC		2.09	J	ES 1234678-HpCDD	104	
OCDD	38.3			J	ES OCDD	96.9	
2378-TCDF	27				ES 2378-TCDF	93.3	
12378-PeCDF	ND	0.948			ES 12378-PeCDF	108	
23478-PeCDF	ND	0.926			ES 23478-PeCDF	106	
123478-HxCDF	ND	0.943			ES 123478-HxCDF	75.8	
123678-HxCDF	ND	0.928			ES 123678-HxCDF	73.4	
234678-HxCDF	ND	0.988			ES 234678-HxCDF	78.3	
123789-HxCDF	ND	1.21			ES 123789-HxCDF	81.4	
1234678-HpCDF	ND	1.19			ES 1234678-HpCDF	91.6	
1234789-HpCDF	ND	1.44			ES 1234789-HpCDF	95.4	
OCDF	ND	1.57			ES OCDF	86.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	97.9	
Total TCDD	7.55		7.55		CS 12347-PeCDD	125	
Total PeCDD	ND	1.26	ND		CS 12346-PeCDF	114	
Total HxCDD	ND	1.46	ND		CS 123469-HxCDF	82.6	
Total HpCDD	ND		4.63		CS 1234689-HpCDF	103	
Total TCDF	39.7		39.7				
Total PeCDF	ND	0.937	ND				
Total HxCDF	ND	1.01	ND				
Total HpCDF	ND	1.3	ND				
Total PCDD/Fs	**85.5**		**90.2**				
WHO-2005 TEQs							
TEQ: ND=0	10.3		10.3				
TEQ: ND=DL/2	11.5	2.56	11.5				
TEQ: ND=DL	12.7	5.11	12.7				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 12599404-120222-S-MTK-WC-26 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.09 L	Lab Sample ID:	B7410_19730_DF_001	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	8:27:15

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.54)		12479/12468D	(1.26)		124679/124689D	(1.46)		1234679D	[2.54]	J
1379D	(2.54)		12469D	(1.26)		123468D	(1.46)		1234678D	[2.09]	J
1369D	(2.54)		12368D	(1.26)		123679/123689D	(1.46)				
1469D	(2.54)		12478D	(1.26)		123469D	(1.46)				
1247D...[4]	(2.54)		12379D	(1.26)		123478D	(1.43)				
1378D	(2.54)		12369D...[3]	(1.26)		123678D	(1.46)				
1268D	(2.54)		12346/12347D	(1.26)		123467D	(1.46)				
1478D	(2.54)		12378D	(1.26)		123789D	(1.5)		**Conc.**	0	
1279D	(2.54)		12367D	(1.26)					**EMPC**	4.63	
1234/1269D	(2.54)		12389D	(1.26)							
1236D	(2.54)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.54)										
1239D	(2.54)								OCDD	38.3	J
2378D	7.55										
1278D	(2.54)										
1267D	(2.54)										
1289D	(2.54)										
Conc.	7.55		**Conc.**	0		**Conc.**	0				
EMPC	7.55		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	10.3	10.3
TEQ: ND=DL/2	11.5	11.5
TEQ: ND=DL	12.7	12.7

	Conc.	EMPC
Total PCDD/Fs	85.5	90.2

Checkcode: 455-088-KYL

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-26 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.09 L	Lab Sample ID:	B7410_19730_DF_001	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	8:27:15

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.18)		13468/12468F	(1.34)		123468F	(1.01)		1234678F	(1.19)	
1468F	(1.18)		13678F...[3]	(0.937)		124678/134678F	(1.01)		1234679F	(1.3)	
2468F	(1.18)		12368F...[3]	(0.937)		134679F	(1.01)		1234689F	(1.3)	
1346/1246F	(1.18)		14678F	(0.937)		124679F	(1.01)		1234789F	(1.44)	
1347F...[3]	(1.18)		13479F	(0.937)		124689F	(1.01)				
1348F	(1.18)		13469/12479F	(0.937)		123467F	(1.01)				
1248F...[3]	(1.18)		12346F	(0.937)		123478F	(0.943)				
1268F	(1.18)		23468/12469F	(0.937)		123678F	(0.928)				
1467F	(1.18)		12347F	(0.937)		123479F	(1.01)				
1478F	(1.18)		12348F	(0.937)		123469F	(1.01)				
1369/1237F	(1.18)		12378F	(0.948)		123679F	(1.01)				
2467F	(1.18)		12678/12367F	(0.937)		234678F	(0.988)		**Conc.**	0	
2368F	(1.18)		12379F	(0.937)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.18)		12679F	(0.937)		123689F	(1.01)				
1278F	12.7		23467/12369F	(0.937)		123789F	(1.21)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.18)		23478F	(0.926)		123789/123489F	0				
1267F	(1.18)		23478/12489F	0		123489F	(1.01)		OCDF	(1.57)	
2346/1249F	(1.18)		12489F	(0.937)							
2347/1279F	(1.18)		12349F	(0.937)							
2348F	(1.18)		12389F	(0.937)							
2378F	27										
2367/3467F	(1.18)										
1269F	(1.18)										
1239F	(1.18)										
1289F	(1.18)										
Conc.	39.7		**Conc.**	0		**Conc.**	0				
EMPC	39.7		**EMPC**	0		**EMPC**	0				

Checkcode: 455-088-KYL

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-26 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_001
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.09 L	QC Batch No.:	19730
Date Collected:	02-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 08:27
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	7.55		2.54	7.55	7.55	7.55
12378-PeCDD	(1.26)		1.26	(0.631)	(1.26)	(1.26)
123478-HxCDD	(1.43)		1.43	(0.143)	(0.143)	(0.143)
123678-HxCDD	(1.46)		1.46	(0.146)	(0.146)	(0.146)
123789-HxCDD	(1.5)		1.5	(0.15)	(0.15)	(0.15)
1234678-HpCDD	[2.09]	J	1.28	[0.0209]	[0.0209]	[0.0209]
OCDD	38.3	J	1.99	0.0383	0.00383	0.0115
2378-TCDF	27		1.18	2.7	2.7	2.7
12378-PeCDF	(0.948)		0.948	(0.0474)	(0.0474)	(0.0285)
23478-PeCDF	(0.926)		0.926	(0.463)	(0.463)	(0.278)
123478-HxCDF	(0.943)		0.943	(0.0943)	(0.0943)	(0.0943)
123678-HxCDF	(0.928)		0.928	(0.0928)	(0.0928)	(0.0928)
234678-HxCDF	(0.988)		0.988	(0.0988)	(0.0988)	(0.0988)
123789-HxCDF	(1.21)		1.21	(0.121)	(0.121)	(0.121)
1234678-HpCDF	(1.19)		1.19	(0.0119)	(0.0119)	(0.0119)
1234789-HpCDF	(1.44)		1.44	(0.0144)	(0.0144)	(0.0144)
OCDF	(1.57)		1.57	(0.00157)	(0.000157)	(0.000471)

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TEQ Summaries			
EMPC = 0, ND = 0	10.3	10.3	10.3
EMPC = 0, ND = DL / 2	11.3	11.6	11.5
EMPC = 0, ND = DL	12.3	12.9	12.7
EMPC = 0, < J-level = 0	10.3	10.3	10.3
EMPC = EMPC, ND = 0	10.3	10.3	10.3
EMPC = EMPC, ND = DL / 2	11.3	11.6	11.5
EMPC = EMPC, ND = DL	12.3	12.9	12.7
EMPC = EMPC, < J-level = 0	10.3	10.3	10.3

Checkcode: 455-088-KYL

SGS North America - DF v0.99

Sample ID: 12599404-120222-S-MTK-WC-23 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	Lab Sample ID	B7410_19730_DF_002	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	9:14:50

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	7.04				ES 2378-TCDD	94.5	
12378-PeCDD	ND	1.65			ES 12378-PeCDD	113	
123478-HxCDD	ND	1.58			ES 123478-HxCDD	84.9	
123678-HxCDD	ND	1.56			ES 123678-HxCDD	79.6	
123789-HxCDD	ND	1.66			ES 123789-HxCDD	84.8	
1234678-HpCDD	ND	1.44			ES 1234678-HpCDD	99.7	
OCDD	EMPC		17.4	J	ES OCDD	88.5	
2378-TCDF	EMPC		20.1		ES 2378-TCDF	96.3	
12378-PeCDF	ND	1.48			ES 12378-PeCDF	108	
23478-PeCDF	ND	1.49			ES 23478-PeCDF	107	
123478-HxCDF	ND	1.01			ES 123478-HxCDF	77.3	
123678-HxCDF	ND	0.946			ES 123678-HxCDF	72.5	
234678-HxCDF	ND	1.04			ES 234678-HxCDF	76.5	
123789-HxCDF	ND	1.09			ES 123789-HxCDF	86.6	
1234678-HpCDF	ND	1.15			ES 1234678-HpCDF	87	
1234789-HpCDF	ND	1.43			ES 1234789-HpCDF	91.4	
OCDF	6.07			J	ES OCDF	82.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	106	
Total TCDD	7.04		7.04		CS 12347-PeCDD	134	V
Total PeCDD	ND	1.65	ND		CS 12346-PeCDF	116	
Total HxCDD	ND	1.6	ND		CS 123469-HxCDF	85.4	
Total HpCDD	ND	1.44	ND		CS 1234689-HpCDF	105	
Total TCDF	10.8		34.8				
Total PeCDF	ND	1.49	ND				
Total HxCDF	ND	1.02	ND				
Total HpCDF	ND	1.28	ND				
Total PCDD/Fs	**23.9**		**65.3**				
WHO-2005 TEQs							
TEQ: ND=0	7.04		9.05				
TEQ: ND=DL/2	8.57	2.57	10.6				
TEQ: ND=DL	10.1	5.14	12.1				

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Sample ID: 12599404-120222-S-MTK-WC-23 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	Lab Sample ID:	B7410_19730_DF_002	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	9:14:50

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(1.92)		12479/12468D	(1.65)		124679/124689D	(1.6)		1234679D	(1.44)	
1379D	(1.92)		12469D	(1.65)		123468D	(1.6)		1234678D	(1.44)	
1369D	(1.92)		12368D	(1.65)		123679/123689D	(1.6)				
1469D	(1.92)		12478D	(1.65)		123469D	(1.6)				
1247D...[4]	(1.92)		12379D	(1.65)		123478D	(1.58)				
1378D	(1.92)		12369D...[3]	(1.65)		123678D	(1.56)				
1268D	(1.92)		12346/12347D	(1.65)		123467D	(1.6)				
1478D	(1.92)		12378D	(1.65)		123789D	(1.66)		**Conc.**	0	
1279D	(1.92)		12367D	(1.65)					**EMPC**	0	
1234/1269D	(1.92)		12389D	(1.65)							
1236D	(1.92)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(1.92)										
1239D	(1.92)								OCDD	[17.4]	J
2378D	7.04										
1278D	(1.92)										
1267D	(1.92)										
1289D	(1.92)										
Conc.	7.04		**Conc.**	0		**Conc.**	0				
EMPC	7.04		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	7.04	9.05
TEQ: ND=DL/2	8.57	10.6
TEQ: ND=DL	10.1	12.1

	Conc.	EMPC
Total PCDD/Fs	23.9	65.3

Checkcode: 661-115-PQF

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-23 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	Lab Sample ID:	B7410_19730_DF_002	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	9:14:50

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.46)		13468/12468F	(1.34)		123468F	(1.02)		1234678F	(1.15)	
1468F	(1.46)		13678F...[3]	(1.49)		124678/134678F	(1.02)		1234679F	(1.28)	
2468F	(1.46)		12368F...[3]	(1.49)		134679F	(1.02)		1234689F	(1.28)	
1346/1246F	(1.46)		14678F	(1.49)		124679F	(1.02)		1234789F	(1.43)	
1347F...[3]	(1.46)		13479F	(1.49)		124689F	(1.02)				
1348F	(1.46)		13469/12479F	(1.49)		123467F	(1.02)				
1248F...[3]	(1.46)		12346F	(1.49)		123478F	(1.01)				
1268F	(1.46)		23468/12469F	(1.49)		123678F	(0.946)				
1467F	(1.46)		12347F	(1.49)		123479F	(1.02)				
1478F	(1.46)		12348F	(1.49)		123469F	(1.02)				
1369/1237F	(1.46)		12378F	(1.48)		123679F	(1.02)				
2467F	(1.46)		12678/12367F	(1.49)		234678F	(1.04)		**Conc.**	0	
2368F	(1.46)		12379F	(1.49)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.46)		12679F	(1.49)		123689F	(1.02)				
1278F	10.8		23467/12369F	(1.49)		123789F	(1.09)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.46)		23478F	(1.49)		123789/123489F	0				
1267F	(1.46)		23478/12489F	0		123489F	(1.02)		OCDF	6.07	J
2346/1249F	(1.46)		12489F	(1.49)							
2347/1279F	(1.46)		12349F	(1.49)							
2348F	[2.12]	J	12389F	(1.49)							
2378F	[20.1]										
2367/3467F	[1.74]	J									
1269F	(1.46)										
1239F	(1.46)										
1289F	(1.46)										
Conc.	10.8		**Conc.**	0		**Conc.**	0				
EMPC	34.8		**EMPC**	0		**EMPC**	0				

Checkcode: 661-115-PQF

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-23 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_002
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	QC Batch No.:	19730
Date Collected:	02-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 09:14
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	7.04		1.92	7.04	7.04	7.04
12378-PeCDD	(1.65)		1.65	(0.825)	(1.65)	(1.65)
123478-HxCDD	(1.58)		1.58	(0.158)	(0.158)	(0.158)
123678-HxCDD	(1.56)		1.56	(0.156)	(0.156)	(0.156)
123789-HxCDD	(1.66)		1.66	(0.166)	(0.166)	(0.166)
1234678-HpCDD	(1.44)		1.44	(0.0144)	(0.0144)	(0.0144)
OCDD	[17.4]	J	2.47	[0.0174]	[0.00174]	[0.00522]
2378-TCDF	[20.1]		1.46	[2.01]	[2.01]	[2.01]
12378-PeCDF	(1.48)		1.48	(0.0742)	(0.0742)	(0.0445)
23478-PeCDF	(1.49)		1.49	(0.747)	(0.747)	(0.448)
123478-HxCDF	(1.01)		1.01	(0.101)	(0.101)	(0.101)
123678-HxCDF	(0.946)		0.946	(0.0946)	(0.0946)	(0.0946)
234678-HxCDF	(1.04)		1.04	(0.104)	(0.104)	(0.104)
123789-HxCDF	(1.09)		1.09	(0.109)	(0.109)	(0.109)
1234678-HpCDF	(1.15)		1.15	(0.0115)	(0.0115)	(0.0115)
1234789-HpCDF	(1.43)		1.43	(0.0143)	(0.0143)	(0.0143)
OCDF	6.07	J	1.64	0.00607	0.000607	0.00182

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TEQ Summaries			
EMPC = 0, ND = 0	7.04	7.04	7.04
EMPC = 0, ND = DL / 2	8.33	8.74	8.57
EMPC = 0, ND = DL	9.62	10.4	10.1
EMPC = 0, < J-level = 0	7.04	7.04	7.04
EMPC = EMPC, ND = 0	9.07	9.05	9.05
EMPC = EMPC, ND = DL / 2	10.4	10.7	10.6
EMPC = EMPC, ND = DL	11.6	12.4	12.1
EMPC = EMPC, < J-level = 0	9.04	9.04	9.04

Checkcode: 661-115-PQF

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Sample ID: 12599404-120222-S-MTK-WC-22 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.14 L	Lab Sample ID	B7410_19730_DF_003	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:02:29

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		2.88	J	ES 2378-TCDD	90.7	
12378-PeCDD	ND	1.25			ES 12378-PeCDD	109	
123478-HxCDD	ND	1.37			ES 123478-HxCDD	84.7	
123678-HxCDD	ND	1.48			ES 123678-HxCDD	78.8	
123789-HxCDD	ND	1.47			ES 123789-HxCDD	83.6	
1234678-HpCDD	ND	1.16			ES 1234678-HpCDD	101	
OCDD	EMPC		11.3	J	ES OCDD	92.5	
2378-TCDF	11.2				ES 2378-TCDF	93.8	
12378-PeCDF	ND	0.968			ES 12378-PeCDF	105	
23478-PeCDF	ND	0.911			ES 23478-PeCDF	103	
123478-HxCDF	ND	1.07			ES 123478-HxCDF	77.9	
123678-HxCDF	ND	1.17			ES 123678-HxCDF	71.2	
234678-HxCDF	ND	1.26			ES 234678-HxCDF	76.7	
123789-HxCDF	ND	1.43			ES 123789-HxCDF	84.6	
1234678-HpCDF	ND	0.837			ES 1234678-HpCDF	89.4	
1234789-HpCDF	ND	0.904			ES 1234789-HpCDF	96.9	
OCDF	ND	1.67			ES OCDF	87.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95.2	
Total TCDD	ND		2.88		CS 12347-PeCDD	120	
Total PeCDD	ND	1.25	ND		CS 12346-PeCDF	109	
Total HxCDD	ND	1.44	ND		CS 123469-HxCDF	80.1	
Total HpCDD	ND	1.16	ND		CS 1234689-HpCDF	98.9	
Total TCDF	11.2		16.2				
Total PeCDF	ND	0.94	ND				
Total HxCDF	ND	1.23	ND				
Total HpCDF	ND	0.869	ND				
Total PCDD/Fs	**11.2**		**30.4**				
WHO-2005 TEQs							
TEQ: ND=0	1.12		4				
TEQ: ND=DL/2	2.38	2.42	5.26				
TEQ: ND=DL	3.63	4.84	6.51				

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Sample ID: 12599404-120222-S-MTK-WC-22 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.14 L	Lab Sample ID:	B7410_19730_DF_003	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:02:29

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.22)		12479/12468D	(1.25)		124679/124689D	(1.44)		1234679D	(1.16)	
1379D	(2.22)		12469D	(1.25)		123468D	(1.44)		1234678D	(1.16)	
1369D	(2.22)		12368D	(1.25)		123679/123689D	(1.44)				
1469D	(2.22)		12478D	(1.25)		123469D	(1.44)				
1247D...[4]	(2.22)		12379D	(1.25)		123478D	(1.37)				
1378D	(2.22)		12369D...[3]	(1.25)		123678D	(1.48)				
1268D	(2.22)		12346/12347D	(1.25)		123467D	(1.44)				
1478D	(2.22)		12378D	(1.25)		123789D	(1.47)		**Conc.**	0	
1279D	(2.22)		12367D	(1.25)					**EMPC**	0	
1234/1269D	(2.22)		12389D	(1.25)							
1236D	(2.22)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.22)										
1239D	(2.22)								OCDD	[11.3]	J
2378D	[2.88]	J									
1278D	(2.22)										
1267D	(2.22)										
1289D	(2.22)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	2.88		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	1.12	4
TEQ: ND=DL/2	2.38	5.26
TEQ: ND=DL	3.63	6.51

	Conc.	EMPC
Total PCDD/Fs	11.2	30.4

Checkcode: 450-981-QPP

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-22 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.14 L	Lab Sample ID:	B7410_19730_DF_003	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:02:29

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.08)		13468/12468F	(1.07)		123468F	(1.23)		1234678F	(0.837)	
1468F	(1.08)		13678F...[3]	(0.94)		124678/134678F	(1.23)		1234679F	(0.869)	
2468F	(1.08)		12368F...[3]	(0.94)		134679F	(1.23)		1234689F	(0.869)	
1346/1246F	(1.08)		14678F	(0.94)		124679F	(1.23)		1234789F	(0.904)	
1347F...[3]	(1.08)		13479F	(0.94)		124689F	(1.23)				
1348F	(1.08)		13469/12479F	(0.94)		123467F	(1.23)				
1248F...[3]	(1.08)		12346F	(0.94)		123478F	(1.07)				
1268F	(1.08)		23468/12469F	(0.94)		123678F	(1.17)				
1467F	(1.08)		12347F	(0.94)		123479F	(1.23)				
1478F	(1.08)		12348F	(0.94)		123469F	(1.23)				
1369/1237F	(1.08)		12378F	(0.968)		123679F	(1.23)				
2467F	(1.08)		12678/12367F	(0.94)		234678F	(1.26)		**Conc.**	0	
2368F	(1.08)		12379F	(0.94)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.08)		12679F	(0.94)		123689F	(1.23)				
1278F	[4.96]		23467/12369F	(0.94)		123789F	(1.43)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(1.08)		23478F	(0.911)		123789/123489F	0			(pg/L)	
1267F	(1.08)		23478/12489F	0		123489F	(1.23)		OCDF	(1.67)	
2346/1249F	(1.08)		12489F	(0.94)							
2347/1279F	(1.08)		12349F	(0.94)							
2348F	(1.08)		12389F	(0.94)							
2378F	11.2										
2367/3467F	(1.08)										
1269F	(1.08)										
1239F	(1.08)										
1289F	(1.08)										
Conc.	11.2		**Conc.**	0		**Conc.**	0				
EMPC	16.2		**EMPC**	0		**EMPC**	0				

Checkcode: 450-981-QPP

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-22 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_003
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.14 L	QC Batch No.:	19730
Date Collected:	02-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 10:02
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	[2.88]	J	2.22	[2.88]	[2.88]	[2.88]
12378-PeCDD	(1.25)		1.25	(0.627)	(1.25)	(1.25)
123478-HxCDD	(1.37)		1.37	(0.137)	(0.137)	(0.137)
123678-HxCDD	(1.48)		1.48	(0.148)	(0.148)	(0.148)
123789-HxCDD	(1.47)		1.47	(0.147)	(0.147)	(0.147)
1234678-HpCDD	(1.16)		1.16	(0.0116)	(0.0116)	(0.0116)
OCDD	[11.3]	J	1.74	[0.0113]	[0.00113]	[0.0034]
2378-TCDF	11.2		1.08	1.12	1.12	1.12
12378-PeCDF	(0.968)		0.968	(0.0484)	(0.0484)	(0.029)
23478-PeCDF	(0.911)		0.911	(0.456)	(0.456)	(0.273)
123478-HxCDF	(1.07)		1.07	(0.107)	(0.107)	(0.107)
123678-HxCDF	(1.17)		1.17	(0.117)	(0.117)	(0.117)
234678-HxCDF	(1.26)		1.26	(0.126)	(0.126)	(0.126)
123789-HxCDF	(1.43)		1.43	(0.143)	(0.143)	(0.143)
1234678-HpCDF	(0.837)		0.837	(0.00837)	(0.00837)	(0.00837)
1234789-HpCDF	(0.904)		0.904	(0.00904)	(0.00904)	(0.00904)
OCDF	(1.67)		1.67	(0.00167)	(0.000167)	(0.0005)

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TEQ Summaries			
EMPC = 0, ND = 0	1.12	1.12	1.12
EMPC = 0, ND = DL / 2	2.16	2.48	2.38
EMPC = 0, ND = DL	3.21	3.83	3.63
EMPC = 0, < J-level = 0	1.12	1.12	1.12
EMPC = EMPC, ND = 0	4.01	4	4
EMPC = EMPC, ND = DL / 2	5.05	5.36	5.26
EMPC = EMPC, ND = DL	6.1	6.71	6.51
EMPC = EMPC, < J-level = 0	1.12	1.12	1.12

Checkcode: 450-981-QPP

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Sample ID: 12599404-120222-S-MTK-WC-21 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	Lab Sample ID	B7410_19730_DF_004	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:50:05

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	4.76			J	ES 2378-TCDD	82.3	
12378-PeCDD	ND	1.82			ES 12378-PeCDD	96.7	
123478-HxCDD	ND	2.46			ES 123478-HxCDD	81.9	
123678-HxCDD	ND	2.52			ES 123678-HxCDD	77.3	
123789-HxCDD	ND	2.51			ES 123789-HxCDD	83.5	
1234678-HpCDD	ND	2.21			ES 1234678-HpCDD	88.3	
OCDD	EMPC		27	J	ES OCDD	77.5	
2378-TCDF	10.9				ES 2378-TCDF	90.4	
12378-PeCDF	ND	1.62			ES 12378-PeCDF	101	
23478-PeCDF	ND	1.65			ES 23478-PeCDF	95.9	
123478-HxCDF	ND	2.03			ES 123478-HxCDF	74.6	
123678-HxCDF	ND	1.94			ES 123678-HxCDF	72.3	
234678-HxCDF	ND	2.13			ES 234678-HxCDF	75.8	
123789-HxCDF	ND	2.71			ES 123789-HxCDF	76.9	
1234678-HpCDF	ND	2.88			ES 1234678-HpCDF	82.1	
1234789-HpCDF	ND	3.7			ES 1234789-HpCDF	80.8	
OCDF	EMPC		9.58	J	ES OCDF	70	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95	
Total TCDD	4.76		4.76		CS 12347-PeCDD	116	
Total PeCDD	ND	1.82	ND		CS 12346-PeCDF	108	
Total HxCDD	ND	2.49	ND		CS 123469-HxCDF	86.3	
Total HpCDD	ND		4.54		CS 1234689-HpCDF	94.5	
Total TCDF	18.3		18.3				
Total PeCDF	ND	1.63	ND				
Total HxCDF	ND	2.18	ND				
Total HpCDF	ND	3.24	ND				
Total PCDD/Fs	**23.1**		**64.2**				
WHO-2005 TEQs							
TEQ: ND=0	5.85		5.86				
TEQ: ND=DL/2	7.89	3.47	7.9				
TEQ: ND=DL	9.93	6.94	9.94				

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Sample ID: 12599404-120222-S-MTK-WC-21 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	Lab Sample ID:	B7410_19730_DF_004	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:50:05

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.72)		12479/12468D	(1.82)		124679/124689D	(2.49)		1234679D	[4.54]	J
1379D	(2.72)		12469D	(1.82)		123468D	(2.49)		1234678D	(2.21)	
1369D	(2.72)		12368D	(1.82)		123679/123689D	(2.49)				
1469D	(2.72)		12478D	(1.82)		123469D	(2.49)				
1247D...[4]	(2.72)		12379D	(1.82)		123478D	(2.46)				
1378D	(2.72)		12369D...[3]	(1.82)		123678D	(2.52)				
1268D	(2.72)		12346/12347D	(1.82)		123467D	(2.49)				
1478D	(2.72)		12378D	(1.82)		123789D	(2.51)		**Conc.**	0	
1279D	(2.72)		12367D	(1.82)					**EMPC**	4.54	
1234/1269D	(2.72)		12389D	(1.82)							
1236D	(2.72)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.72)										
1239D	(2.72)								OCDD	[27]	J
2378D	4.76	J									
1278D	(2.72)										
1267D	(2.72)										
1289D	(2.72)										
Conc.	4.76		**Conc.**	0		**Conc.**	0				
EMPC	4.76		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	5.85	5.86
TEQ: ND=DL/2	7.89	7.9
TEQ: ND=DL	9.93	9.94

	Conc.	EMPC
Total PCDD/Fs	23.1	64.2

Checkcode: 950-780-GYT

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-21 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	Lab Sample ID:	B7410_19730_DF_004	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:50:05

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.33)		13468/12468F	(1.12)		123468F	(2.18)		1234678F	(2.88)	
1468F	(1.33)		13678F...[3]	(1.63)		124678/134678F	(2.18)		1234679F	(3.24)	
2468F	(1.33)		12368F...[3]	(1.63)		134679F	(2.18)		1234689F	(3.24)	
1346/1246F	(1.33)		14678F	(1.63)		124679F	(2.18)		1234789F	(3.7)	
1347F...[3]	(1.33)		13479F	(1.63)		124689F	(2.18)				
1348F	(1.33)		13469/12479F	(1.63)		123467F	(2.18)				
1248F...[3]	(1.33)		12346F	(1.63)		123478F	(2.03)				
1268F	(1.33)		23468/12469F	(1.63)		123678F	(1.94)				
1467F	(1.33)		12347F	(1.63)		123479F	(2.18)				
1478F	(1.33)		12348F	(1.63)		123469F	(2.18)				
1369/1237F	(1.33)		12378F	(1.62)		123679F	(2.18)				
2467F	(1.33)		12678/12367F	(1.63)		234678F	(2.13)		**Conc.**	0	
2368F	(1.33)		12379F	(1.63)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.33)		12679F	(1.63)		123689F	(2.18)				
1278F	5.71	J	23467/12369F	(1.63)		123789F	(2.71)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.33)		23478F	(1.65)		123789/123489F	0				
1267F	(1.33)		23478/12489F	0		123489F	(2.18)		OCDF	[9.58]	J
2346/1249F	(1.33)		12489F	(1.63)							
2347/1279F	(1.33)		12349F	(1.63)							
2348F	1.73	J	12389F	(1.63)							
2378F	10.9										
2367/3467F	(1.33)										
1269F	(1.33)										
1239F	(1.33)										
1289F	(1.33)										
Conc.	18.3		**Conc.**	0		**Conc.**	0				
EMPC	18.3		**EMPC**	0		**EMPC**	0				

Checkcode: 950-780-GYT

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-21 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_004
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	QC Batch No.:	19730
Date Collected:	02-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 10:50
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	4.76	J	2.72	4.76	4.76	4.76
12378-PeCDD	(1.82)		1.82	(0.91)	(1.82)	(1.82)
123478-HxCDD	(2.46)		2.46	(0.246)	(0.246)	(0.246)
123678-HxCDD	(2.52)		2.52	(0.252)	(0.252)	(0.252)
123789-HxCDD	(2.51)		2.51	(0.251)	(0.251)	(0.251)
1234678-HpCDD	(2.21)		2.21	(0.0221)	(0.0221)	(0.0221)
OCDD	[27]	J	4.29	[0.027]	[0.0027]	[0.00809]
2378-TCDF	10.9		1.33	1.09	1.09	1.09
12378-PeCDF	(1.62)		1.62	(0.0811)	(0.0811)	(0.0487)
23478-PeCDF	(1.65)		1.65	(0.825)	(0.825)	(0.495)
123478-HxCDF	(2.03)		2.03	(0.203)	(0.203)	(0.203)
123678-HxCDF	(1.94)		1.94	(0.194)	(0.194)	(0.194)
234678-HxCDF	(2.13)		2.13	(0.213)	(0.213)	(0.213)
123789-HxCDF	(2.71)		2.71	(0.271)	(0.271)	(0.271)
1234678-HpCDF	(2.88)		2.88	(0.0288)	(0.0288)	(0.0288)
1234789-HpCDF	(3.7)		3.7	(0.037)	(0.037)	(0.037)
OCDF	[9.58]	J	3.47	[0.00958]	[0.000958]	[0.00287]

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TEQ Summaries			
EMPC = 0, ND = 0	5.85	5.85	5.85
EMPC = 0, ND = DL / 2	7.61	8.07	7.89
EMPC = 0, ND = DL	9.38	10.3	9.93
EMPC = 0, < J-level = 0	1.09	1.09	1.09
EMPC = EMPC, ND = 0	5.88	5.85	5.86
EMPC = EMPC, ND = DL / 2	7.65	8.07	7.9
EMPC = EMPC, ND = DL	9.42	10.3	9.94
EMPC = EMPC, < J-level = 0	1.09	1.09	1.09

Checkcode: 950-780-GYT

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Sample ID: 12599404-120222-S-MTK-WC-20 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.98 L	Lab Sample ID	B7410_19730_DF_005	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:37:39

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		7.81		ES 2378-TCDD	91.8	
12378-PeCDD	ND	1.47			ES 12378-PeCDD	123	
123478-HxCDD	ND	1.32			ES 123478-HxCDD	85.3	
123678-HxCDD	ND	1.32			ES 123678-HxCDD	80.3	
123789-HxCDD	ND	1.38			ES 123789-HxCDD	85.9	
1234678-HpCDD	EMPC		3.2	J	ES 1234678-HpCDD	96.2	
OCDD	44			J	ES OCDD	87.1	
2378-TCDF	EMPC		18.8		ES 2378-TCDF	99.3	
12378-PeCDF	ND	0.99			ES 12378-PeCDF	119	
23478-PeCDF	ND	1.04			ES 23478-PeCDF	117	
123478-HxCDF	ND	1.08			ES 123478-HxCDF	79.6	
123678-HxCDF	ND	1.02			ES 123678-HxCDF	76.4	
234678-HxCDF	ND	1.05			ES 234678-HxCDF	78.3	
123789-HxCDF	ND	1.37			ES 123789-HxCDF	84.7	
1234678-HpCDF	1.85			J	ES 1234678-HpCDF	93.7	
1234789-HpCDF	ND	1.49			ES 1234789-HpCDF	91.8	
OCDF	EMPC		7.16	J	ES OCDF	80	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	105	
Total TCDD	ND		7.81		CS 12347-PeCDD	142	V
Total PeCDD	ND	1.47	ND		CS 12346-PeCDF	124	
Total HxCDD	ND	1.34	ND		CS 123469-HxCDF	88.3	
Total HpCDD	ND		8.27		CS 1234689-HpCDF	103	
Total TCDF	2.74		29				
Total PeCDF	ND	1.01	ND				
Total HxCDF	ND	1.12	ND				
Total HpCDF	1.85		1.85				
Total PCDD/Fs	**48.6**		**98**				
WHO-2005 TEQs							
TEQ: ND=0	0.0317		9.76				
TEQ: ND=DL/2	1.37	2.73	11.1				
TEQ: ND=DL	2.71	5.46	12.4				

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Sample ID: 12599404-120222-S-MTK-WC-20 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.98 L	Lab Sample ID:	B7410_19730_DF_005	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:37:39

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.62)		12479/12468D	(1.47)		124679/124689D	(1.34)		1234679D	[5.08]	J
1379D	(2.62)		12469D	(1.47)		123468D	(1.34)		1234678D	[3.2]	J
1369D	(2.62)		12368D	(1.47)		123679/123689D	(1.34)				
1469D	(2.62)		12478D	(1.47)		123469D	(1.34)				
1247D...[4]	(2.62)		12379D	(1.47)		123478D	(1.32)				
1378D	(2.62)		12369D...[3]	(1.47)		123678D	(1.32)				
1268D	(2.62)		12346/12347D	(1.47)		123467D	(1.34)				
1478D	(2.62)		12378D	(1.47)		123789D	(1.38)		**Conc.**	0	
1279D	(2.62)		12367D	(1.47)					**EMPC**	8.27	
1234/1269D	(2.62)		12389D	(1.47)							
1236D	(2.62)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.62)										
1239D	(2.62)								OCDD	44	J
2378D	[7.81]										
1278D	(2.62)										
1267D	(2.62)										
1289D	(2.62)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	7.81		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0317	9.76
TEQ: ND=DL/2	1.37	11.1
TEQ: ND=DL	2.71	12.4

	Conc.	EMPC
Total PCDD/Fs	48.6	98

Checkcode: 951-336-YHX

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-20 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.98 L	Lab Sample ID:	B7410_19730_DF_005	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:37:39

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.33)		13468/12468F	(1.06)		123468F	(1.12)		1234678F	1.85	J
1468F	(1.33)		13678F...[3]	(1.01)		124678/134678F	(1.12)		1234679F	(1.32)	
2468F	(1.33)		12368F...[3]	(1.01)		134679F	(1.12)		1234689F	(1.32)	
1346/1246F	(1.33)		14678F	(1.01)		124679F	(1.12)		1234789F	(1.49)	
1347F...[3]	(1.33)		13479F	(1.01)		124689F	(1.12)				
1348F	(1.33)		13469/12479F	(1.01)		123467F	(1.12)				
1248F...[3]	(1.33)		12346F	(1.01)		123478F	(1.08)				
1268F	(1.33)		23468/12469F	(1.01)		123678F	(1.02)				
1467F	(1.33)		12347F	(1.01)		123479F	(1.12)				
1478F	(1.33)		12348F	(1.01)		123469F	(1.12)				
1369/1237F	(1.33)		12378F	(0.99)		123679F	(1.12)				
2467F	(1.33)		12678/12367F	(1.01)		234678F	(1.05)		**Conc.**	1.85	
2368F	(1.33)		12379F	(1.01)		234678/123689F	0		**EMPC**	1.85	
1238F...[5]	(1.33)		12679F	(1.01)		123689F	(1.12)				
1278F	[7.45]		23467/12369F	(1.01)		123789F	(1.37)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.33)		23478F	(1.04)		123789/123489F	0				
1267F	(1.33)		23478/12489F	0		123489F	(1.12)		OCDF	[7.16]	J
2346/1249F	(1.33)		12489F	(1.01)							
2347/1279F	(1.33)		12349F	(1.01)							
2348F	2.74	J	12389F	(1.01)							
2378F	[18.8]										
2367/3467F	(1.33)										
1269F	(1.33)										
1239F	(1.33)										
1289F	(1.33)										
Conc.	2.74		**Conc.**	0		**Conc.**	0				
EMPC	29		**EMPC**	0		**EMPC**	0				

Checkcode: 951-336-YHX

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-20 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_005
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.98 L	QC Batch No.:	19730
Date Collected:	02-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 11:37
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	[7.81]		2.62	[7.81]	[7.81]	[7.81]
12378-PeCDD	(1.47)		1.47	(0.734)	(1.47)	(1.47)
123478-HxCDD	(1.32)		1.32	(0.132)	(0.132)	(0.132)
123678-HxCDD	(1.32)		1.32	(0.132)	(0.132)	(0.132)
123789-HxCDD	(1.38)		1.38	(0.138)	(0.138)	(0.138)
1234678-HpCDD	[3.2]	J	1.17	[0.032]	[0.032]	[0.032]
OCDD	44	J	2.22	0.044	0.0044	0.0132
2378-TCDF	[18.8]		1.33	[1.88]	[1.88]	[1.88]
12378-PeCDF	(0.99)		0.99	(0.0495)	(0.0495)	(0.0297)
23478-PeCDF	(1.04)		1.04	(0.52)	(0.52)	(0.312)
123478-HxCDF	(1.08)		1.08	(0.108)	(0.108)	(0.108)
123678-HxCDF	(1.02)		1.02	(0.102)	(0.102)	(0.102)
234678-HxCDF	(1.05)		1.05	(0.105)	(0.105)	(0.105)
123789-HxCDF	(1.37)		1.37	(0.137)	(0.137)	(0.137)
1234678-HpCDF	1.85	J	1.19	0.0185	0.0185	0.0185
1234789-HpCDF	(1.49)		1.49	(0.0149)	(0.0149)	(0.0149)
OCDF	[7.16]	J	1.95	[0.00716]	[0.000716]	[0.00215]

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TEQ Summaries			
EMPC = 0, ND = 0	0.0625	0.0229	0.0317
EMPC = 0, ND = DL / 2	1.15	1.48	1.37
EMPC = 0, ND = DL	2.23	2.93	2.71
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	9.79	9.74	9.76
EMPC = EMPC, ND = DL / 2	10.9	11.2	11.1
EMPC = EMPC, ND = DL	12	12.7	12.4
EMPC = EMPC, < J-level = 0	9.69	9.69	9.69

Checkcode: 951-336-YHX

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Sample ID: 12599404-120222-S-MTK-WC-19 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.12 L	Lab Sample ID	B7410_19730_DF_006	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:25:14

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	1.57			ES 2378-TCDD	91.8	
12378-PeCDD	ND	1.18			ES 12378-PeCDD	118	
123478-HxCDD	ND	1.15			ES 123478-HxCDD	86.5	
123678-HxCDD	ND	1.25			ES 123678-HxCDD	81.9	
123789-HxCDD	ND	1.22			ES 123789-HxCDD	87.5	
1234678-HpCDD	2.51			J	ES 1234678-HpCDD	106	
OCDD	EMPC		43.5	J	ES OCDD	94.2	
2378-TCDF	EMPC		3.67	J	ES 2378-TCDF	97.1	
12378-PeCDF	ND	0.908			ES 12378-PeCDF	116	
23478-PeCDF	ND	0.872			ES 23478-PeCDF	115	
123478-HxCDF	ND	1.02			ES 123478-HxCDF	79.6	
123678-HxCDF	ND	1.02			ES 123678-HxCDF	76.1	
234678-HxCDF	ND	0.984			ES 234678-HxCDF	80.5	
123789-HxCDF	ND	1.18			ES 123789-HxCDF	87.1	
1234678-HpCDF	ND	0.803			ES 1234678-HpCDF	98.3	
1234789-HpCDF	ND	0.965			ES 1234789-HpCDF	101	
OCDF	3.37			J	ES OCDF	88.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.3	
Total TCDD	ND	1.57	ND		CS 12347-PeCDD	126	
Total PeCDD	ND	1.18	ND		CS 12346-PeCDF	114	
Total HxCDD	ND	1.2	ND		CS 123469-HxCDF	83.3	
Total HpCDD	2.51		7.1		CS 1234689-HpCDF	103	
Total TCDF	ND		3.67				
Total PeCDF	ND	0.89	ND				
Total HxCDF	ND	1.05	ND				
Total HpCDF	ND	0.877	ND				
Total PCDD/Fs	**5.88**		**57.6**				
WHO-2005 TEQs							
TEQ: ND=0	0.0261		0.406				
TEQ: ND=DL/2	1.95	1.98	2.33				
TEQ: ND=DL	3.87	3.97	4.25				

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Sample ID: 12599404-120222-S-MTK-WC-19 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.12 L	Lab Sample ID:	B7410_19730_DF_006	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:25:14

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(1.57)		12479/12468D	(1.18)		124679/124689D	(1.2)		1234679D	[4.58]	J
1379D	(1.57)		12469D	(1.18)		123468D	(1.2)		1234678D	2.51	J
1369D	(1.57)		12368D	(1.18)		123679/123689D	(1.2)				
1469D	(1.57)		12478D	(1.18)		123469D	(1.2)				
1247D...[4]	(1.57)		12379D	(1.18)		123478D	(1.15)				
1378D	(1.57)		12369D...[3]	(1.18)		123678D	(1.25)				
1268D	(1.57)		12346/12347D	(1.18)		123467D	(1.2)				
1478D	(1.57)		12378D	(1.18)		123789D	(1.22)		**Conc.**	2.51	
1279D	(1.57)		12367D	(1.18)					**EMPC**	7.1	
1234/1269D	(1.57)		12389D	(1.18)							
1236D	(1.57)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(1.57)										
1239D	(1.57)								OCDD	[43.5]	J
2378D	(1.57)										
1278D	(1.57)										
1267D	(1.57)										
1289D	(1.57)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0261	0.406
TEQ: ND=DL/2	1.95	2.33
TEQ: ND=DL	3.87	4.25

	Conc.	EMPC
Total PCDD/Fs	5.88	57.6

Checkcode: 561-527-CYQ

Report Created: 04-Jan-2023 14:04 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-19 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.12 L	Lab Sample ID:	B7410_19730_DF_006	Date Extracted:	22-Dec-2022
Date Collected:	02-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:25:14

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.11)		13468/12468F	(0.99)		123468F	(1.05)		1234678F	(0.803)	
1468F	(1.11)		13678F...[3]	(0.89)		124678/134678F	(1.05)		1234679F	(0.877)	
2468F	(1.11)		12368F...[3]	(0.89)		134679F	(1.05)		1234689F	(0.877)	
1346/1246F	(1.11)		14678F	(0.89)		124679F	(1.05)		1234789F	(0.965)	
1347F...[3]	(1.11)		13479F	(0.89)		124689F	(1.05)				
1348F	(1.11)		13469/12479F	(0.89)		123467F	(1.05)				
1248F...[3]	(1.11)		12346F	(0.89)		123478F	(1.02)				
1268F	(1.11)		23468/12469F	(0.89)		123678F	(1.02)				
1467F	(1.11)		12347F	(0.89)		123479F	(1.05)				
1478F	(1.11)		12348F	(0.89)		123469F	(1.05)				
1369/1237F	(1.11)		12378F	(0.908)		123679F	(1.05)				
2467F	(1.11)		12678/12367F	(0.89)		234678F	(0.984)		**Conc.**	0	
2368F	(1.11)		12379F	(0.89)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.11)		12679F	(0.89)		123689F	(1.05)				
1278F	(1.11)		23467/12369F	(0.89)		123789F	(1.18)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.11)		23478F	(0.872)		123789/123489F	0				
1267F	(1.11)		23478/12489F	0		123489F	(1.05)		OCDF	3.37	J
2346/1249F	(1.11)		12489F	(0.89)							
2347/1279F	(1.11)		12349F	(0.89)							
2348F	(1.11)		12389F	(0.89)							
2378F	[3.67]	J									
2367/3467F	(1.11)										
1269F	(1.11)										
1239F	(1.11)										
1289F	(1.11)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	3.67		**EMPC**	0		**EMPC**	0				

Checkcode: 561-527-CYQ

Report Created: 04-Jan-2023 14:04 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-19 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_006
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.12 L	QC Batch No.:	19730
Date Collected:	02-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 12:25
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(1.57)		1.57	(1.57)	(1.57)	(1.57)
12378-PeCDD	(1.18)		1.18	(0.592)	(1.18)	(1.18)
123478-HxCDD	(1.15)		1.15	(0.115)	(0.115)	(0.115)
123678-HxCDD	(1.25)		1.25	(0.125)	(0.125)	(0.125)
123789-HxCDD	(1.22)		1.22	(0.122)	(0.122)	(0.122)
1234678-HpCDD	2.51	J	0.964	0.0251	0.0251	0.0251
OCDD	[43.5]	J	1.75	[0.0435]	[0.00435]	[0.013]
2378-TCDF	[3.67]	J	1.11	[0.367]	[0.367]	[0.367]
12378-PeCDF	(0.908)		0.908	(0.0454)	(0.0454)	(0.0272)
23478-PeCDF	(0.872)		0.872	(0.436)	(0.436)	(0.262)
123478-HxCDF	(1.02)		1.02	(0.102)	(0.102)	(0.102)
123678-HxCDF	(1.02)		1.02	(0.102)	(0.102)	(0.102)
234678-HxCDF	(0.984)		0.984	(0.0984)	(0.0984)	(0.0984)
123789-HxCDF	(1.18)		1.18	(0.118)	(0.118)	(0.118)
1234678-HpCDF	(0.803)		0.803	(0.00803)	(0.00803)	(0.00803)
1234789-HpCDF	(0.965)		0.965	(0.00965)	(0.00965)	(0.00965)
OCDF	3.37	J	1.46	0.00337	0.000337	0.00101

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TEQ Summaries			
EMPC = 0, ND = 0	0.0285	0.0255	0.0261
EMPC = 0, ND = DL / 2	1.75	2.04	1.95
EMPC = 0, ND = DL	3.47	4.06	3.87
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.439	0.396	0.406
EMPC = EMPC, ND = DL / 2	2.16	2.42	2.33
EMPC = EMPC, ND = DL	3.88	4.43	4.25
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 561-527-CYQ

SGS North America - DF v0.99

Sample ID: 12599404-120222-S-MTK-WC-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	Lab Sample ID	B7410_19730_DF_007	Date Extracted:	22-Dec-2022
Date Collected:	08-Dec-2022	pH:	5	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:12:54

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	3.88			ES 2378-TCDD	88.7	
12378-PeCDD	ND	2.45			ES 12378-PeCDD	110	
123478-HxCDD	ND	2.09			ES 123478-HxCDD	89.5	
123678-HxCDD	ND	2.4			ES 123678-HxCDD	80	
123789-HxCDD	ND	2.23			ES 123789-HxCDD	87.9	
1234678-HpCDD	ND	1.78			ES 1234678-HpCDD	102	
OCDD	13.5			J	ES OCDD	93.4	
2378-TCDF	ND	2.35			ES 2378-TCDF	94.6	
12378-PeCDF	ND	2.22			ES 12378-PeCDF	109	
23478-PeCDF	ND	2.03			ES 23478-PeCDF	108	
123478-HxCDF	ND	1.36			ES 123478-HxCDF	80	
123678-HxCDF	ND	1.35			ES 123678-HxCDF	76.8	
234678-HxCDF	ND	1.39			ES 234678-HxCDF	80.8	
123789-HxCDF	ND	1.58			ES 123789-HxCDF	86	
1234678-HpCDF	ND	1.58			ES 1234678-HpCDF	99.5	
1234789-HpCDF	ND	2.19			ES 1234789-HpCDF	104	
OCDF	ND	2.54			ES OCDF	88.2	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	ND	3.88	ND		CS 12347-PeCDD	131	V
Total PeCDD	ND	2.45	ND		CS 12346-PeCDF	114	
Total HxCDD	ND	2.23	ND		CS 123469-HxCDF	88.3	
Total HpCDD	ND	1.78	ND		CS 1234689-HpCDF	107	
Total TCDF	ND	2.35	ND				
Total PeCDF	ND	2.12	ND				
Total HxCDF	ND	1.41	ND				
Total HpCDF	ND	1.86	ND				
Total PCDD/Fs	**13.5**		**13.5**				
WHO-2005 TEQs							
TEQ: ND=0	0.00404		0.00404				
TEQ: ND=DL/2	4.27	4.27	4.27				
TEQ: ND=DL	8.54	8.54	8.54				

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Sample ID: 12599404-120222-S-MTK-WC-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	Lab Sample ID:	B7410_19730_DF_007	Date Extracted:	22-Dec-2022
Date Collected:	08-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:12:54

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(3.88)		12479/12468D	(2.45)		124679/124689D	(2.23)		1234679D	(1.78)	
1379D	(3.88)		12469D	(2.45)		123468D	(2.23)		1234678D	(1.78)	
1369D	(3.88)		12368D	(2.45)		123679/123689D	(2.23)				
1469D	(3.88)		12478D	(2.45)		123469D	(2.23)				
1247D...[4]	(3.88)		12379D	(2.45)		123478D	(2.09)				
1378D	(3.88)		12369D...[3]	(2.45)		123678D	(2.4)				
1268D	(3.88)		12346/12347D	(2.45)		123467D	(2.23)				
1478D	(3.88)		12378D	(2.45)		123789D	(2.23)		**Conc.**	0	
1279D	(3.88)		12367D	(2.45)					**EMPC**	0	
1234/1269D	(3.88)		12389D	(2.45)							
1236D	(3.88)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(3.88)										
1239D	(3.88)								OCDD	13.5	J
2378D	(3.88)										
1278D	(3.88)										
1267D	(3.88)										
1289D	(3.88)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.00404	0.00404
TEQ: ND=DL/2	4.27	4.27
TEQ: ND=DL	8.54	8.54

	Conc.	EMPC
Total PCDD/Fs	13.5	13.5

Checkcode: 260-065-DNL

Report Created: 04-Jan-2023 14:04 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	Lab Sample ID:	B7410_19730_DF_007	Date Extracted:	22-Dec-2022
Date Collected:	08-Dec-2022	pH:	5	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:12:54

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.35)		13468/12468F	(2.32)		123468F	(1.41)		1234678F	(1.58)	
1468F	(2.35)		13678F...[3]	(2.12)		124678/134678F	(1.41)		1234679F	(1.86)	
2468F	(2.35)		12368F...[3]	(2.12)		134679F	(1.41)		1234689F	(1.86)	
1346/1246F	(2.35)		14678F	(2.12)		124679F	(1.41)		1234789F	(2.19)	
1347F...[3]	(2.35)		13479F	(2.12)		124689F	(1.41)				
1348F	(2.35)		13469/12479F	(2.12)		123467F	(1.41)				
1248F...[3]	(2.35)		12346F	(2.12)		123478F	(1.36)				
1268F	(2.35)		23468/12469F	(2.12)		123678F	(1.35)				
1467F	(2.35)		12347F	(2.12)		123479F	(1.41)				
1478F	(2.35)		12348F	(2.12)		123469F	(1.41)				
1369/1237F	(2.35)		12378F	(2.22)		123679F	(1.41)				
2467F	(2.35)		12678/12367F	(2.12)		234678F	(1.39)		**Conc.**	0	
2368F	(2.35)		12379F	(2.12)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.35)		12679F	(2.12)		123689F	(1.41)				
1278F	(2.35)		23467/12369F	(2.12)		123789F	(1.58)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.35)		23478F	(2.03)		123789/123489F	0				
1267F	(2.35)		23478/12489F	0		123489F	(1.41)		OCDF	(2.54)	
2346/1249F	(2.35)		12489F	(2.12)							
2347/1279F	(2.35)		12349F	(2.12)							
2348F	(2.35)		12389F	(2.12)							
2378F	(2.35)										
2367/3467F	(2.35)										
1269F	(2.35)										
1239F	(2.35)										
1289F	(2.35)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 260-065-DNL

Report Created: 04-Jan-2023 14:04 Analyst: pw

Sample ID: 12599404-120222-S-MTK-WC-TCLP L TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7410_19730_DF_007
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	QC Batch No.:	19730
Date Collected:	08-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 13:12
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(3.88)		3.88	(3.88)	(3.88)	(3.88)
12378-PeCDD	(2.45)		2.45	(1.23)	(2.45)	(2.45)
123478-HxCDD	(2.09)		2.09	(0.209)	(0.209)	(0.209)
123678-HxCDD	(2.4)		2.4	(0.24)	(0.24)	(0.24)
123789-HxCDD	(2.23)		2.23	(0.223)	(0.223)	(0.223)
1234678-HpCDD	(1.78)		1.78	(0.0178)	(0.0178)	(0.0178)
OCDD	13.5	J	2.89	0.0135	0.00135	0.00404
2378-TCDF	(2.35)		2.35	(0.235)	(0.235)	(0.235)
12378-PeCDF	(2.22)		2.22	(0.111)	(0.111)	(0.0665)
23478-PeCDF	(2.03)		2.03	(1.01)	(1.01)	(0.608)
123478-HxCDF	(1.36)		1.36	(0.136)	(0.136)	(0.136)
123678-HxCDF	(1.35)		1.35	(0.135)	(0.135)	(0.135)
234678-HxCDF	(1.39)		1.39	(0.139)	(0.139)	(0.139)
123789-HxCDF	(1.58)		1.58	(0.158)	(0.158)	(0.158)
1234678-HpCDF	(1.58)		1.58	(0.0158)	(0.0158)	(0.0158)
1234789-HpCDF	(2.19)		2.19	(0.0219)	(0.0219)	(0.0219)
OCDF	(2.54)		2.54	(0.00254)	(0.000254)	(0.000763)

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TEQ Summaries			
EMPC = 0, ND = 0	0.0135	0.00135	0.00404
EMPC = 0, ND = DL / 2	3.9	4.5	4.27
EMPC = 0, ND = DL	7.78	8.99	8.54
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.0135	0.00135	0.00404
EMPC = EMPC, ND = DL / 2	3.9	4.5	4.27
EMPC = EMPC, ND = DL	7.78	8.99	8.54
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 260-065-DNL

SGS North America - DF v0.99

Sample ID: Method Blank B7410_19730 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19730_DF_TLX	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:51:59

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	1.68			ES 2378-TCDD	89.9	
12378-PeCDD	ND	1.21			ES 12378-PeCDD	109	
123478-HxCDD	ND	1.09			ES 123478-HxCDD	86.3	
123678-HxCDD	ND	1.13			ES 123678-HxCDD	78.9	
123789-HxCDD	ND	1.1			ES 123789-HxCDD	86.2	
1234678-HpCDD	ND	0.942			ES 1234678-HpCDD	105	
OCDD	ND	1.37			ES OCDD	92.8	
2378-TCDF	ND	1.21			ES 2378-TCDF	91.6	
12378-PeCDF	ND	0.842			ES 12378-PeCDF	106	
23478-PeCDF	ND	0.794			ES 23478-PeCDF	102	
123478-HxCDF	ND	1.31			ES 123478-HxCDF	72.6	
123678-HxCDF	ND	1.14			ES 123678-HxCDF	70.1	
234678-HxCDF	ND	1.4			ES 234678-HxCDF	71.4	
123789-HxCDF	ND	1.58			ES 123789-HxCDF	77.3	
1234678-HpCDF	ND	1.64			ES 1234678-HpCDF	87.3	
1234789-HpCDF	ND	1.82			ES 1234789-HpCDF	93	
OCDF	ND	1.31			ES OCDF	84.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.3	
Total TCDD	ND	1.68	ND		CS 12347-PeCDD	119	
Total PeCDD	ND	1.21	ND		CS 12346-PeCDF	105	
Total HxCDD	ND	1.1	ND		CS 123469-HxCDF	76.1	
Total HpCDD	ND	0.942	ND		CS 1234689-HpCDF	92.4	
Total TCDF	ND	1.21	ND				
Total PeCDF	ND	0.819	ND				
Total HxCDF	ND	1.35	ND				
Total HpCDF	ND	1.72	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	2.1	2.1	2.1				
TEQ: ND=DL	4.19	4.19	4.19				

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Sample ID: Method Blank B7410_19730 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19730_DF_TLX	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:51:59

Tetra-Dioxins	Conc. (pg/L)	Qualifiers
1368D	(1.68)	
1379D	(1.68)	
1369D	(1.68)	
1469D	(1.68)	
1247D...[4]	(1.68)	
1378D	(1.68)	
1268D	(1.68)	
1478D	(1.68)	
1279D	(1.68)	
1234/1269D	(1.68)	
1236D	(1.68)	
1237/1238D	(1.68)	
1239D	(1.68)	
2378D	(1.68)	
1278D	(1.68)	
1267D	(1.68)	
1289D	(1.68)	
Conc.	0	
EMPC	0	

Penta-Dioxins	Conc. (pg/L)	Qualifiers
12479/12468D	(1.21)	
12469D	(1.21)	
12368D	(1.21)	
12478D	(1.21)	
12379D	(1.21)	
12369D...[3]	(1.21)	
12346/12347D	(1.21)	
12378D	(1.21)	
12367D	(1.21)	
12389D	(1.21)	
Conc.	0	
EMPC	0	

Hexa-Dioxins	Conc (pg/L)	Qualifiers
124679/124689D	(1.1)	
123468D	(1.1)	
123679/123689D	(1.1)	
123469D	(1.1)	
123478D	(1.09)	
123678D	(1.13)	
123467D	(1.1)	
123789D	(1.1)	
Conc.	0	
EMPC	0	

Hepta-Dioxins	Conc (pg/L)	Qualifiers
1234679D	(0.942)	
1234678D	(0.942)	
Conc.	0	
EMPC	0	

Octa-Dioxin	Conc (pg/L)	Qualifiers
OCDD	(1.37)	

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	2.1	2.1
TEQ: ND=DL	4.19	4.19

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 815-993-NJV

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: Method Blank B7410_19730 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19730_DF_TLX	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:51:59

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.21)		13468/12468F	(1.15)		123468F	(1.35)		1234678F	(1.64)	
1468F	(1.21)		13678F...[3]	(0.819)		124678/134678F	(1.35)		1234679F	(1.72)	
2468F	(1.21)		12368F...[3]	(0.819)		134679F	(1.35)		1234689F	(1.72)	
1346/1246F	(1.21)		14678F	(0.819)		124679F	(1.35)		1234789F	(1.82)	
1347F...[3]	(1.21)		13479F	(0.819)		124689F	(1.35)				
1348F	(1.21)		13469/12479F	(0.819)		123467F	(1.35)				
1248F...[3]	(1.21)		12346F	(0.819)		123478F	(1.31)				
1268F	(1.21)		23468/12469F	(0.819)		123678F	(1.14)				
1467F	(1.21)		12347F	(0.819)		123479F	(1.35)				
1478F	(1.21)		12348F	(0.819)		123469F	(1.35)				
1369/1237F	(1.21)		12378F	(0.842)		123679F	(1.35)				
2467F	(1.21)		12678/12367F	(0.819)		234678F	(1.4)		**Conc.**	0	
2368F	(1.21)		12379F	(0.819)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.21)		12679F	(0.819)		123689F	(1.35)				
1278F	(1.21)		23467/12369F	(0.819)		123789F	(1.58)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.21)		23478F	(0.794)		123789/123489F	0				
1267F	(1.21)		23478/12489F	0		123489F	(1.35)		OCDF	(1.31)	
2346/1249F	(1.21)		12489F	(0.819)							
2347/1279F	(1.21)		12349F	(0.819)							
2348F	(1.21)		12389F	(0.819)							
2378F	(1.21)										
2367/3467F	(1.21)										
1269F	(1.21)										
1239F	(1.21)										
1289F	(1.21)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 815-993-NJV

Report Created: 04-Jan-2023 14:03 Analyst: pw

Sample ID: Method Blank B7410_19730 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19730_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19730
Date Collected:	n/a	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	04-Jan-2023 06:51
Lab Project No:	B7410	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(1.68)		1.68	(1.68)	(1.68)	(1.68)
12378-PeCDD	(1.21)		1.21	(0.605)	(1.21)	(1.21)
123478-HxCDD	(1.09)		1.09	(0.109)	(0.109)	(0.109)
123678-HxCDD	(1.13)		1.13	(0.113)	(0.113)	(0.113)
123789-HxCDD	(1.1)		1.1	(0.11)	(0.11)	(0.11)
1234678-HpCDD	(0.942)		0.942	(0.00942)	(0.00942)	(0.00942)
OCDD	(1.37)		1.37	(0.00137)	(0.000137)	(0.000411)
2378-TCDF	(1.21)		1.21	(0.121)	(0.121)	(0.121)
12378-PeCDF	(0.842)		0.842	(0.0421)	(0.0421)	(0.0253)
23478-PeCDF	(0.794)		0.794	(0.397)	(0.397)	(0.238)
123478-HxCDF	(1.31)		1.31	(0.131)	(0.131)	(0.131)
123678-HxCDF	(1.14)		1.14	(0.114)	(0.114)	(0.114)
234678-HxCDF	(1.4)		1.4	(0.14)	(0.14)	(0.14)
123789-HxCDF	(1.58)		1.58	(0.158)	(0.158)	(0.158)
1234678-HpCDF	(1.64)		1.64	(0.0164)	(0.0164)	(0.0164)
1234789-HpCDF	(1.82)		1.82	(0.0182)	(0.0182)	(0.0182)
OCDF	(1.31)		1.31	(0.00131)	(0.000131)	(0.000394)

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613; Toll-Free 866 846-8290
www.us.sgs.com

TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	1.88	2.18	2.1
EMPC = 0, ND = DL	3.77	4.37	4.19
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	1.88	2.18	2.1
EMPC = EMPC, ND = DL	3.77	4.37	4.19
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 815-993-NJV

SGS North America - DF v0.99

Sample ID: 0_19730_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19730_DF	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:29:13

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.2				ES 2378-TCDD	92.2	
12378-PeCDD	48.4				ES 12378-PeCDD	119	
123478-HxCDD	50.5				ES 123478-HxCDD	89.4	
123678-HxCDD	55.6				ES 123678-HxCDD	79.1	
123789-HxCDD	52.3				ES 123789-HxCDD	86.5	
1234678-HpCDD	54.2				ES 1234678-HpCDD	92.3	
OCDD	107				ES OCDD	84.5	
2378-TCDF	10.7				ES 2378-TCDF	97	
12378-PeCDF	51.1				ES 12378-PeCDF	120	
23478-PeCDF	54.8				ES 23478-PeCDF	114	
123478-HxCDF	56.7				ES 123478-HxCDF	72.5	
123678-HxCDF	56.2				ES 123678-HxCDF	69.8	
234678-HxCDF	58.3				ES 234678-HxCDF	72.2	
123789-HxCDF	54.9				ES 123789-HxCDF	76	
1234678-HpCDF	58.2				ES 1234678-HpCDF	80.8	
1234789-HpCDF	57				ES 1234789-HpCDF	81.1	
OCDF	112				ES OCDF	71.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	101	
Total TCDD	55.6		55.6		CS 12347-PeCDD	133	
Total PeCDD	72.4		72.4		CS 12346-PeCDF	122	
Total HxCDD	173		173		CS 123469-HxCDF	80.1	
Total HpCDD	67.6		67.6		CS 1234689-HpCDF	90.7	
Total TCDF	59.9		59.9				
Total PeCDF	239		239				
Total HxCDF	369		369				
Total HpCDF	115		115				
Total PCDD/Fs	**1,370**		**1,370**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.335	119				
TEQ: ND=DL	119	0.67	119				

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Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 0_19730_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7410	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19730_DF	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:16:48

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.1				ES 2378-TCDD	86.1	
12378-PeCDD	48.7				ES 12378-PeCDD	113	
123478-HxCDD	52.4				ES 123478-HxCDD	83	
123678-HxCDD	54.2				ES 123678-HxCDD	77.7	
123789-HxCDD	50.9				ES 123789-HxCDD	83.5	
1234678-HpCDD	53.2				ES 1234678-HpCDD	98.3	
OCDD	106				ES OCDD	86.8	
2378-TCDF	10.4				ES 2378-TCDF	92	
12378-PeCDF	51.5				ES 12378-PeCDF	112	
23478-PeCDF	54.6				ES 23478-PeCDF	110	
123478-HxCDF	54.9				ES 123478-HxCDF	69.2	
123678-HxCDF	56				ES 123678-HxCDF	68	
234678-HxCDF	56.5				ES 234678-HxCDF	71.7	
123789-HxCDF	54.9				ES 123789-HxCDF	74.5	
1234678-HpCDF	57.3				ES 1234678-HpCDF	82.5	
1234789-HpCDF	57.6				ES 1234789-HpCDF	83.3	
OCDF	109				ES OCDF	76.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	98.5	
Total TCDD	55.4		55.4		CS 12347-PeCDD	131	
Total PeCDD	73.8		73.8		CS 12346-PeCDF	119	
Total HxCDD	172		172		CS 123469-HxCDF	77.5	
Total HpCDD	65.9		65.9		CS 1234689-HpCDF	96.4	
Total TCDF	60		60				
Total PeCDF	239		239				
Total HxCDF	361		361				
Total HpCDF	115		115				
Total PCDD/Fs	**1,360**		**1,360**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.231	119				
TEQ: ND=DL	119	0.462	119				

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Sample DUP			Method 1613B
Sample ID: 0_19730_OPR001			
Analyte	**OPR1_19730_DF pg/uL**	**OPR2_19730_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	11.2	11.1	0.6%
1,2,3,7,8-PeCDD	48.4	48.7	0.8%
1,2,3,4,7,8-HxCDD	50.5	52.4	3.7%
1,2,3,6,7,8-HxCDD	55.6	54.2	2.6%
1,2,3,7,8,9-HxCDD	52.3	50.9	2.8%
1,2,3,4,6,7,8-HpCDD	54.2	53.2	1.8%
OCDD	107	106	1.0%
2,3,7,8-TCDF	10.7	10.4	2.8%
1,2,3,7,8-PeCDF	51.1	51.5	0.9%
2,3,4,7,8-PeCDF	54.8	54.6	0.4%
1,2,3,4,7,8-HxCDF	56.7	54.9	3.2%
1,2,3,6,7,8-HxCDF	56.2	56	0.4%
2,3,4,6,7,8-HxCDF	58.3	56.5	3.1%
1,2,3,7,8,9-HxCDF	54.9	54.9	0.1%
1,2,3,4,6,7,8-HpCDF	58.2	57.3	1.4%
1,2,3,4,7,8,9-HpCDF	57	57.6	1.0%
OCDF	112	109	2.4%
Totals			
Total TCDD	55.6	55.4	0.4%
Total PeCDD	72.4	73.8	1.8%
Total HxCDD	173	172	0.8%
Total HpCDD	67.6	65.9	2.5%
Total TCDF	59.9	60	0.1%
Total PeCDF	239	239	0.1%
Total HxCDF	369	361	2.1%
Total HpCDF	115	115	0.2%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*10-Dec-22 at 10:32*
AP Project name:	*B7410*
Requested TAT:	*15 business days*
Projected due date:	*4-Jan-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-002625*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120222-S-MTK-WC-26	B7410_001	Leachate	4	250mL amber glass	02-Dec-22	09:00	1.9, 3.1	1, 2	589473693248,589473693259,
12599404-120222-S-MTK-WC-23	B7410_002	Leachate	4	250mL amber glass	02-Dec-22	10:00	1.9, 3.1	1, 2	589473693248,589473693259,
12599404-120222-S-MTK-WC-22	B7410_003	Leachate	4	250mL amber glass	02-Dec-22	11:00	1.9, 3.1	1, 2	589473693248,589473693259,
12599404-120222-S-MTK-WC-21	B7410_004	Leachate	4	250mL amber glass	02-Dec-22	13:15	1.9, 3.1	1, 2	589473693248,589473693259,
12599404-120222-S-MTK-WC-20	B7410_005	Leachate	4	250mL amber glass	02-Dec-22	14:05	1.9, 3.1	1, 2	589473693248,589473693259,
12599404-120222-S-MTK-WC-19	B7410_006	Leachate	4	250mL amber glass	02-Dec-22	15:20	1.9, 3.1	1, 2	589473693248,589473693259,
12599404-120222-S-MTK-WC-TCLP LB	B7410_007	Leachate Blank	2	250mL amber glass	08-Dec-22	n/a	3.1	2	589473693259

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Greg Dickinson *Logged in by: Erin Cropsey-Sjursen* *QC'ed by:* AK 13 Dec 22

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SO

B7410

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SGS CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

FED-EX Tracking # 5915-3592-7256
Bottle Order Control #
SGS Quote #
SGS Job # JD57657

Client / Reporting Information

Company Name: GHD Services Inc
Street Address: 5551 Corporate Blvd # 200
City: Baton Rouge State: LA Zip: 70808
Project Contact: Alice Hupple E-mail: Alice.Hupple@ghd.com
Phone #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-235 3016

Project Information

Project Name: San Jacinto Waste Pits
Street: 18300 Market St
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TCLP Dioxins/Furans 1613B	TCLP Metals 1311/6010C	TCLP Mercury 1311/7470A	TPH	pH Check (Lab Use Only)	LAB USE ONLY
1	12599404-120222-S-MTK-WC26		12/02/22	0900	MTK	C		S	2	B				3	2			X	X	X	X		150
2	-WC23			1000	MTK	C		S	1	B				3				X	X	X	X		
3	-WC22			1100	MTK	C		S	1	B				3				X	X	X	X		
4	-WC21			1315	MTK	C		S	1	B				3				X	X	X	X		
5	-WC20			1405	MTK	C		S	1	B				3				X	X	X	X		
6	-WC-19			1520	MTK	C		S	1	B				3				X	X	X	X		
	Temp Blank																						

Turn Around Time (Business Days)

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

Approved By (SGS PM) / Date: NA (2B)

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

See SOW
Normal TAT
TPH collected in bulk jar, not per TNRCC Method

http://www.sgs.com/en/terms-and-conditions

*Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	12-2-22/1700	1 Fed Ex	2 Fed Ex	12/3/22 0730	2
3		3	4		4
5		5	Custody Seal #	Therm ID:	Cooler Temp. °C: 4.4

Intact / Not Intact / Absent / On Ice / See Sample Receipt Summary

B7410 1/2

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD56572X

Client / Reporting Information

Company Name:
Street Address
City State Zip
Project Contact E-mail: Kelly.Ramos@sgs.com
Phone #
Sampler(s) Name(s) Phone: MTK

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street
City State
Project #
Client Purchase Order #
Project Manager

Billing Information (if different from Report to)
Company Name
Street Address
City State Zip
Attention:

Requested Analysis

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	Dioxin/furans - leachate bottles!	LAB USE ONLY
1A	12599404-120222-S-MTK-WC-26		12/2/22	9:00:00 AM	MTK	SO										X	
2A	12599404-120222-S-MTK-WC-23		12/2/22	10:00:00 AM	MTK	SO										X	
3A	12599404-120222-S-MTK-WC-22		12/2/22	11:00:00 AM	MTK	SO										X	
4A	12599404-120222-S-MTK-WC-21		12/2/22	1:15:00 PM	MTK	SO										X	
5A	12599404-120222-S-MTK-WC-20		12/2/22	2:05:00 PM	MTK	SO										X	
6A	12599404-120222-S-MTK-WC-19		12/2/22	3:20:00 PM	MTK	SO										X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [x] Other 1/7/1900

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other FULT1

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	12/9	1 Fedex	2 Fed Ex	10:32 12-10-22	2 Gregory Dickman
3		3	4		4
5		5	Custody Seal #	☑ Intact ☐ Not intact ☐ Absent	Preserved where applicable ☑ Therm. ID: IR4 On Ice ☑ Cooler Temp. °C 1.9°C 3.1°C

jd56572x.xls
Rev. Date: 4/10/18

B7410 2/2

Date / Time: 12/8/2022 3:13:28 PM
CSR: KELLYR
Job #: JD56572X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: FULT1
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD56572-1A	12599404-120222-S-MTK-WC-26	Dioxin/furans - leachate bottles!		MTK	12/2/2022	9:00:00 AM	
JD56572-2A	12599404-120222-S-MTK-WC-23	Dioxin/furans - leachate bottles!	TCR	MTK	12/2/2022	10:00:00 AM	
JD56572-3A	12599404-120222-S-MTK-WC-22	Dioxin/furans - leachate bottles!		MTK	12/2/2022	11:00:00 AM	
JD56572-4A	12599404-120222-S-MTK-WC-21	Dioxin/furans - leachate bottles!		MTK	12/2/2022	1:15:00 PM	
JD56572-5A	12599404-120222-S-MTK-WC-20	Dioxin/furans - leachate bottles!		MTK	12/2/2022	2:05:00 PM	
JD56572-6A	12599404-120222-S-MTK-WC-19	Dioxin/furans - leachate bottles!		MTK	12/2/2022	3:20:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: [signature] Date: 12/12/22

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2. **TC Batch ID: TCO769** B7410 1/2

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	4.04		4.00	4.04	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	4.01
PH Buffer														7.00	7.02		7.00	7.02					7.00	7.01
PH Buffer														10.00	10.00		10.00	10.00					10.00	9.99
LB (fluid #1)	N	66	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.73
LB (fluid #2)	N	NA	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	NA
JD55426-1	N	15	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.22	100	100.22	NA	9.60	5 mins	NA	2.93	1	4.93	YES	2004.4	NA	5.34
JD55426-2	N	18	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.58	100	100.58	NA	7.39	5 mins	NA	1.61	1	4.93	YES	2011.6	NA	4.81
JD55426-3	N	19	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.78	100	100.78	NA	7.64	5 mins	NA	1.64	1	4.93	YES	2015.6	NA	5.05
JD55426-4	N	32	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.23	100	100.23	NA	11.15	5 mins	NA	1.91	1	4.93	YES	2004.6	NA	8.70
JD55426-5	N	40	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.58	100	100.58	NA	10.48	5 mins	NA	1.63	1	4.93	YES	2011.6	NA	5.32
JD55426-6	N	48	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.36	100	100.36	NA	9.14	5 mins	NA	1.59	1	4.93	YES	2007.2	NA	4.99
JD56572-1A	N	53	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.11	100	100.11	NA	8.88	5 mins	NA	1.63	1	4.93	YES	2002.2	NA	5.08
JD56572-2A	N	57	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.59	100	100.59	NA	7.81	5 mins	NA	1.51	1	4.93	YES	2011.8	NA	5.37
JD56572-3A	N	59	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.71	100	100.71	NA	8.32	5 mins	NA	1.53	1	4.93	YES	2014.2	NA	5.98
JD56572-4A	N	62	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.24	100	100.24	NA	8.89	5 mins	NA	1.62	1	4.93	YES	2004.8	NA	6.27
PH Buffer														4.00	4.05		2.00	2.05					4.00	4.02
PH Buffer														10.00	10.00		4.00	4.05					10.00	10.00
JD56572-5A	N	64	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.63	100	100.63	NA	9.15	5 mins	NA	1.61	1	4.93	YES	2012.6	NA	5.40
JD56572-6A	N	65	M/E	9	7-Dec-22	8-Dec-22	16:27	8:27	12:27	9:00	100.11	100	100.11	NA	9.21	5 mins	NA	1.68	1	4.93	YES	2002.2	NA	6.36
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.05		2.00	2.05					4.00	4.02
PH Buffer														10.00	10.00		4.00	4.05					7.00	7.01

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____ Set-up analyst: NF Take-down analyst: NF

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

TC Batch ID: TCO769 B7410 2/2

Balance ID: B54

pH meter ID: PH 67

Temperature ranges during leaching. (Must be from 20.5-25.4 °C, and recorded for each leaching period).

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	29-Oct-22
5	29	29-Oct-22
7	28	29-Oct-22
8	NA	22-Apr-21
9	32	29-Oct-22
10	32	29-Oct-22
11	NA	7-Sep-21
12	28	29-Oct-22

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID: 5624720

Expiration: 13-Jul-23

Recorded temperature: 50

Heating time: Start:

End:

Reagent Information	Reagent ID or Manufacturer Lot	Expiration Date
Reagent		
Extraction fluid 1	GNE10-72115-TCLP	15-Dec-2022
Extraction fluid 2	GNE10-72116-TCLP	15-Dec-2022
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE7-70898-TCLP	20-Jan-2023
pH 2 buffer	FISHER 210051	1-Mar-2023
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Sep-2023
pH 10 buffer	FISHER 210276	1-Feb-2023
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jan-2023
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	12/2/2022

B7410

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 09DEC22
ACTWGT: 48.25 LB
CAD: 0692838/CAFE3211

BILL SENDER

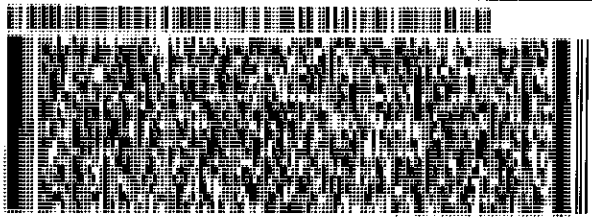
TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

WILMINGTON NC 28405
(910) 794-1613 REF:
INV:
PO: DEPT:

12/10 10:32

1.9oc

551C3/9897/104C



FedEx Express

E

J1811180605010V

1 of 2

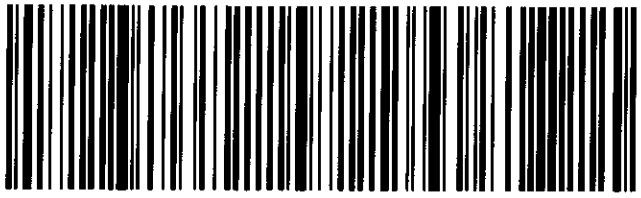
TRK# 0201 5894 7369 3248

MASTER

NO ILMA

SATURDAY 12:00P
PRIORITY OVERNIGHT

28405
NC-US **RDU**



Part # 156148-434 MTW EXP 05/23

B7410

1

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 08DEC22
ACTWGT: 48.25 LB
CAD: 0692838/CAFE3211

BILL SENDER

TO SAMPLE RECEIVING
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

12/10 10:32

WILMINGTON NC 28405

3.1oc

(910) 794-1813 REF:
INV:
PO: DEPT:

FedE
Expr

E

2 of 2

SATURDAY 12:00
PRIORITY OVERNIGH

MPS# 0263 5894 7369 3259
Mstr# 5894 7369 3248 0201

NO ILMA

284(
NC-US RDU

Part # 1981-3-424 MTW EXP 05/23

3
59
0

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120122-S-MTK-WC-1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.68 L	Lab Sample ID	B7413_19705_DF_001	Date Extracted:	12-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	14:21:48

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	128				ES 2378-TCDD	66.8	
12378-PeCDD	ND	3.28			ES 12378-PeCDD	75.4	
123478-HxCDD	ND	4.46			ES 123478-HxCDD	59.1	
123678-HxCDD	ND	5.16			ES 123678-HxCDD	54.3	
123789-HxCDD	ND	4.57			ES 123789-HxCDD	58.2	
1234678-HpCDD	91.3				ES 1234678-HpCDD	68.2	
OCDD	1,380				ES OCDD	55.2	
2378-TCDF	411				ES 2378-TCDF	64	
12378-PeCDF	11.5			J	ES 12378-PeCDF	72.4	
23478-PeCDF	10.5			J	ES 23478-PeCDF	72.5	
123478-HxCDF	EMPC		12.1	J	ES 123478-HxCDF	53.9	
123678-HxCDF	EMPC		5.39	J	ES 123678-HxCDF	52.2	
234678-HxCDF	ND	3.6			ES 234678-HxCDF	54.7	
123789-HxCDF	ND	4.12			ES 123789-HxCDF	60.2	
1234678-HpCDF	66.6				ES 1234678-HpCDF	62.5	
1234789-HpCDF	EMPC		8.62	J	ES 1234789-HpCDF	65	
OCDF	2,370				ES OCDF	55	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	99.7	
Total TCDD	128		139		CS 12347-PeCDD	120	
Total PeCDD	ND	3.28	ND		CS 12346-PeCDF	109	
Total HxCDD	19.1		19.1		CS 123469-HxCDF	83.8	
Total HpCDD	222		222		CS 1234689-HpCDF	96	
Total TCDF	687		790				
Total PeCDF	22		30.4				
Total HxCDF	6.3		50.7				
Total HpCDF	77.4		140				
Total PCDD/Fs	**4,910**		**5,140**				
WHO-2005 TEQs							
TEQ: ND=0	175		177				
TEQ: ND=DL/2	178	6.95	180				
TEQ: ND=DL	181	13.9	183				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 12599404-120122-S-MTK-WC-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.68 L	Lab Sample ID:	B7413_19705_DF_001	Date Extracted:	12-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No.:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	14:21:48

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(5.83)		12479/12468D	(3.28)		124679/124689D	19.1	J	1234679D	131	
1379D	(5.83)		12469D	(3.28)		123468D	(4.72)		1234678D	91.3	
1369D	(5.83)		12368D	(3.28)		123679/123689D	(4.72)				
1469D	(5.83)		12478D	(3.28)		123469D	(4.72)				
1247D...[4]	(5.83)		12379D	(3.28)		123478D	(4.46)				
1378D	(5.83)		12369D...[3]	(3.28)		123678D	(5.16)				
1268D	(5.83)		12346/12347D	(3.28)		123467D	(4.72)				
1478D	(5.83)		12378D	(3.28)		123789D	(4.57)		**Conc.**	222	
1279D	(5.83)		12367D	(3.28)					**EMPC**	222	
1234/1269D	(5.83)		12389D	(3.28)							
1236D	(5.83)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(5.83)									**(pg/L)**	
1239D	(5.83)								OCDD	1380	
2378D	128										
1278D	[11]										
1267D	(5.83)										
1289D	(5.83)										
Conc.	128		**Conc.**	0		**Conc.**	19.1				
EMPC	139		**EMPC**	0		**EMPC**	19.1				

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Wilmington, NC 28405, USA
Tel: +1 910 794-1613
www.us.sgs.com

WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	175	177
TEQ: ND=DL/2	178	180
TEQ: ND=DL	181	183

	Conc.	EMPC
Total PCDD/Fs	4,910	5,140

Checkcode: 972-944-WZQ

Report Created: 15-Dec-2022 15:15 Analyst: pw

Sample ID: 12599404-120122-S-MTK-WC-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.68 L	Lab Sample ID:	B7413_19705_DF_001	Date Extracted:	12-Dec-2022
Date Collected:	01-Dec-2022	pH:	5	QC Batch No.:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	14:21:48

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(6.41)		13468/12468F	(3.61)		123468F	6.3	J	1234678F	66.6	
1468F	(6.41)		13678F...[3]	(3.46)		124678/134678F	[14.2]	J	1234679F	10.8	J
2468F	(6.41)		12368F...[3]	[8.37]	J	134679F	(3.59)		1234689F	[53.9]	
1346/1246F	(6.41)		14678F	(3.46)		124679F	(3.59)		1234789F	[8.62]	J
1347F...[3]	(6.41)		13479F	(3.46)		124689F	[12.8]	J			
1348F	(6.41)		13469/12479F	(3.46)		123467F	(3.59)				
1248F...[3]	[21.6]		12346F	(3.46)		123478F	[12.1]	J			
1268F	[3.66]	J	23468/12469F	(3.46)		123678F	[5.39]	J			
1467F	(6.41)		12347F	(3.46)		123479F	(3.59)				
1478F	26.3		12348F	(3.46)		123469F	(3.59)				
1369/1237F	(6.41)		12378F	11.5	J	123679F	(3.59)				
2467F	(6.41)		12678/12367F	(3.46)		234678F	(3.6)		**Conc.**	77.4	
2368F	[9.68]		12379F	(3.46)		234678/123689F	0		**EMPC**	140	
1238F...[5]	[19.3]		12679F	(3.46)		123689F	(3.59)				
1278F	202		23467/12369F	(3.46)		123789F	(4.12)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(6.41)		23478F	10.5	J	123789/123489F	0			**(pg/L)**	
1267F	11.6		23478/12489F	0		123489F	(3.59)		OCDF	2370	
2346/1249F	(6.41)		12489F	(3.46)							
2347/1279F	(6.41)		12349F	(3.46)							
2348F	[18.4]		12389F	(3.46)							
2378F	411										
2367/3467F	36.4										
1269F	(6.41)										
1239F	(6.41)										
1289F	[30]										
Conc.	687		**Conc.**	22		**Conc.**	6.3				
EMPC	790		**EMPC**	30.4		**EMPC**	50.7				

Checkcode: 972-944-WZQ

Report Created: 15-Dec-2022 15:15 Analyst: pw

Sample ID: 12599404-120122-S-MTK-WC-1 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7413_19705_DF_001
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.68 L	QC Batch No.:	19705
Date Collected:	01-Dec-2022	Split:	-	Date Extracted:	12-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	15-Dec-2022 14:21
Lab Project No:	B7413	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	128		5.83	128	128	128
12378-PeCDD	(3.28)		3.28	(1.64)	(3.28)	(3.28)
123478-HxCDD	(4.46)		4.46	(0.446)	(0.446)	(0.446)
123678-HxCDD	(5.16)		5.16	(0.516)	(0.516)	(0.516)
123789-HxCDD	(4.57)		4.57	(0.457)	(0.457)	(0.457)
1234678-HpCDD	91.3		4.29	0.913	0.913	0.913
OCDD	1380		6.94	1.38	0.138	0.415
2378-TCDF	411		6.41	41.1	41.1	41.1
12378-PeCDF	11.5	J	3.38	0.573	0.573	0.344
23478-PeCDF	10.5	J	3.54	5.26	5.26	3.16
123478-HxCDF	[12.1]	J	3.59	[1.21]	[1.21]	[1.21]
123678-HxCDF	[5.39]	J	3.12	[0.539]	[0.539]	[0.539]
234678-HxCDF	(3.6)		3.6	(0.36)	(0.36)	(0.36)
123789-HxCDF	(4.12)		4.12	(0.412)	(0.412)	(0.412)
1234678-HpCDF	66.6		3.85	0.666	0.666	0.666
1234789-HpCDF	[8.62]	J	4.11	[0.0862]	[0.0862]	[0.0862]
OCDF	2370		5.82	2.37	0.237	0.71

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TEQ Summaries			
EMPC = 0, ND = 0	180	177	175
EMPC = 0, ND = DL / 2	182	180	178
EMPC = 0, ND = DL	184	183	181
EMPC = 0, < J-level = 0	175	171	172
EMPC = EMPC, ND = 0	182	179	177
EMPC = EMPC, ND = DL / 2	184	182	180
EMPC = EMPC, ND = DL	186	184	183
EMPC = EMPC, < J-level = 0	175	171	172

Checkcode: 972-944-WZQ

SGS North America - DF v0.99

Sample ID: 12599404-120122-S-MTK-WC-2 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	Lab Sample ID	B7413_19705_DF_002	Date Extracted:	12-Dec-2022
Date Collected:	01-Dec-2022	pH:	6	QC Batch No:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	15:09:24

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	3.25			ES 2378-TCDD	94.7	
12378-PeCDD	ND	2.39			ES 12378-PeCDD	111	
123478-HxCDD	ND	1.83			ES 123478-HxCDD	85.5	
123678-HxCDD	ND	1.94			ES 123678-HxCDD	77.5	
123789-HxCDD	ND	1.74			ES 123789-HxCDD	87.4	
1234678-HpCDD	EMPC		2.36	J	ES 1234678-HpCDD	97.4	
OCDD	EMPC		41.1	J	ES OCDD	73.9	
2378-TCDF	7.01				ES 2378-TCDF	97.4	
12378-PeCDF	ND	1.6			ES 12378-PeCDF	110	
23478-PeCDF	ND	1.57			ES 23478-PeCDF	109	
123478-HxCDF	ND	1.54			ES 123478-HxCDF	78.7	
123678-HxCDF	ND	1.75			ES 123678-HxCDF	73.1	
234678-HxCDF	ND	1.62			ES 234678-HxCDF	80.5	
123789-HxCDF	ND	2.01			ES 123789-HxCDF	87.2	
1234678-HpCDF	ND	1.38			ES 1234678-HpCDF	87.1	
1234789-HpCDF	ND	1.51			ES 1234789-HpCDF	94.2	
OCDF	29.8			J	ES OCDF	70.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	96.1	
Total TCDD	ND	3.25	ND		CS 12347-PeCDD	120	
Total PeCDD	ND	2.39	ND		CS 12346-PeCDF	111	
Total HxCDD	ND	1.83	ND		CS 123469-HxCDF	79.6	
Total HpCDD	4.6		6.96		CS 1234689-HpCDF	91.1	
Total TCDF	7.01		7.01				
Total PeCDF	ND	1.59	ND				
Total HxCDF	ND	1.72	ND				
Total HpCDF	ND	1.44	ND				
Total PCDD/Fs	**41.4**		**84.9**				
WHO-2005 TEQs							
TEQ: ND=0	0.71		0.745				
TEQ: ND=DL/2	4.43	3.83	4.46				
TEQ: ND=DL	8.14	7.66	8.18				

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Sample ID: 12599404-120122-S-MTK-WC-2 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	Lab Sample ID:	B7413_19705_DF_002	Date Extracted:	12-Dec-2022
Date Collected:	01-Dec-2022	pH:	6	QC Batch No.:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	15:09:24

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(3.25)		12479/12468D	(2.39)		124679/124689D	(1.83)		1234679D	4.6	J
1379D	(3.25)		12469D	(2.39)		123468D	(1.83)		1234678D	[2.36]	J
1369D	(3.25)		12368D	(2.39)		123679/123689D	(1.83)				
1469D	(3.25)		12478D	(2.39)		123469D	(1.83)				
1247D...[4]	(3.25)		12379D	(2.39)		123478D	(1.83)				
1378D	(3.25)		12369D...[3]	(2.39)		123678D	(1.94)				
1268D	(3.25)		12346/12347D	(2.39)		123467D	(1.83)				
1478D	(3.25)		12378D	(2.39)		123789D	(1.74)		**Conc.**	4.6	
1279D	(3.25)		12367D	(2.39)					**EMPC**	6.96	
1234/1269D	(3.25)		12389D	(2.39)							
1236D	(3.25)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(3.25)									**(pg/L)**	
1239D	(3.25)								OCDD	[41.1]	J
2378D	(3.25)										
1278D	(3.25)										
1267D	(3.25)										
1289D	(3.25)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.71	0.745
TEQ: ND=DL/2	4.43	4.46
TEQ: ND=DL	8.14	8.18

	Conc.	EMPC
Total PCDD/Fs	41.4	84.9

Checkcode: 988-753-MQD

Report Created: 15-Dec-2022 15:59 Analyst: pw

Sample ID: 12599404-120122-S-MTK-WC-2 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	10-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	Lab Sample ID:	B7413_19705_DF_002	Date Extracted:	12-Dec-2022
Date Collected:	01-Dec-2022	pH:	6	QC Batch No.:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	15:09:24

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.09)		13468/12468F	(1.96)		123468F	(1.72)		1234678F	(1.38)	
1468F	(2.09)		13678F...[3]	(1.59)		124678/134678F	(1.72)		1234679F	(1.44)	
2468F	(2.09)		12368F...[3]	(1.59)		134679F	(1.72)		1234689F	(1.44)	
1346/1246F	(2.09)		14678F	(1.59)		124679F	(1.72)		1234789F	(1.51)	
1347F...[3]	(2.09)		13479F	(1.59)		124689F	(1.72)				
1348F	(2.09)		13469/12479F	(1.59)		123467F	(1.72)				
1248F...[3]	(2.09)		12346F	(1.59)		123478F	(1.54)				
1268F	(2.09)		23468/12469F	(1.59)		123678F	(1.75)				
1467F	(2.09)		12347F	(1.59)		123479F	(1.72)				
1478F	(2.09)		12348F	(1.59)		123469F	(1.72)				
1369/1237F	(2.09)		12378F	(1.6)		123679F	(1.72)				
2467F	(2.09)		12678/12367F	(1.59)		234678F	(1.62)		**Conc.**	0	
2368F	(2.09)		12379F	(1.59)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.09)		12679F	(1.59)		123689F	(1.72)				
1278F	(2.09)		23467/12369F	(1.59)		123789F	(2.01)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.09)		23478F	(1.57)		123789/123489F	0				
1267F	(2.09)		23478/12489F	0		123489F	(1.72)		OCDF	29.8	J
2346/1249F	(2.09)		12489F	(1.59)							
2347/1279F	(2.09)		12349F	(1.59)							
2348F	(2.09)		12389F	(1.59)							
2378F	7.01										
2367/3467F	(2.09)										
1269F	(2.09)										
1239F	(2.09)										
1289F	(2.09)										
Conc.	7.01		**Conc.**	0		**Conc.**	0				
EMPC	7.01		**EMPC**	0		**EMPC**	0				

Checkcode: 988-753-MQD

Report Created: 15-Dec-2022 15:59 Analyst: pw

Sample ID: 12599404-120122-S-MTK-WC-2 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7413_19705_DF_002
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.01 L	QC Batch No.:	19705
Date Collected:	01-Dec-2022	Split:	-	Date Extracted:	12-Dec-2022
Date Received:	10-Dec-2022	Dilution:	-	Date Analyzed:	15-Dec-2022 15:09
Lab Project No:	B7413	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(3.25)		3.25	(3.25)	(3.25)	(3.25)
12378-PeCDD	(2.39)		2.39	(1.2)	(2.39)	(2.39)
123478-HxCDD	(1.83)		1.83	(0.183)	(0.183)	(0.183)
123678-HxCDD	(1.94)		1.94	(0.194)	(0.194)	(0.194)
123789-HxCDD	(1.74)		1.74	(0.174)	(0.174)	(0.174)
1234678-HpCDD	[2.36]	J	1.47	[0.0236]	[0.0236]	[0.0236]
OCDD	[41.1]	J	4.23	[0.0411]	[0.00411]	[0.0123]
2378-TCDF	7.01		2.09	0.701	0.701	0.701
12378-PeCDF	(1.6)		1.6	(0.0799)	(0.0799)	(0.0479)
23478-PeCDF	(1.57)		1.57	(0.787)	(0.787)	(0.472)
123478-HxCDF	(1.54)		1.54	(0.154)	(0.154)	(0.154)
123678-HxCDF	(1.75)		1.75	(0.175)	(0.175)	(0.175)
234678-HxCDF	(1.62)		1.62	(0.162)	(0.162)	(0.162)
123789-HxCDF	(2.01)		2.01	(0.201)	(0.201)	(0.201)
1234678-HpCDF	(1.38)		1.38	(0.0138)	(0.0138)	(0.0138)
1234789-HpCDF	(1.51)		1.51	(0.0151)	(0.0151)	(0.0151)
OCDF	29.8	J	2.37	0.0298	0.00298	0.00894

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TEQ Summaries			
EMPC = 0, ND = 0	0.73	0.704	0.71
EMPC = 0, ND = DL / 2	4.02	4.59	4.43
EMPC = 0, ND = DL	7.31	8.48	8.14
EMPC = 0, < J-level = 0	0.701	0.701	0.701
EMPC = EMPC, ND = 0	0.795	0.731	0.745
EMPC = EMPC, ND = DL / 2	4.09	4.62	4.46
EMPC = EMPC, ND = DL	7.38	8.51	8.18
EMPC = EMPC, < J-level = 0	0.701	0.701	0.701

Checkcode: 988-753-MQD

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Sample ID: Method Blank B7413_19705 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19705_DF_TLX	Date Extracted:	12-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	13:34:13

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.36			ES 2378-TCDD	96.9	
12378-PeCDD	ND	1.74			ES 12378-PeCDD	111	
123478-HxCDD	ND	1.76			ES 123478-HxCDD	91.7	
123678-HxCDD	ND	1.86			ES 123678-HxCDD	82.4	
123789-HxCDD	ND	1.95			ES 123789-HxCDD	88.7	
1234678-HpCDD	ND	1.43			ES 1234678-HpCDD	104	
OCDD	ND	2.63			ES OCDD	89.3	
2378-TCDF	ND	1.77			ES 2378-TCDF	99.2	
12378-PeCDF	ND	1.26			ES 12378-PeCDF	109	
23478-PeCDF	ND	1.23			ES 23478-PeCDF	107	
123478-HxCDF	ND	1.1			ES 123478-HxCDF	82.7	
123678-HxCDF	ND	1.08			ES 123678-HxCDF	79.7	
234678-HxCDF	ND	1.08			ES 234678-HxCDF	83.7	
123789-HxCDF	ND	1.38			ES 123789-HxCDF	92.9	
1234678-HpCDF	ND	0.944			ES 1234678-HpCDF	96.3	
1234789-HpCDF	ND	1.05			ES 1234789-HpCDF	105	
OCDF	ND	1.48			ES OCDF	83.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.8	
Total TCDD	ND	2.36	ND		CS 12347-PeCDD	118	
Total PeCDD	ND	1.74	ND		CS 12346-PeCDF	106	
Total HxCDD	ND	1.85	ND		CS 123469-HxCDF	81.9	
Total HpCDD	ND	1.43	ND		CS 1234689-HpCDF	98.9	
Total TCDF	ND	1.77	ND				
Total PeCDF	ND	1.25	ND				
Total HxCDF	ND	1.15	ND				
Total HpCDF	ND	0.993	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	2.87	2.87	2.87				
TEQ: ND=DL	5.74	5.74	5.74				

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Sample ID: Method Blank B7413_19705 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19705_DF_TLX	Date Extracted:	12-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	13:34:13

Tetra-Dioxins	Conc. (pg/L)	Qualifiers
1368D	(2.36)	
1379D	(2.36)	
1369D	(2.36)	
1469D	(2.36)	
1247D...[4]	(2.36)	
1378D	(2.36)	
1268D	(2.36)	
1478D	(2.36)	
1279D	(2.36)	
1234/1269D	(2.36)	
1236D	(2.36)	
1237/1238D	(2.36)	
1239D	(2.36)	
2378D	(2.36)	
1278D	(2.36)	
1267D	(2.36)	
1289D	(2.36)	
Conc.	0	
EMPC	0	

Penta-Dioxins	Conc. (pg/L)	Qualifiers
12479/12468D	(1.74)	
12469D	(1.74)	
12368D	(1.74)	
12478D	(1.74)	
12379D	(1.74)	
12369D...[3]	(1.74)	
12346/12347D	(1.74)	
12378D	(1.74)	
12367D	(1.74)	
12389D	(1.74)	
Conc.	0	
EMPC	0	

Hexa-Dioxins	Conc (pg/L)	Qualifiers
124679/124689D	(1.85)	
123468D	(1.85)	
123679/123689D	(1.85)	
123469D	(1.85)	
123478D	(1.76)	
123678D	(1.86)	
123467D	(1.85)	
123789D	(1.95)	
Conc.	0	
EMPC	0	

Hepta-Dioxins	Conc (pg/L)	Qualifiers
1234679D	(1.43)	
1234678D	(1.43)	
Conc.	0	
EMPC	0	

Octa-Dioxin	Conc (pg/L)	Qualifiers
OCDD	(2.63)	

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Wilmington, NC 28405, USA
Tel: +1 910 794-1613
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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	2.87	2.87
TEQ: ND=DL	5.74	5.74

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 991-145-CRM

Report Created: 15-Dec-2022 14:59 Analyst: pw

Sample ID: Method Blank B7413_19705 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19705_DF_TLX	Date Extracted:	12-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	13:34:13

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.77)		13468/12468F	(1.3)		123468F	(1.15)		1234678F	(0.944)	
1468F	(1.77)		13678F...[3]	(1.25)		124678/134678F	(1.15)		1234679F	(0.993)	
2468F	(1.77)		12368F...[3]	(1.25)		134679F	(1.15)		1234689F	(0.993)	
1346/1246F	(1.77)		14678F	(1.25)		124679F	(1.15)		1234789F	(1.05)	
1347F...[3]	(1.77)		13479F	(1.25)		124689F	(1.15)				
1348F	(1.77)		13469/12479F	(1.25)		123467F	(1.15)				
1248F...[3]	(1.77)		12346F	(1.25)		123478F	(1.1)				
1268F	(1.77)		23468/12469F	(1.25)		123678F	(1.08)				
1467F	(1.77)		12347F	(1.25)		123479F	(1.15)				
1478F	(1.77)		12348F	(1.25)		123469F	(1.15)				
1369/1237F	(1.77)		12378F	(1.26)		123679F	(1.15)				
2467F	(1.77)		12678/12367F	(1.25)		234678F	(1.08)		**Conc.**	0	
2368F	(1.77)		12379F	(1.25)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.77)		12679F	(1.25)		123689F	(1.15)				
1278F	(1.77)		23467/12369F	(1.25)		123789F	(1.38)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.77)		23478F	(1.23)		123789/123489F	0				
1267F	(1.77)		23478/12489F	0		123489F	(1.15)		OCDF	(1.48)	
2346/1249F	(1.77)		12489F	(1.25)							
2347/1279F	(1.77)		12349F	(1.25)							
2348F	(1.77)		12389F	(1.25)							
2378F	(1.77)										
2367/3467F	(1.77)										
1269F	(1.77)										
1239F	(1.77)										
1289F	(1.77)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 991-145-CRM

Report Created: 15-Dec-2022 14:59 Analyst: pw

Sample ID: Method Blank B7413_19705 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19705_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19705
Date Collected:	n/a	Split:	-	Date Extracted:	12-Dec-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	15-Dec-2022 13:34
Lab Project No:	B7413	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2.36)		2.36	(2.36)	(2.36)	(2.36)
12378-PeCDD	(1.74)		1.74	(0.871)	(1.74)	(1.74)
123478-HxCDD	(1.76)		1.76	(0.176)	(0.176)	(0.176)
123678-HxCDD	(1.86)		1.86	(0.186)	(0.186)	(0.186)
123789-HxCDD	(1.95)		1.95	(0.195)	(0.195)	(0.195)
1234678-HpCDD	(1.43)		1.43	(0.0143)	(0.0143)	(0.0143)
OCDD	(2.63)		2.63	(0.00263)	(0.000263)	(0.000788)
2378-TCDF	(1.77)		1.77	(0.177)	(0.177)	(0.177)
12378-PeCDF	(1.26)		1.26	(0.0629)	(0.0629)	(0.0377)
23478-PeCDF	(1.23)		1.23	(0.616)	(0.616)	(0.37)
123478-HxCDF	(1.1)		1.1	(0.11)	(0.11)	(0.11)
123678-HxCDF	(1.08)		1.08	(0.108)	(0.108)	(0.108)
234678-HxCDF	(1.08)		1.08	(0.108)	(0.108)	(0.108)
123789-HxCDF	(1.38)		1.38	(0.138)	(0.138)	(0.138)
1234678-HpCDF	(0.944)		0.944	(0.00944)	(0.00944)	(0.00944)
1234789-HpCDF	(1.05)		1.05	(0.0105)	(0.0105)	(0.0105)
OCDF	(1.48)		1.48	(0.00148)	(0.000148)	(0.000444)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	2.57	3.01	2.87
EMPC = 0, ND = DL	5.15	6.01	5.74
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	2.57	3.01	2.87
EMPC = EMPC, ND = DL	5.15	6.01	5.74
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 991-145-CRM

SGS North America - DF v0.99

Sample ID: 0_19705_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19705_DF	Date Extracted:	12-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	11:12:21

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.3				ES 2378-TCDD	95.3	
12378-PeCDD	46.2				ES 12378-PeCDD	109	
123478-HxCDD	51.4				ES 123478-HxCDD	87.4	
123678-HxCDD	55				ES 123678-HxCDD	80.3	
123789-HxCDD	52.3				ES 123789-HxCDD	83	
1234678-HpCDD	55.3				ES 1234678-HpCDD	94.2	
OCDD	110				ES OCDD	75.3	
2378-TCDF	11				ES 2378-TCDF	97.3	
12378-PeCDF	53.7				ES 12378-PeCDF	106	
23478-PeCDF	55.8				ES 23478-PeCDF	107	
123478-HxCDF	57.1				ES 123478-HxCDF	76.5	
123678-HxCDF	56.8				ES 123678-HxCDF	71.9	
234678-HxCDF	60.1				ES 234678-HxCDF	76.7	
123789-HxCDF	56.3				ES 123789-HxCDF	83.2	
1234678-HpCDF	58.8				ES 1234678-HpCDF	85.5	
1234789-HpCDF	57.9				ES 1234789-HpCDF	90.2	
OCDF	108				ES OCDF	74.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	98.3	
Total TCDD	53		53		CS 12347-PeCDD	119	
Total PeCDD	69		69		CS 12346-PeCDF	109	
Total HxCDD	173		173		CS 123469-HxCDF	79	
Total HpCDD	68.9		68.9		CS 1234689-HpCDF	91	
Total TCDF	60.5		60.5				
Total PeCDF	258		258				
Total HxCDF	378		378				
Total HpCDF	117		117				
Total PCDD/Fs	**1,400**		**1,400**				
WHO-2005 TEQs							
TEQ: ND=0	118		118				
TEQ: ND=DL/2	118	0.25	118				
TEQ: ND=DL	118	0.5	118				

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Wilmington, NC 28405, USA
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Sample ID: 0_19705_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7413	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19705_DF	Date Extracted:	12-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19705	Date Analyzed:	15-Dec-2022
		Split:	-	Dilution:	-	Time Analyzed:	11:59:01

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	10.7				ES 2378-TCDD	97.2	
12378-PeCDD	46.7				ES 12378-PeCDD	109	
123478-HxCDD	50.8				ES 123478-HxCDD	91.3	
123678-HxCDD	53.5				ES 123678-HxCDD	85.5	
123789-HxCDD	52.8				ES 123789-HxCDD	87.3	
1234678-HpCDD	54.4				ES 1234678-HpCDD	95.4	
OCDD	105				ES OCDD	77.4	
2378-TCDF	11.4				ES 2378-TCDF	94.8	
12378-PeCDF	51.4				ES 12378-PeCDF	106	
23478-PeCDF	56				ES 23478-PeCDF	105	
123478-HxCDF	56.4				ES 123478-HxCDF	79.8	
123678-HxCDF	55.9				ES 123678-HxCDF	76.4	
234678-HxCDF	59				ES 234678-HxCDF	79.8	
123789-HxCDF	55				ES 123789-HxCDF	85	
1234678-HpCDF	57.4				ES 1234678-HpCDF	86.5	
1234789-HpCDF	56.4				ES 1234789-HpCDF	93.3	
OCDF	104				ES OCDF	75.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	51.9		51.9		CS 12347-PeCDD	124	
Total PeCDD	70.5		70.5		CS 12346-PeCDF	107	
Total HxCDD	172		172		CS 123469-HxCDF	82.7	
Total HpCDD	66.9		66.9		CS 1234689-HpCDF	94.7	
Total TCDF	60.9		60.9				
Total PeCDF	254		254				
Total HxCDF	373		373				
Total HpCDF	114		114				
Total PCDD/Fs	**1,370**		**1,370**				
WHO-2005 TEQs							
TEQ: ND=0	117		117				
TEQ: ND=DL/2	117	0.304	117				
TEQ: ND=DL	117	0.607	117				

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Sample DUP

Method 1613B

Sample ID: 0_19705_OPR001

Analyte	OPR1_19705_DF pg/uL	OPR2_19705_DF (DUP) pg/uL	RPD
2,3,7,8-TCDD	11.3	10.7	5.2%
1,2,3,7,8-PeCDD	46.2	46.7	1.2%
1,2,3,4,7,8-HxCDD	51.4	50.8	1.1%
1,2,3,6,7,8-HxCDD	55	53.5	2.7%
1,2,3,7,8,9-HxCDD	52.3	52.8	0.9%
1,2,3,4,6,7,8-HpCDD	55.3	54.4	1.6%
OCDD	110	105	4.7%
2,3,7,8-TCDF	11	11.4	3.3%
1,2,3,7,8-PeCDF	53.7	51.4	4.5%
2,3,4,7,8-PeCDF	55.8	56	0.4%
1,2,3,4,7,8-HxCDF	57.1	56.4	1.2%
1,2,3,6,7,8-HxCDF	56.8	55.9	1.6%
2,3,4,6,7,8-HxCDF	60.1	59	2.0%
1,2,3,7,8,9-HxCDF	56.3	55	2.5%
1,2,3,4,6,7,8-HpCDF	58.8	57.4	2.4%
1,2,3,4,7,8,9-HpCDF	57.9	56.4	2.7%
OCDF	108	104	3.8%
Totals			
Total TCDD	53	51.9	2.1%
Total PeCDD	69	70.5	2.2%
Total HxCDD	173	172	0.7%
Total HpCDD	68.9	66.9	2.9%
Total TCDF	60.5	60.9	0.6%
Total PeCDF	258	254	1.5%
Total HxCDF	378	373	1.3%
Total HpCDF	117	114	2.5%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*10-Dec-22 at 10:32*
AP Project name:	*B7413*
Requested TAT:	*3 business days*
Projected due date:	*15-Dec-22*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-002625*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120122-S-MTK-WC-1	B7413_001	leachate	1	1L amber	01-Dec-22	10:30	3.1	1	589473693259
12599404-120122-S-MTK-WC-2	B7413_002	leachate	1	1L amber	01-Dec-22	11:50	3.1	1	589473693259

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Greg Dickinson *Logged in by: Erin Cropsey-Sjursen* *QC'ed by:* AK 12 Dec 22

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SO
SME

B7413

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #
SGS Quote #
Bottle Order Control # 5915-1655-7143
SGS Job # JD 56547

Client / Reporting Information

Company Name: GHD Services Inc
Street Address: 5551 Corporate Blvd #200
City: B. Jan Rouge State: LA Zip: 70808
Project Contact: Alice Harpole E-mail: Alice.Harpole@ghd.com
Phone #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016

Project Information

Project Name: San Jacinto Waste Pits
Street:
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TCLP Dioxins/Furans 1311 1613B	TCLP Metals 1311/6010C	TCLP Mercury 1311/7470A	TPH	LAB USE ONLY
* 1	12599404-120122-S-MTK-WC-1		12/1/22	1030	MTK	C		S	3					3				X	X	X	X	D32
* 2	↓ - ↓ - ↓ - WC-2		↓	1150	MTK	C		S	3					3				X	X	X	X	
3	↓ - ↓ - ↓ - WC-24		↓	1420	MTK	C		S	3					3				X	X	X	X	
4	↓ - ↓ - ↓ - WC-25		↓	1535	MTK	C		S	3					3				X	X	X	X	
	Temp Blank		—	—	—	—		W	1													

pH Check (Lab Use Only)

12-01-2022

Turn Around Time (Business Days)

- ☐ 10 Business Days
- ☒ 5 Business Days See comments
- ☐ 3 Business Days*
- ☐ 2 Business Days*
- ☐ 1 Business Day*
- ☐ Other

All data available via SGS Engage

Approved By (SGS PM) / Date:

* Approval needed for 1-3 BD TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria
- ☐ CT RCP Criteria
- ☐ State Forms
- ☐ EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

- TPH collected in bulk jar, not per TNRCC method
- See SSOW
- 5 Day TAT on WC-1 + WC-2, normal TAT on WC-24 + WC-25

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	12-01-22/17:00	1 FX	2 FY	12/2/22 10:20	2 [signature]
3		3	4		4
5	~~12/12~~ 12/10 10:32	5 [signature]	Custody Seal # ☑ Intact ☐ Not Intact ☐ Absent	Therm ID: IR4 On Ice ☑ See Sample Receipt Summary	Cooler Temp. °C: 3.0

EHSA-QAC-0023-05 Rev.Date:8/5/22

* = included in this project

B7409 ar 12/16/22 B7413

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD56547X

Client / Reporting Information

Company Name:
Street Address:
City State Zip:
Project Contact E-mail: Kelly.Ramos@sgs.com
Phone #:
Sampler(s) Name(s) Phone: MTK

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street:
City State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis

Dioxin/Furans - leachate bottles

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	Dioxin/Furans - leachate bottles	LAB USE ONLY
* 1A	12599404-120122-S-MTK-WC-1		12/1/22	10:30:00 AM	MTK	SO										X	
* 2A	12599404-120122-S-MTK-WC-2		12/1/22	11:50:00 AM	MTK	SO										X	
* 3A	12599404-120122-S-MTK-WC-24		12/1/22	2:20:00 PM	MTK	SO										X	
* 4A	12599404-120122-S-MTK-WC-25		12/1/22	3:35:00 PM	MTK	SO										X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] Other 1/7/1900

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other FULT1

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by: 1	Date / Time: 12/9	Received By: 1 Fedex	Relinquished By: 2 Red Ex	Date / Time: 12-10-22 1033	Received By: 2 Greg Dittman
Relinquished by: 3	Date / Time:	Received By: 3	Relinquished By: 4	Date / Time:	Received By: 4
Relinquished by: 5	Date / Time:	Received By: 5	Custody Seal #	[X] Intact [ ] Not Intact	Preserved where applicable [ ] Absent [X] On Ice [X] Cooler Temp. °C: Therm. ID: IR4 1.9°C 3.1°C

* Samples in this project

~~* = included in this project~~

~~B7409~~ B7413
9K 12/12/22

Date / Time: 12/8/2022 2:39:58 PM
CSR: KELLYR
Job #: JD56547X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: FULT1
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD56547-1A	12599404-120122-S-MTK-WC-1	Dioxin/Furans - leachate bottles!		MTK	12/1/2022	10:30:00 AM	
JD56547-2A	12599404-120122-S-MTK-WC-2	Dioxin/Furans - leachate bottles!	TLLP	MTK	12/1/2022	11:50:00 AM	
JD56547-3A	12599404-120122-S-MTK-WC-24	Dioxin/Furans - leachate bottles!		MTK	12/1/2022	2:20:00 PM	
JD56547-4A	12599404-120122-S-MTK-WC-25	Dioxin/Furans - leachate bottles!		MTK	12/1/2022	3:35:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: Cindy Lin Date: 12/12/22

B7413

~~B7409~~ ECS 12/12/22

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130
DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 08DEC22
ACTWGT: 48.25 LB
CAD: 0682838/CAFE3211

BILL SENDER

TO SAMPLE RECEIVING
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

12/10 10:32

WILMINGTON NC 28405

3.1 oc

(910) 794-1613 REF:
INV:
PO: DEPT:

FedE
Expr

E

2 of 2

SATURDAY 12:00
PRIORITY OVERNIGH

MPS# 0253 5894 7369 3259
Mstr# 5894 7369 3248 0201

NO ILMA

284
NC-US RDU

3
59
04

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120622-S-MTK-WC-16 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	Lab Sample ID	B7421_19742_DF_001	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	19:26:32

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.14			ES 2378-TCDD	88.6	
12378-PeCDD	ND	4.12			ES 12378-PeCDD	89	
123478-HxCDD	ND	3.54			ES 123478-HxCDD	86.1	
123678-HxCDD	ND	3.62			ES 123678-HxCDD	86.3	
123789-HxCDD	ND	2.94			ES 123789-HxCDD	88.5	
1234678-HpCDD	ND	2.42			ES 1234678-HpCDD	84.3	
OCDD	224				ES OCDD	81.1	
2378-TCDF	ND	7.36			ES 2378-TCDF	93.7	
12378-PeCDF	ND	2.77			ES 12378-PeCDF	89.8	
23478-PeCDF	ND	2.76			ES 23478-PeCDF	87	
123478-HxCDF	ND	1.55			ES 123478-HxCDF	88.7	
123678-HxCDF	ND	1.51			ES 123678-HxCDF	91	
234678-HxCDF	ND	1.55			ES 234678-HxCDF	89.4	
123789-HxCDF	ND	1.81			ES 123789-HxCDF	79.4	
1234678-HpCDF	ND	0.976			ES 1234678-HpCDF	85.8	
1234789-HpCDF	ND	1.16			ES 1234789-HpCDF	82.1	
OCDF	ND	3.03			ES OCDF	81.2	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.1	
Total TCDD	ND	6.14	ND		CS 12347-PeCDD	92.9	
Total PeCDD	ND	4.12	ND		CS 12346-PeCDF	91.1	
Total HxCDD	ND	3.35	ND		CS 123469-HxCDF	91.3	
Total HpCDD	ND	2.42	ND		CS 1234689-HpCDF	88.9	
Total TCDF	ND	7.36	ND				
Total PeCDF	ND	2.76	ND				
Total HxCDF	ND	1.59	ND				
Total HpCDF	ND	1.06	ND				
Total PCDD/Fs	**224**		**224**				
WHO-2005 TEQs							
TEQ: ND=0	0.0672		0.0672				
TEQ: ND=DL/2	6.87	6.8	6.87				
TEQ: ND=DL	13.7	13.6	13.7				

SGS
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Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 12599404-120622-S-MTK-WC-16 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	Lab Sample ID:	B7421_19742_DF_001	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	19:26:32

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.14)		12479/12468D	(4.12)		124679/124689D	(3.35)		1234679D	(2.42)	
1379D	(6.14)		12469D	(4.12)		123468D	(3.35)		1234678D	(2.42)	
1369D	(6.14)		12368D	(4.12)		123679/123689D	(3.35)				
1469D	(6.14)		12478D	(4.12)		123469D	(3.35)				
1247D...[4]	(6.14)		12379D	(4.12)		123478D	(3.54)				
1378D	(6.14)		12369D...[3]	(4.12)		123678D	(3.62)				
1268D	(6.14)		12346/12347D	(4.12)		123467D	(3.35)				
1478D	(6.14)		12378D	(4.12)		123789D	(2.94)		**Conc.**	0	
1279D	(6.14)		12367D	(4.12)					**EMPC**	0	
1234/1269D	(6.14)		12389D	(4.12)							
1236D	(6.14)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(6.14)										
1239D	(6.14)								OCDD	224	
2378D	(6.14)										
1278D	(6.14)										
1267D	(6.14)										
1289D	(6.14)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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Tel: +1 910 794-1613
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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0672	0.0672
TEQ: ND=DL/2	6.87	6.87
TEQ: ND=DL	13.7	13.7

	Conc.	EMPC
Total PCDD/Fs	224	224

Checkcode: 682-209-SFM

Report Created: 09-Jan-2023 09:23 Analyst: TF

Sample ID: 12599404-120622-S-MTK-WC-16 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	Lab Sample ID:	B7421_19742_DF_001	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	19:26:32

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(7.36)		13468/12468F	(1.86)		123468F	(1.59)		1234678F	(0.976)	
1468F	(7.36)		13678F...[3]	(2.76)		124678/134678F	(1.59)		1234679F	(1.06)	
2468F	(7.36)		12368F...[3]	(2.76)		134679F	(1.59)		1234689F	(1.06)	
1346/1246F	(7.36)		14678F	(2.76)		124679F	(1.59)		1234789F	(1.16)	
1347F...[3]	(7.36)		13479F	(2.76)		124689F	(1.59)				
1348F	(7.36)		13469/12479F	(2.76)		123467F	(1.59)				
1248F...[3]	(7.36)		12346F	(2.76)		123478F	(1.55)				
1268F	(7.36)		23468/12469F	(2.76)		123678F	(1.51)				
1467F	(7.36)		12347F	(2.76)		123479F	(1.59)				
1478F	(7.36)		12348F	(2.76)		123469F	(1.59)				
1369/1237F	(7.36)		12378F	(2.77)		123679F	(1.59)				
2467F	(7.36)		12678/12367F	(2.76)		234678F	(1.55)		**Conc.**	0	
2368F	(7.36)		12379F	(2.76)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(7.36)		12679F	(2.76)		123689F	(1.59)				
1278F	(7.36)		23467/12369F	(2.76)		123789F	(1.81)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(7.36)		23478F	(2.76)		123789/123489F	0				
1267F	(7.36)		23478/12489F	0		123489F	(1.59)		OCDF	(3.03)	
2346/1249F	(7.36)		12489F	(2.76)							
2347/1279F	(7.36)		12349F	(2.76)							
2348F	(7.36)		12389F	(2.76)							
2378F	(7.36)										
2367/3467F	(7.36)										
1269F	(7.36)										
1239F	(7.36)										
1289F	(7.36)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 682-209-SFM

Report Created: 09-Jan-2023 09:23 Analyst: TF

Sample ID: 12599404-120622-S-MTK-WC-16 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7421_19742_DF_001
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	QC Batch No.:	19742
Date Collected:	06-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	06-Jan-2023 19:26
Lab Project No:	B7421	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.14)		6.14	(6.14)	(6.14)	(6.14)
12378-PeCDD	(4.12)		4.12	(2.06)	(4.12)	(4.12)
123478-HxCDD	(3.54)		3.54	(0.354)	(0.354)	(0.354)
123678-HxCDD	(3.62)		3.62	(0.362)	(0.362)	(0.362)
123789-HxCDD	(2.94)		2.94	(0.294)	(0.294)	(0.294)
1234678-HpCDD	(2.42)		2.42	(0.0242)	(0.0242)	(0.0242)
OCDD	224		2.94	0.224	0.0224	0.0672
2378-TCDF	(7.36)		7.36	(0.736)	(0.736)	(0.736)
12378-PeCDF	(2.77)		2.77	(0.138)	(0.138)	(0.083)
23478-PeCDF	(2.76)		2.76	(1.38)	(1.38)	(0.828)
123478-HxCDF	(1.55)		1.55	(0.155)	(0.155)	(0.155)
123678-HxCDF	(1.51)		1.51	(0.151)	(0.151)	(0.151)
234678-HxCDF	(1.55)		1.55	(0.155)	(0.155)	(0.155)
123789-HxCDF	(1.81)		1.81	(0.181)	(0.181)	(0.181)
1234678-HpCDF	(0.976)		0.976	(0.00976)	(0.00976)	(0.00976)
1234789-HpCDF	(1.16)		1.16	(0.0116)	(0.0116)	(0.0116)
OCDF	(3.03)		3.03	(0.00303)	(0.000303)	(0.000909)

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TEQ Summaries			
EMPC = 0, ND = 0	0.224	0.0224	0.0672
EMPC = 0, ND = DL / 2	6.3	7.13	6.87
EMPC = 0, ND = DL	12.4	14.2	13.7
EMPC = 0, < J-level = 0	0.224	0.0224	0.0672
EMPC = EMPC, ND = 0	0.224	0.0224	0.0672
EMPC = EMPC, ND = DL / 2	6.3	7.13	6.87
EMPC = EMPC, ND = DL	12.4	14.2	13.7
EMPC = EMPC, < J-level = 0	0.224	0.0224	0.0672

Checkcode: 682-209-SFM

SGS North America - DF v0.99

Sample ID: 12599404-120622-S-MTK-WC-15 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	Lab Sample ID	B7421_19742_DF_002-RJ	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	08-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:00:01

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.4			ES 2378-TCDD	95.3	
12378-PeCDD	ND	4.44			ES 12378-PeCDD	99.2	
123478-HxCDD	ND	2.71			ES 123478-HxCDD	99.9	
123678-HxCDD	ND	2.56			ES 123678-HxCDD	97.3	
123789-HxCDD	ND	2.35			ES 123789-HxCDD	98.3	
1234678-HpCDD	ND	2.2			ES 1234678-HpCDD	91.9	
OCDD	EMPC		18.2	J	ES OCDD	79.6	
2378-TCDF	ND	8.53			ES 2378-TCDF	96.7	
12378-PeCDF	ND	2.09			ES 12378-PeCDF	103	
23478-PeCDF	ND	2			ES 23478-PeCDF	99.5	
123478-HxCDF	ND	2.12			ES 123478-HxCDF	101	
123678-HxCDF	ND	1.8			ES 123678-HxCDF	102	
234678-HxCDF	ND	1.99			ES 234678-HxCDF	102	
123789-HxCDF	ND	2.05			ES 123789-HxCDF	97	
1234678-HpCDF	ND	1.64			ES 1234678-HpCDF	101	
1234789-HpCDF	ND	2.4			ES 1234789-HpCDF	88.7	
OCDF	ND	3.73			ES OCDF	79.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91	
Total TCDD	ND	6.4	ND		CS 12347-PeCDD	103	
Total PeCDD	ND	4.44	ND		CS 12346-PeCDF	107	
Total HxCDD	ND	2.53	ND		CS 123469-HxCDF	110	
Total HpCDD	ND	2.2	ND		CS 1234689-HpCDF	100	
Total TCDF	ND	8.53	ND				
Total PeCDF	ND	2.05	ND				
Total HxCDF	ND	1.98	ND				
Total HpCDF	ND	1.98	ND				
Total PCDD/Fs	**ND**		**18.2**				
WHO-2005 TEQs							
TEQ: ND=0	0		0.00546				
TEQ: ND=DL/2	6.99	6.99	6.99				
TEQ: ND=DL	14	14	14				

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Sample ID: 12599404-120622-S-MTK-WC-15 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	Lab Sample ID:	B7421_19742_DF_002-RJ	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	08-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:00:01

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.4)		12479/12468D	(4.44)		124679/124689D	(2.53)		1234679D	(2.2)	
1379D	(6.4)		12469D	(4.44)		123468D	(2.53)		1234678D	(2.2)	
1369D	(6.4)		12368D	(4.44)		123679/123689D	(2.53)				
1469D	(6.4)		12478D	(4.44)		123469D	(2.53)				
1247D...[4]	(6.4)		12379D	(4.44)		123478D	(2.71)				
1378D	(6.4)		12369D...[3]	(4.44)		123678D	(2.56)				
1268D	(6.4)		12346/12347D	(4.44)		123467D	(2.53)				
1478D	(6.4)		12378D	(4.44)		123789D	(2.35)		Conc.	0	
1279D	(6.4)		12367D	(4.44)					EMPC	0	
1234/1269D	(6.4)		12389D	(4.44)							
1236D	(6.4)								Octa-Dioxin	Conc (pg/L)	Qualifiers
1237/1238D	(6.4)										
1239D	(6.4)								OCDD	[18.2]	J
2378D	(6.4)										
1278D	(6.4)										
1267D	(6.4)										
1289D	(6.4)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0.00546
TEQ: ND=DL/2	6.99	6.99
TEQ: ND=DL	14	14

	Conc.	EMPC
Total PCDD/Fs	0	18.2

Checkcode: 542-183-QMS

Report Created: 09-Jan-2023 09:24 Analyst: TF

Sample ID: 12599404-120622-S-MTK-WC-15 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	Lab Sample ID:	B7421_19742_DF_002-RJ	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	08-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:00:01

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(8.53)		13468/12468F	(1.98)		123468F	(1.98)		1234678F	(1.64)	
1468F	(8.53)		13678F...[3]	(2.05)		124678/134678F	(1.98)		1234679F	(1.98)	
2468F	(8.53)		12368F...[3]	(2.05)		134679F	(1.98)		1234689F	(1.98)	
1346/1246F	(8.53)		14678F	(2.05)		124679F	(1.98)		1234789F	(2.4)	
1347F...[3]	(8.53)		13479F	(2.05)		124689F	(1.98)				
1348F	(8.53)		13469/12479F	(2.05)		123467F	(1.98)				
1248F...[3]	(8.53)		12346F	(2.05)		123478F	(2.12)				
1268F	(8.53)		23468/12469F	(2.05)		123678F	(1.8)				
1467F	(8.53)		12347F	(2.05)		123479F	(1.98)				
1478F	(8.53)		12348F	(2.05)		123469F	(1.98)				
1369/1237F	(8.53)		12378F	(2.09)		123679F	(1.98)				
2467F	(8.53)		12678/12367F	(2.05)		234678F	(1.99)		**Conc.**	0	
2368F	(8.53)		12379F	(2.05)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(8.53)		12679F	(2.05)		123689F	(1.98)				
1278F	(8.53)		23467/12369F	(2.05)		123789F	(2.05)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(8.53)		23478F	(2)		123789/123489F	0				
1267F	(8.53)		23478/12489F	0		123489F	(1.98)		OCDF	(3.73)	
2346/1249F	(8.53)		12489F	(2.05)							
2347/1279F	(8.53)		12349F	(2.05)							
2348F	(8.53)		12389F	(2.05)							
2378F	(8.53)										
2367/3467F	(8.53)										
1269F	(8.53)										
1239F	(8.53)										
1289F	(8.53)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 542-183-QMS

Report Created: 09-Jan-2023 09:24 Analyst: TF

Sample ID: 12599404-120622-S-MTK-WC-15 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7421_19742_DF_002-RJ
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.82 L	QC Batch No.:	19742
Date Collected:	06-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	08-Jan-2023 16:00
Lab Project No:	B7421	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.4)		6.4	(6.4)	(6.4)	(6.4)
12378-PeCDD	(4.44)		4.44	(2.22)	(4.44)	(4.44)
123478-HxCDD	(2.71)		2.71	(0.271)	(0.271)	(0.271)
123678-HxCDD	(2.56)		2.56	(0.256)	(0.256)	(0.256)
123789-HxCDD	(2.35)		2.35	(0.235)	(0.235)	(0.235)
1234678-HpCDD	(2.2)		2.2	(0.022)	(0.022)	(0.022)
OCDD	[18.2]	J	3.72	[0.0182]	[0.00182]	[0.00546]
2378-TCDF	(8.53)		8.53	(0.853)	(0.853)	(0.853)
12378-PeCDF	(2.09)		2.09	(0.104)	(0.104)	(0.0626)
23478-PeCDF	(2)		2	(1)	(1)	(0.601)
123478-HxCDF	(2.12)		2.12	(0.212)	(0.212)	(0.212)
123678-HxCDF	(1.8)		1.8	(0.18)	(0.18)	(0.18)
234678-HxCDF	(1.99)		1.99	(0.199)	(0.199)	(0.199)
123789-HxCDF	(2.05)		2.05	(0.205)	(0.205)	(0.205)
1234678-HpCDF	(1.64)		1.64	(0.0164)	(0.0164)	(0.0164)
1234789-HpCDF	(2.4)		2.4	(0.024)	(0.024)	(0.024)
OCDF	(3.73)		3.73	(0.00373)	(0.000373)	(0.00112)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	6.1	7.21	6.99
EMPC = 0, ND = DL	12.2	14.4	14
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.0182	0.00182	0.00546
EMPC = EMPC, ND = DL / 2	6.12	7.21	6.99
EMPC = EMPC, ND = DL	12.2	14.4	14
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 542-183-QMS

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Sample ID: 12599404-120622-S-MTK-WC-14 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.70 L	Lab Sample ID	B7421_19742_DF_003	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	20:59:09

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		11.4		ES 2378-TCDD	96.6	
12378-PeCDD	ND	3.49			ES 12378-PeCDD	96.3	
123478-HxCDD	ND	3.67			ES 123478-HxCDD	93.1	
123678-HxCDD	ND	3.76			ES 123678-HxCDD	93.3	
123789-HxCDD	ND	3.2			ES 123789-HxCDD	94.7	
1234678-HpCDD	16.4			J	ES 1234678-HpCDD	94.7	
OCDD	EMPC		158		ES OCDD	89	
2378-TCDF	51.1				ES 2378-TCDF	95.9	
12378-PeCDF	ND	3.09			ES 12378-PeCDF	91	
23478-PeCDF	ND	2.97			ES 23478-PeCDF	88.5	
123478-HxCDF	3.99			J	ES 123478-HxCDF	96.5	
123678-HxCDF	ND	1.91			ES 123678-HxCDF	98	
234678-HxCDF	ND	2.31			ES 234678-HxCDF	96.7	
123789-HxCDF	ND	2.12			ES 123789-HxCDF	91.6	
1234678-HpCDF	EMPC		6.96	J	ES 1234678-HpCDF	97.7	
1234789-HpCDF	ND	2.09			ES 1234789-HpCDF	93.9	
OCDF	EMPC		94.6		ES OCDF	88.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.9	
Total TCDD	ND		11.4		CS 12347-PeCDD	96.3	
Total PeCDD	ND	3.49	ND		CS 12346-PeCDF	90.3	
Total HxCDD	ND	3.53	ND		CS 123469-HxCDF	97.9	
Total HpCDD	16.4		42.4		CS 1234689-HpCDF	92.4	
Total TCDF	51.1		69.6				
Total PeCDF	ND	3.03	ND				
Total HxCDF	3.99		3.99				
Total HpCDF	ND		12.4				
Total PCDD/Fs	**71.4**		**392**				
WHO-2005 TEQs							
TEQ: ND=0	5.67		17.2				
TEQ: ND=DL/2	8.77	8.24	20.3				
TEQ: ND=DL	11.9	16.5	23.4				

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Sample ID: 12599404-120622-S-MTK-WC-14 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.70 L	Lab Sample ID:	B7421_19742_DF_003	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	20:59:09

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(9.39)		12479/12468D	(3.49)		124679/124689D	(3.53)		1234679D	[26.1]	J
1379D	(9.39)		12469D	(3.49)		123468D	(3.53)		1234678D	16.4	J
1369D	(9.39)		12368D	(3.49)		123679/123689D	(3.53)				
1469D	(9.39)		12478D	(3.49)		123469D	(3.53)				
1247D...[4]	(9.39)		12379D	(3.49)		123478D	(3.67)				
1378D	(9.39)		12369D...[3]	(3.49)		123678D	(3.76)				
1268D	(9.39)		12346/12347D	(3.49)		123467D	(3.53)				
1478D	(9.39)		12378D	(3.49)		123789D	(3.2)		**Conc.**	16.4	
1279D	(9.39)		12367D	(3.49)					**EMPC**	42.4	
1234/1269D	(9.39)		12389D	(3.49)							
1236D	(9.39)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(9.39)									**(pg/L)**	
1239D	(9.39)								OCDD	[158]	
2378D	[11.4]										
1278D	(9.39)										
1267D	(9.39)										
1289D	(9.39)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	11.4		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	5.67	17.2
TEQ: ND=DL/2	8.77	20.3
TEQ: ND=DL	11.9	23.4

	Conc.	EMPC
Total PCDD/Fs	71.4	392

Checkcode: 250-192-CLH

Report Created: 09-Jan-2023 09:24 Analyst: TF

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Sample ID: 12599404-120622-S-MTK-WC-14 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.70 L	Lab Sample ID:	B7421_19742_DF_003	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	20:59:09

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(6.26)		13468/12468F	(3.12)		123468F	(2.1)		1234678F	[6.96]	J
1468F	(6.26)		13678F...[3]	(3.03)		124678/134678F	(2.1)		1234679F	(1.89)	
2468F	(6.26)		12368F...[3]	(3.03)		134679F	(2.1)		1234689F	[5.46]	J
1346/1246F	(6.26)		14678F	(3.03)		124679F	(2.1)		1234789F	(2.09)	
1347F...[3]	(6.26)		13479F	(3.03)		124689F	(2.1)				
1348F	(6.26)		13469/12479F	(3.03)		123467F	(2.1)				
1248F...[3]	(6.26)		12346F	(3.03)		123478F	3.99	J			
1268F	(6.26)		23468/12469F	(3.03)		123678F	(1.91)				
1467F	(6.26)		12347F	(3.03)		123479F	(2.1)				
1478F	(6.26)		12348F	(3.03)		123469F	(2.1)				
1369/1237F	(6.26)		12378F	(3.09)		123679F	(2.1)				
2467F	(6.26)		12678/12367F	(3.03)		234678F	(2.31)		**Conc.**	0	
2368F	(6.26)		12379F	(3.03)		234678/123689F	0		**EMPC**	12.4	
1238F...[5]	(6.26)		12679F	(3.03)		123689F	(2.1)				
1278F	[18.5]		23467/12369F	(3.03)		123789F	(2.12)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(6.26)		23478F	(2.97)		123789/123489F	0			**(pg/L)**	
1267F	(6.26)		23478/12489F	0		123489F	(2.1)		OCDF	[94.6]	
2346/1249F	(6.26)		12489F	(3.03)							
2347/1279F	(6.26)		12349F	(3.03)							
2348F	(6.26)		12389F	(3.03)							
2378F	51.1										
2367/3467F	(6.26)										
1269F	(6.26)										
1239F	(6.26)										
1289F	(6.26)										
Conc.	51.1		**Conc.**	0		**Conc.**	3.99				
EMPC	69.6		**EMPC**	0		**EMPC**	3.99				

Checkcode: 250-192-CLH

Report Created: 09-Jan-2023 09:24 Analyst: TF

Sample ID: 12599404-120622-S-MTK-WC-14 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7421_19742_DF_003
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.70 L	QC Batch No.:	19742
Date Collected:	06-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	06-Jan-2023 20:59
Lab Project No:	B7421	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	[11.4]		9.39	[11.4]	[11.4]	[11.4]
12378-PeCDD	(3.49)		3.49	(1.75)	(3.49)	(3.49)
123478-HxCDD	(3.67)		3.67	(0.367)	(0.367)	(0.367)
123678-HxCDD	(3.76)		3.76	(0.376)	(0.376)	(0.376)
123789-HxCDD	(3.2)		3.2	(0.32)	(0.32)	(0.32)
1234678-HpCDD	16.4	J	3.2	0.164	0.164	0.164
OCDD	[158]		5.17	[0.158]	[0.0158]	[0.0473]
2378-TCDF	51.1		6.26	5.11	5.11	5.11
12378-PeCDF	(3.09)		3.09	(0.155)	(0.155)	(0.0928)
23478-PeCDF	(2.97)		2.97	(1.49)	(1.49)	(0.892)
123478-HxCDF	3.99	J	2.06	0.399	0.399	0.399
123678-HxCDF	(1.91)		1.91	(0.191)	(0.191)	(0.191)
234678-HxCDF	(2.31)		2.31	(0.231)	(0.231)	(0.231)
123789-HxCDF	(2.12)		2.12	(0.212)	(0.212)	(0.212)
1234678-HpCDF	[6.96]	J	1.71	[0.0696]	[0.0696]	[0.0696]
1234789-HpCDF	(2.09)		2.09	(0.0209)	(0.0209)	(0.0209)
OCDF	[94.6]		5.21	[0.0946]	[0.00946]	[0.0284]

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TEQ Summaries			
EMPC = 0, ND = 0	5.67	5.67	5.67
EMPC = 0, ND = DL / 2	8.22	9.1	8.77
EMPC = 0, ND = DL	10.8	12.5	11.9
EMPC = 0, < J-level = 0	5.11	5.11	5.11
EMPC = EMPC, ND = 0	17.4	17.1	17.2
EMPC = EMPC, ND = DL / 2	19.9	20.6	20.3
EMPC = EMPC, ND = DL	22.5	24	23.4
EMPC = EMPC, < J-level = 0	16.7	16.5	16.5

Checkcode: 250-192-CLH

SGS North America - DF v0.99

Sample ID: 12599404-120622-S-MTK-WC-13 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	Lab Sample ID	B7421_19742_DF_004	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	21:45:28

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.82			ES 2378-TCDD	92.8	
12378-PeCDD	ND	3.52			ES 12378-PeCDD	93.8	
123478-HxCDD	ND	4.25			ES 123478-HxCDD	99	
123678-HxCDD	ND	3.95			ES 123678-HxCDD	95.9	
123789-HxCDD	ND	3.33			ES 123789-HxCDD	103	
1234678-HpCDD	ND	3			ES 1234678-HpCDD	98.1	
OCDD	EMPC		38.9	J	ES OCDD	96.1	
2378-TCDF	ND	7.46			ES 2378-TCDF	97.3	
12378-PeCDF	ND	2.53			ES 12378-PeCDF	97.2	
23478-PeCDF	ND	2.71			ES 23478-PeCDF	95.5	
123478-HxCDF	ND	2.11			ES 123478-HxCDF	100	
123678-HxCDF	ND	1.89			ES 123678-HxCDF	99.4	
234678-HxCDF	ND	2.12			ES 234678-HxCDF	104	
123789-HxCDF	ND	2.34			ES 123789-HxCDF	94	
1234678-HpCDF	ND	1.67			ES 1234678-HpCDF	95.2	
1234789-HpCDF	ND	1.73			ES 1234789-HpCDF	94.7	
OCDF	ND	2.93			ES OCDF	94.7	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95	
Total TCDD	ND	6.82	ND		CS 12347-PeCDD	100	
Total PeCDD	ND	3.52	ND		CS 12346-PeCDF	106	
Total HxCDD	ND	3.82	ND		CS 123469-HxCDF	108	
Total HpCDD	ND	3	ND		CS 1234689-HpCDF	104	
Total TCDF	ND	7.46	ND				
Total PeCDF	ND	2.62	ND				
Total HxCDF	ND	2.11	ND				
Total HpCDF	ND	1.7	ND				
Total PCDD/Fs	**ND**		**38.9**				
WHO-2005 TEQs							
TEQ: ND=0	0		0.0117				
TEQ: ND=DL/2	7.02	7.02	7.04				
TEQ: ND=DL	14	14	14.1				

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Sample ID: 12599404-120622-S-MTK-WC-13 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	Lab Sample ID:	B7421_19742_DF_004	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	21:45:28

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.82)		12479/12468D	(3.52)		124679/124689D	(3.82)		1234679D	(3)	
1379D	(6.82)		12469D	(3.52)		123468D	(3.82)		1234678D	(3)	
1369D	(6.82)		12368D	(3.52)		123679/123689D	(3.82)				
1469D	(6.82)		12478D	(3.52)		123469D	(3.82)				
1247D...[4]	(6.82)		12379D	(3.52)		123478D	(4.25)				
1378D	(6.82)		12369D...[3]	(3.52)		123678D	(3.95)				
1268D	(6.82)		12346/12347D	(3.52)		123467D	(3.82)				
1478D	(6.82)		12378D	(3.52)		123789D	(3.33)		Conc.	0	
1279D	(6.82)		12367D	(3.52)					EMPC	0	
1234/1269D	(6.82)		12389D	(3.52)							
1236D	(6.82)								Octa-Dioxin	Conc (pg/L)	Qualifiers
1237/1238D	(6.82)										
1239D	(6.82)								OCDD	[38.9]	J
2378D	(6.82)										
1278D	(6.82)										
1267D	(6.82)										
1289D	(6.82)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0.0117
TEQ: ND=DL/2	7.02	7.04
TEQ: ND=DL	14	14.1

	Conc.	EMPC
Total PCDD/Fs	0	38.9

Checkcode: 359-171-WPT

Report Created: 09-Jan-2023 09:24 Analyst: TF

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Sample ID: 12599404-120622-S-MTK-WC-13 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	Lab Sample ID:	B7421_19742_DF_004	Date Extracted:	29-Dec-2022
Date Collected:	06-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	21:45:28

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(7.46)		13468/12468F	(2.46)		123468F	(2.11)		1234678F	(1.67)	
1468F	(7.46)		13678F...[3]	(2.62)		124678/134678F	(2.11)		1234679F	(1.7)	
2468F	(7.46)		12368F...[3]	(2.62)		134679F	(2.11)		1234689F	(1.7)	
1346/1246F	(7.46)		14678F	(2.62)		124679F	(2.11)		1234789F	(1.73)	
1347F...[3]	(7.46)		13479F	(2.62)		124689F	(2.11)				
1348F	(7.46)		13469/12479F	(2.62)		123467F	(2.11)				
1248F...[3]	(7.46)		12346F	(2.62)		123478F	(2.11)				
1268F	(7.46)		23468/12469F	(2.62)		123678F	(1.89)				
1467F	(7.46)		12347F	(2.62)		123479F	(2.11)				
1478F	(7.46)		12348F	(2.62)		123469F	(2.11)				
1369/1237F	(7.46)		12378F	(2.53)		123679F	(2.11)				
2467F	(7.46)		12678/12367F	(2.62)		234678F	(2.12)		**Conc.**	0	
2368F	(7.46)		12379F	(2.62)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(7.46)		12679F	(2.62)		123689F	(2.11)				
1278F	(7.46)		23467/12369F	(2.62)		123789F	(2.34)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(7.46)		23478F	(2.71)		123789/123489F	0				
1267F	(7.46)		23478/12489F	0		123489F	(2.11)		OCDF	(2.93)	
2346/1249F	(7.46)		12489F	(2.62)							
2347/1279F	(7.46)		12349F	(2.62)							
2348F	(7.46)		12389F	(2.62)							
2378F	(7.46)										
2367/3467F	(7.46)										
1269F	(7.46)										
1239F	(7.46)										
1289F	(7.46)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 359-171-WPT

Report Created: 09-Jan-2023 09:24 Analyst: TF

Sample ID: 12599404-120622-S-MTK-WC-13 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7421_19742_DF_004
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.76 L	QC Batch No.:	19742
Date Collected:	06-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	06-Jan-2023 21:45
Lab Project No:	B7421	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.82)		6.82	(6.82)	(6.82)	(6.82)
12378-PeCDD	(3.52)		3.52	(1.76)	(3.52)	(3.52)
123478-HxCDD	(4.25)		4.25	(0.425)	(0.425)	(0.425)
123678-HxCDD	(3.95)		3.95	(0.395)	(0.395)	(0.395)
123789-HxCDD	(3.33)		3.33	(0.333)	(0.333)	(0.333)
1234678-HpCDD	(3)		3	(0.03)	(0.03)	(0.03)
OCDD	[38.9]	J	3.45	[0.0389]	[0.00389]	[0.0117]
2378-TCDF	(7.46)		7.46	(0.746)	(0.746)	(0.746)
12378-PeCDF	(2.53)		2.53	(0.127)	(0.127)	(0.076)
23478-PeCDF	(2.71)		2.71	(1.36)	(1.36)	(0.814)
123478-HxCDF	(2.11)		2.11	(0.211)	(0.211)	(0.211)
123678-HxCDF	(1.89)		1.89	(0.189)	(0.189)	(0.189)
234678-HxCDF	(2.12)		2.12	(0.212)	(0.212)	(0.212)
123789-HxCDF	(2.34)		2.34	(0.234)	(0.234)	(0.234)
1234678-HpCDF	(1.67)		1.67	(0.0167)	(0.0167)	(0.0167)
1234789-HpCDF	(1.73)		1.73	(0.0173)	(0.0173)	(0.0173)
OCDF	(2.93)		2.93	(0.00293)	(0.000293)	(0.000879)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	6.44	7.32	7.02
EMPC = 0, ND = DL	12.9	14.6	14
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.0389	0.00389	0.0117
EMPC = EMPC, ND = DL / 2	6.48	7.32	7.04
EMPC = EMPC, ND = DL	12.9	14.6	14.1
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 359-171-WPT

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Sample ID: Method Blank B7421_19742 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19742_DF_TLX	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:53:56

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	5.46			ES 2378-TCDD	89	
12378-PeCDD	ND	3.16			ES 12378-PeCDD	99	
123478-HxCDD	ND	2.49			ES 123478-HxCDD	93.8	
123678-HxCDD	ND	2.5			ES 123678-HxCDD	93.9	
123789-HxCDD	ND	2.12			ES 123789-HxCDD	93.5	
1234678-HpCDD	ND	2.27			ES 1234678-HpCDD	89.4	
OCDD	ND	2.93			ES OCDD	90.9	
2378-TCDF	ND	4.79			ES 2378-TCDF	84.7	
12378-PeCDF	ND	2.45			ES 12378-PeCDF	92.2	
23478-PeCDF	ND	2.49			ES 23478-PeCDF	88.1	
123478-HxCDF	ND	2			ES 123478-HxCDF	91.5	
123678-HxCDF	ND	1.94			ES 123678-HxCDF	97.3	
234678-HxCDF	ND	1.97			ES 234678-HxCDF	96.9	
123789-HxCDF	ND	2.27			ES 123789-HxCDF	84.1	
1234678-HpCDF	ND	1.15			ES 1234678-HpCDF	93.9	
1234789-HpCDF	ND	1.45			ES 1234789-HpCDF	80.3	
OCDF	ND	3.51			ES OCDF	83.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88	
Total TCDD	ND	5.46	ND		CS 12347-PeCDD	101	
Total PeCDD	ND	3.16	ND		CS 12346-PeCDF	93.3	
Total HxCDD	ND	2.36	ND		CS 123469-HxCDF	97.8	
Total HpCDD	ND	2.27	ND		CS 1234689-HpCDF	91.1	
Total TCDF	ND	4.79	ND				
Total PeCDF	ND	2.47	ND				
Total HxCDF	ND	2.03	ND				
Total HpCDF	ND	1.28	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	5.75	5.75	5.75				
TEQ: ND=DL	11.5	11.5	11.5				

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Sample ID: Method Blank B7421_19742 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19742_DF_TLX	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:53:56

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(5.46)		12479/12468D	(3.16)		124679/124689D	(2.36)		1234679D	(2.27)	
1379D	(5.46)		12469D	(3.16)		123468D	(2.36)		1234678D	(2.27)	
1369D	(5.46)		12368D	(3.16)		123679/123689D	(2.36)				
1469D	(5.46)		12478D	(3.16)		123469D	(2.36)				
1247D...[4]	(5.46)		12379D	(3.16)		123478D	(2.49)				
1378D	(5.46)		12369D...[3]	(3.16)		123678D	(2.5)				
1268D	(5.46)		12346/12347D	(3.16)		123467D	(2.36)				
1478D	(5.46)		12378D	(3.16)		123789D	(2.12)		**Conc.**	0	
1279D	(5.46)		12367D	(3.16)					**EMPC**	0	
1234/1269D	(5.46)		12389D	(3.16)							
1236D	(5.46)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(5.46)									**(pg/L)**	
1239D	(5.46)								OCDD	(2.93)	
2378D	(5.46)										
1278D	(5.46)										
1267D	(5.46)										
1289D	(5.46)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	5.75	5.75
TEQ: ND=DL	11.5	11.5

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 243-065-BYN

Report Created: 09-Jan-2023 09:23 Analyst: TF

Sample ID: Method Blank B7421_19742 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19742_DF_TLX	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:53:56

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(4.79)		13468/12468F	(2.29)		123468F	(2.03)		1234678F	(1.15)	
1468F	(4.79)		13678F...[3]	(2.47)		124678/134678F	(2.03)		1234679F	(1.28)	
2468F	(4.79)		12368F...[3]	(2.47)		134679F	(2.03)		1234689F	(1.28)	
1346/1246F	(4.79)		14678F	(2.47)		124679F	(2.03)		1234789F	(1.45)	
1347F...[3]	(4.79)		13479F	(2.47)		124689F	(2.03)				
1348F	(4.79)		13469/12479F	(2.47)		123467F	(2.03)				
1248F...[3]	(4.79)		12346F	(2.47)		123478F	(2)				
1268F	(4.79)		23468/12469F	(2.47)		123678F	(1.94)				
1467F	(4.79)		12347F	(2.47)		123479F	(2.03)				
1478F	(4.79)		12348F	(2.47)		123469F	(2.03)				
1369/1237F	(4.79)		12378F	(2.45)		123679F	(2.03)				
2467F	(4.79)		12678/12367F	(2.47)		234678F	(1.97)		**Conc.**	0	
2368F	(4.79)		12379F	(2.47)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(4.79)		12679F	(2.47)		123689F	(2.03)				
1278F	(4.79)		23467/12369F	(2.47)		123789F	(2.27)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(4.79)		23478F	(2.49)		123789/123489F	0				
1267F	(4.79)		23478/12489F	0		123489F	(2.03)		OCDF	(3.51)	
2346/1249F	(4.79)		12489F	(2.47)							
2347/1279F	(4.79)		12349F	(2.47)							
2348F	(4.79)		12389F	(2.47)							
2378F	(4.79)										
2367/3467F	(4.79)										
1269F	(4.79)										
1239F	(4.79)										
1289F	(4.79)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 243-065-BYN

Report Created: 09-Jan-2023 09:23 Analyst: TF

Sample ID: Method Blank B7421_19742 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19742_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19742
Date Collected:	n/a	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	06-Jan-2023 17:53
Lab Project No:	B7421	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(5.46)		5.46	(5.46)	(5.46)	(5.46)
12378-PeCDD	(3.16)		3.16	(1.58)	(3.16)	(3.16)
123478-HxCDD	(2.49)		2.49	(0.249)	(0.249)	(0.249)
123678-HxCDD	(2.5)		2.5	(0.25)	(0.25)	(0.25)
123789-HxCDD	(2.12)		2.12	(0.212)	(0.212)	(0.212)
1234678-HpCDD	(2.27)		2.27	(0.0227)	(0.0227)	(0.0227)
OCDD	(2.93)		2.93	(0.00293)	(0.000293)	(0.00088)
2378-TCDF	(4.79)		4.79	(0.479)	(0.479)	(0.479)
12378-PeCDF	(2.45)		2.45	(0.123)	(0.123)	(0.0736)
23478-PeCDF	(2.49)		2.49	(1.25)	(1.25)	(0.748)
123478-HxCDF	(2)		2	(0.2)	(0.2)	(0.2)
123678-HxCDF	(1.94)		1.94	(0.194)	(0.194)	(0.194)
234678-HxCDF	(1.97)		1.97	(0.197)	(0.197)	(0.197)
123789-HxCDF	(2.27)		2.27	(0.227)	(0.227)	(0.227)
1234678-HpCDF	(1.15)		1.15	(0.0115)	(0.0115)	(0.0115)
1234789-HpCDF	(1.45)		1.45	(0.0145)	(0.0145)	(0.0145)
OCDF	(3.51)		3.51	(0.00351)	(0.000351)	(0.00105)

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613; Toll-Free 866 846-8290
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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	5.24	6.02	5.75
EMPC = 0, ND = DL	10.5	12	11.5
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	5.24	6.02	5.75
EMPC = EMPC, ND = DL	10.5	12	11.5
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 243-065-BYN

SGS North America - DF v0.99

Sample ID: 0_19742_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19742_DF	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:35:36

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.1				ES 2378-TCDD	84.2	
12378-PeCDD	50.1				ES 12378-PeCDD	84.3	
123478-HxCDD	58.9				ES 123478-HxCDD	87.2	
123678-HxCDD	59.1				ES 123678-HxCDD	87.7	
123789-HxCDD	53.3				ES 123789-HxCDD	92.4	
1234678-HpCDD	56.5				ES 1234678-HpCDD	89.2	
OCDD	110				ES OCDD	88.3	
2378-TCDF	11.5				ES 2378-TCDF	87.4	
12378-PeCDF	51.9				ES 12378-PeCDF	87	
23478-PeCDF	54.9				ES 23478-PeCDF	80.7	
123478-HxCDF	52.7				ES 123478-HxCDF	95.1	
123678-HxCDF	53.5				ES 123678-HxCDF	98	
234678-HxCDF	55.4				ES 234678-HxCDF	92.7	
123789-HxCDF	54.7				ES 123789-HxCDF	79.5	
1234678-HpCDF	52.2				ES 1234678-HpCDF	92.5	
1234789-HpCDF	51.2				ES 1234789-HpCDF	88.5	
OCDF	100				ES OCDF	89.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	82.4	
Total TCDD	60		60		CS 12347-PeCDD	91	
Total PeCDD	76.9		76.9		CS 12346-PeCDF	94.8	
Total HxCDD	188		188		CS 123469-HxCDF	97.1	
Total HpCDD	70		70		CS 1234689-HpCDF	97.4	
Total TCDF	66.7		66.7				
Total PeCDF	209		209				
Total HxCDF	347		347				
Total HpCDF	103		103				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	122		122				
TEQ: ND=DL/2	122	0.468	122				
TEQ: ND=DL	122	0.937	122				

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Sample ID: 0_19742_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7421	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19742_DF	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:21:20

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.8				ES 2378-TCDD	89	
12378-PeCDD	50.8				ES 12378-PeCDD	88.8	
123478-HxCDD	56.4				ES 123478-HxCDD	87	
123678-HxCDD	56.9				ES 123678-HxCDD	85.5	
123789-HxCDD	54.7				ES 123789-HxCDD	86.3	
1234678-HpCDD	56.1				ES 1234678-HpCDD	91.5	
OCDD	112				ES OCDD	82.3	
2378-TCDF	10.4				ES 2378-TCDF	87.4	
12378-PeCDF	51.8				ES 12378-PeCDF	87.4	
23478-PeCDF	57.1				ES 23478-PeCDF	80	
123478-HxCDF	53.3				ES 123478-HxCDF	88.6	
123678-HxCDF	51				ES 123678-HxCDF	92.8	
234678-HxCDF	53.8				ES 234678-HxCDF	91.8	
123789-HxCDF	50.9				ES 123789-HxCDF	77.8	
1234678-HpCDF	53.5				ES 1234678-HpCDF	89.3	
1234789-HpCDF	52.6				ES 1234789-HpCDF	84.8	
OCDF	105				ES OCDF	82.9	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	87.6	
Total TCDD	58.3		58.3		CS 12347-PeCDD	88.1	
Total PeCDD	77.6		77.6		CS 12346-PeCDF	88.7	
Total HxCDD	185		185		CS 123469-HxCDF	93.8	
Total HpCDD	68.9		68.9		CS 1234689-HpCDF	92.4	
Total TCDF	63.3		63.3				
Total PeCDF	211		211				
Total HxCDF	342		342				
Total HpCDF	106		106				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	122		122				
TEQ: ND=DL/2	122	0.401	122				
TEQ: ND=DL	122	0.802	122				

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Sample DUP — Method 1613B

Sample ID: 0_19742_OPR001

Analyte	OPR1_19742_DF pg/uL	OPR2_19742_DF (DUP) pg/uL	RPD
2,3,7,8-TCDD	12.1	11.8	2.4%
1,2,3,7,8-PeCDD	50.1	50.8	1.4%
1,2,3,4,7,8-HxCDD	58.9	56.4	4.3%
1,2,3,6,7,8-HxCDD	59.1	56.9	3.8%
1,2,3,7,8,9-HxCDD	53.3	54.7	2.6%
1,2,3,4,6,7,8-HpCDD	56.5	56.1	0.7%
OCDD	110	112	1.6%
2,3,7,8-TCDF	11.5	10.4	10.6%
1,2,3,7,8-PeCDF	51.9	51.8	0.1%
2,3,4,7,8-PeCDF	54.9	57.1	3.9%
1,2,3,4,7,8-HxCDF	52.7	53.3	1.0%
1,2,3,6,7,8-HxCDF	53.5	51	4.7%
2,3,4,6,7,8-HxCDF	55.4	53.8	2.9%
1,2,3,7,8,9-HxCDF	54.7	50.9	7.2%
1,2,3,4,6,7,8-HpCDF	52.2	53.5	2.5%
1,2,3,4,7,8,9-HpCDF	51.2	52.6	2.6%
OCDF	100	105	4.3%
Totals			
Total TCDD	60	58.3	2.8%
Total PeCDD	76.9	77.6	0.9%
Total HxCDD	188	185	1.7%
Total HpCDD	70	68.9	1.5%
Total TCDF	66.7	63.3	5.2%
Total PeCDF	209	211	0.9%
Total HxCDF	347	342	1.2%
Total HpCDF	103	106	2.6%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*15-Dec-22 at 10:33*
AP Project name:	*B7421*
Requested TAT:	*15 business days*
Projected due date:	*9-Jan-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-00265*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120622-S-MTK-WC-16	B7421_001	Leachate	2	1L amber	06-Dec-22	10:40	3.5	1	589473694380
12599404-120622-S-MTK-WC-15	B7421_002	Leachate	2	1L amber	06-Dec-22	13:30	3.5	1	589473694380
12599404-120622-S-MTK-WC-14	B7421_003	Leachate	2	1L amber	06-Dec-22	14:10	3.5	1	589473694380
12599404-120622-S-MTK-WC-13	B7421_004	Leachate	2	1L amber	06-Dec-22	15:15	3.5	1	589473694380

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Erin Cropsey-Sjursen *Logged in by: Erin Cropsey-Sjursen* *QC'ed by:* AK 15 Dec 22

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

B7421 1/2

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD56730X

Client / Reporting Information

Company Name:
Street Address:
City / State / Zip:
Project Contact: Kelly.Ramos@sgs.com | E-mail
Phone #:
Sampler(s) Name(s): MTK | Phone

Project Information

Project Name: SJRWP - PCPSE, Harris County, TX
Street:
City / State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	HOKE	DI Water	MEOH	ENCORE	dioxin/furans - send leachate bottles!	LAB USE ONLY
1A	12599404-120622-S-MTK-WC-16		12/6/22	10:40:00 AM	MTK	SO										X	
2A	12599404-120622-S-MTK-WC-15		12/6/22	1:30:00 PM	MTK	SO										X	
3A	12599404-120622-S-MTK-WC-14		12/6/22	2:10:00 PM	MTK	SO										X	
4A	12599404-120622-S-MTK-WC-13		12/6/22	3:15:00 PM	MTK	SO										X	

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] Other 7/7/1500

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT3 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington with prep paperwork. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:
1	Eddie C	12/13/22 15:33	1
2	Relinquished By:	Date / Time:	Received By: 2
3	Relinquished by:	Date / Time:	Received By: 3
4	Relinquished By:	Date / Time:	Received By: 4
5	Relinquished by:	Date / Time: 12/15 10:33	Received By: 5

16:22
12/14/22

Custody Seal #: | Intact | Not intact | Absent | Preserved where applicable | On Ice | Cooler Temp. °C: 3.5°C | Therm. ID: IR4

jd56730x.xls

B7421 2/2

Date / Time: 12/13/2022 9:59:23 AM
CSR: KELLYR
Job #: JD56730X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD56730-1A	12599404-120622-S-MTK-WC-16	dioxin/furans - send leachate bottles!	SUB	MTK	12/6/2022	10:40:00 AM	
JD56730-2A	12599404-120622-S-MTK-WC-15	dioxin/furans - send leachate bottles!		MTK	12/6/2022	1:30:00 PM	
JD56730-3A	12599404-120622-S-MTK-WC-14	dioxin/furans - send leachate bottles!		MTK	12/6/2022	2:10:00 PM	
JD56730-4A	12599404-120622-S-MTK-WC-13	dioxin/furans - send leachate bottles!		MTK	12/6/2022	3:15:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington with prep paperwork. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: [signature] Date: 12/15/22

ORIGIN ID:ZRPA (732) 328-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 14DEC22
ACTWGT: 48.10 LB
CAD: 0692838/CAFE3211

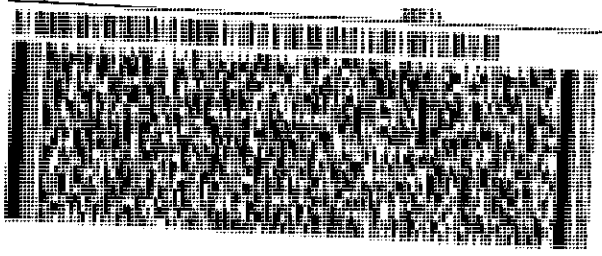
BILL SENDER

TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

12/15 10:33

3.5°C

WILMINGTON NC 28405
(910) 794-1613
INV:
PO:
REF:



FedEx
Express

TRK# 0201 **5894 7369 4380**

THU - 15 DEC 10:30A
PRIORITY OVERNIGHT

G5 ILMA

28405
NC-US **RDU**

Part # 156148-434 MTW EXP 05/23

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120822-S-MTK-WC-4 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	Lab Sample ID	B7422_19754_DF_001	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	6	QC Batch No:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	1:15:23

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.11			ES 2378-TCDD	98.7	
12378-PeCDD	ND	4.07			ES 12378-PeCDD	103	
123478-HxCDD	ND	3.38			ES 123478-HxCDD	92.6	
123678-HxCDD	ND	3.44			ES 123678-HxCDD	92.4	
123789-HxCDD	ND	2.61			ES 123789-HxCDD	95.4	
1234678-HpCDD	EMPC		10.4	J	ES 1234678-HpCDD	91	
OCDD	EMPC		84.8		ES OCDD	73.6	
2378-TCDF	EMPC		7.39		ES 2378-TCDF	104	
12378-PeCDF	ND	2.99			ES 12378-PeCDF	103	
23478-PeCDF	ND	2.73			ES 23478-PeCDF	102	
123478-HxCDF	ND	1.92			ES 123478-HxCDF	98.4	
123678-HxCDF	ND	1.83			ES 123678-HxCDF	98.7	
234678-HxCDF	ND	2.04			ES 234678-HxCDF	94.7	
123789-HxCDF	ND	1.97			ES 123789-HxCDF	93.6	
1234678-HpCDF	7.88			J	ES 1234678-HpCDF	94.8	
1234789-HpCDF	ND	2			ES 1234789-HpCDF	87.3	
OCDF	EMPC		8.32	J	ES OCDF	71.2	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.5	
Total TCDD	ND	6.11	ND		CS 12347-PeCDD	102	
Total PeCDD	ND	4.07	ND		CS 12346-PeCDF	108	
Total HxCDD	ND	3.12	ND		CS 123469-HxCDF	95.8	
Total HpCDD	ND		19.3		CS 1234689-HpCDF	92.7	
Total TCDF	ND		7.39				
Total PeCDF	ND	2.86	ND				
Total HxCDF	ND	1.94	ND				
Total HpCDF	7.88		7.88				
Total PCDD/Fs	**7.88**		**128**				
WHO-2005 TEQs							
TEQ: ND=0	0.0788		0.95				
TEQ: ND=DL/2	6.49	6.77	7.36				
TEQ: ND=DL	12.9	13.5	13.8				

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Sample ID: 12599404-120822-S-MTK-WC-4 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	Lab Sample ID:	B7422_19754_DF_001	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	6	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	1:15:23

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.11)		12479/12468D	(4.07)		124679/124689D	(3.12)		1234679D	[8.9]	J
1379D	(6.11)		12469D	(4.07)		123468D	(3.12)		1234678D	[10.4]	J
1369D	(6.11)		12368D	(4.07)		123679/123689D	(3.12)				
1469D	(6.11)		12478D	(4.07)		123469D	(3.12)				
1247D...[4]	(6.11)		12379D	(4.07)		123478D	(3.38)				
1378D	(6.11)		12369D...[3]	(4.07)		123678D	(3.44)				
1268D	(6.11)		12346/12347D	(4.07)		123467D	(3.12)				
1478D	(6.11)		12378D	(4.07)		123789D	(2.61)		Conc.	0	
1279D	(6.11)		12367D	(4.07)					EMPC	19.3	
1234/1269D	(6.11)		12389D	(4.07)							
1236D	(6.11)								Octa-Dioxin	Conc (pg/L)	Qualifiers
1237/1238D	(6.11)										
1239D	(6.11)								OCDD	[84.8]	
2378D	(6.11)										
1278D	(6.11)										
1267D	(6.11)										
1289D	(6.11)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0788	0.95
TEQ: ND=DL/2	6.49	7.36
TEQ: ND=DL	12.9	13.8

	Conc.	EMPC
Total PCDD/Fs	7.88	128

Checkcode: 114-631-LJT

Report Created: 10-Jan-2023 11:51 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-4 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	Lab Sample ID:	B7422_19754_DF_001	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	6	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	1:15:23

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(6.67)		13468/12468F	(2.21)		123468F	(1.94)		1234678F	7.88	J
1468F	(6.67)		13678F...[3]	(2.86)		124678/134678F	(1.94)		1234679F	(1.72)	
2468F	(6.67)		12368F...[3]	(2.86)		134679F	(1.94)		1234689F	(1.72)	
1346/1246F	(6.67)		14678F	(2.86)		124679F	(1.94)		1234789F	(2)	
1347F...[3]	(6.67)		13479F	(2.86)		124689F	(1.94)				
1348F	(6.67)		13469/12479F	(2.86)		123467F	(1.94)				
1248F...[3]	(6.67)		12346F	(2.86)		123478F	(1.92)				
1268F	(6.67)		23468/12469F	(2.86)		123678F	(1.83)				
1467F	(6.67)		12347F	(2.86)		123479F	(1.94)				
1478F	(6.67)		12348F	(2.86)		123469F	(1.94)				
1369/1237F	(6.67)		12378F	(2.99)		123679F	(1.94)				
2467F	(6.67)		12678/12367F	(2.86)		234678F	(2.04)		**Conc.**	7.88	
2368F	(6.67)		12379F	(2.86)		234678/123689F	0		**EMPC**	7.88	
1238F...[5]	(6.67)		12679F	(2.86)		123689F	(1.94)				
1278F	(6.67)		23467/12369F	(2.86)		123789F	(1.97)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(6.67)		23478F	(2.73)		123789/123489F	0			(pg/L)	
1267F	(6.67)		23478/12489F	0		123489F	(1.94)		OCDF	[8.32]	J
2346/1249F	(6.67)		12489F	(2.86)							
2347/1279F	(6.67)		12349F	(2.86)							
2348F	(6.67)		12389F	(2.86)							
2378F	[7.39]										
2367/3467F	(6.67)										
1269F	(6.67)										
1239F	(6.67)										
1289F	(6.67)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	7.39		**EMPC**	0		**EMPC**	0				

Checkcode: 114-631-LJT

Report Created: 10-Jan-2023 11:51 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-4 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7422_19754_DF_001
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	QC Batch No.:	19754
Date Collected:	08-Dec-2022	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	23-Dec-2022	Dilution:	-	Date Analyzed:	10-Jan-2023 01:15
Lab Project No:	B7422	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.11)		6.11	(6.11)	(6.11)	(6.11)
12378-PeCDD	(4.07)		4.07	(2.03)	(4.07)	(4.07)
123478-HxCDD	(3.38)		3.38	(0.338)	(0.338)	(0.338)
123678-HxCDD	(3.44)		3.44	(0.344)	(0.344)	(0.344)
123789-HxCDD	(2.61)		2.61	(0.261)	(0.261)	(0.261)
1234678-HpCDD	[10.4]	J	2.92	[0.104]	[0.104]	[0.104]
OCDD	[84.8]		6.52	[0.0848]	[0.00848]	[0.0254]
2378-TCDF	[7.39]		6.67	[0.739]	[0.739]	[0.739]
12378-PeCDF	(2.99)		2.99	(0.149)	(0.149)	(0.0896)
23478-PeCDF	(2.73)		2.73	(1.37)	(1.37)	(0.82)
123478-HxCDF	(1.92)		1.92	(0.192)	(0.192)	(0.192)
123678-HxCDF	(1.83)		1.83	(0.183)	(0.183)	(0.183)
234678-HxCDF	(2.04)		2.04	(0.204)	(0.204)	(0.204)
123789-HxCDF	(1.97)		1.97	(0.197)	(0.197)	(0.197)
1234678-HpCDF	7.88	J	1.48	0.0788	0.0788	0.0788
1234789-HpCDF	(2)		2	(0.02)	(0.02)	(0.02)
OCDF	[8.32]	J	4.79	[0.00832]	[0.000832]	[0.0025]

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TEQ Summaries			
EMPC = 0, ND = 0	0.0788	0.0788	0.0788
EMPC = 0, ND = DL / 2	5.78	6.8	6.49
EMPC = 0, ND = DL	11.5	13.5	12.9
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	1.01	0.931	0.95
EMPC = EMPC, ND = DL / 2	6.71	7.65	7.36
EMPC = EMPC, ND = DL	12.4	14.4	13.8
EMPC = EMPC, < J-level = 0	0.824	0.748	0.764

Checkcode: 114-631-LJT

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Sample ID: 12599404-120822-S-MTK-WC-5 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.84 L	Lab Sample ID	B7422_19754_DF_002	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	6	QC Batch No:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	2:01:42

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.2			ES 2378-TCDD	101	
12378-PeCDD	ND	4.44			ES 12378-PeCDD	106	
123478-HxCDD	ND	2.89			ES 123478-HxCDD	95.7	
123678-HxCDD	ND	2.77			ES 123678-HxCDD	96.1	
123789-HxCDD	ND	2.55			ES 123789-HxCDD	94.1	
1234678-HpCDD	ND	2.94			ES 1234678-HpCDD	92.6	
OCDD	89				ES OCDD	77	
2378-TCDF	ND	8.11			ES 2378-TCDF	107	
12378-PeCDF	ND	2.58			ES 12378-PeCDF	107	
23478-PeCDF	ND	2.4			ES 23478-PeCDF	109	
123478-HxCDF	ND	2.12			ES 123478-HxCDF	98.6	
123678-HxCDF	ND	1.94			ES 123678-HxCDF	96.2	
234678-HxCDF	ND	2.18			ES 234678-HxCDF	95.5	
123789-HxCDF	ND	2.19			ES 123789-HxCDF	91.2	
1234678-HpCDF	ND	1.26			ES 1234678-HpCDF	91.4	
1234789-HpCDF	ND	1.59			ES 1234789-HpCDF	89.7	
OCDF	EMPC		7.88	J	ES OCDF	73.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	96.5	
Total TCDD	ND	6.2	ND		CS 12347-PeCDD	105	
Total PeCDD	ND	4.44	ND		CS 12346-PeCDF	110	
Total HxCDD	ND	2.73	ND		CS 123469-HxCDF	99.1	
Total HpCDD	ND		5.82		CS 1234689-HpCDF	93.6	
Total TCDF	ND	8.11	ND				
Total PeCDF	ND	2.49	ND				
Total HxCDF	ND	2.11	ND				
Total HpCDF	ND	1.42	ND				
Total PCDD/Fs	**89**		**103**				
WHO-2005 TEQs							
TEQ: ND=0	0.0267		0.0291				
TEQ: ND=DL/2	7.01	6.99	7.01				
TEQ: ND=DL	14	14	14				

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Sample ID: 12599404-120822-S-MTK-WC-5 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.84 L	Lab Sample ID:	B7422_19754_DF_002	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	2:01:42

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.2)		12479/12468D	(4.44)		124679/124689D	(2.73)		1234679D	[5.82]	J
1379D	(6.2)		12469D	(4.44)		123468D	(2.73)		1234678D	(2.94)	
1369D	(6.2)		12368D	(4.44)		123679/123689D	(2.73)				
1469D	(6.2)		12478D	(4.44)		123469D	(2.73)				
1247D...[4]	(6.2)		12379D	(4.44)		123478D	(2.89)				
1378D	(6.2)		12369D...[3]	(4.44)		123678D	(2.77)				
1268D	(6.2)		12346/12347D	(4.44)		123467D	(2.73)				
1478D	(6.2)		12378D	(4.44)		123789D	(2.55)		**Conc.**	0	
1279D	(6.2)		12367D	(4.44)					**EMPC**	5.82	
1234/1269D	(6.2)		12389D	(4.44)							
1236D	(6.2)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(6.2)										
1239D	(6.2)								OCDD	89	
2378D	(6.2)										
1278D	(6.2)										
1267D	(6.2)										
1289D	(6.2)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0267	0.0291
TEQ: ND=DL/2	7.01	7.01
TEQ: ND=DL	14	14

	Conc.	EMPC
Total PCDD/Fs	89	103

Checkcode: 544-190-WCG

Report Created: 10-Jan-2023 11:52 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-5 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.84 L	Lab Sample ID:	B7422_19754_DF_002	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	2:01:42

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(8.11)		13468/12468F	(2.08)		123468F	(2.11)		1234678F	(1.26)	
1468F	(8.11)		13678F...[3]	(2.49)		124678/134678F	(2.11)		1234679F	(1.42)	
2468F	(8.11)		12368F...[3]	(2.49)		134679F	(2.11)		1234689F	(1.42)	
1346/1246F	(8.11)		14678F	(2.49)		124679F	(2.11)		1234789F	(1.59)	
1347F...[3]	(8.11)		13479F	(2.49)		124689F	(2.11)				
1348F	(8.11)		13469/12479F	(2.49)		123467F	(2.11)				
1248F...[3]	(8.11)		12346F	(2.49)		123478F	(2.12)				
1268F	(8.11)		23468/12469F	(2.49)		123678F	(1.94)				
1467F	(8.11)		12347F	(2.49)		123479F	(2.11)				
1478F	(8.11)		12348F	(2.49)		123469F	(2.11)				
1369/1237F	(8.11)		12378F	(2.58)		123679F	(2.11)				
2467F	(8.11)		12678/12367F	(2.49)		234678F	(2.18)		**Conc.**	0	
2368F	(8.11)		12379F	(2.49)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(8.11)		12679F	(2.49)		123689F	(2.11)				
1278F	(8.11)		23467/12369F	(2.49)		123789F	(2.19)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(8.11)		23478F	(2.4)		123789/123489F	0				
1267F	(8.11)		23478/12489F	0		123489F	(2.11)		OCDF	[7.88]	J
2346/1249F	(8.11)		12489F	(2.49)							
2347/1279F	(8.11)		12349F	(2.49)							
2348F	(8.11)		12389F	(2.49)							
2378F	(8.11)										
2367/3467F	(8.11)										
1269F	(8.11)										
1239F	(8.11)										
1289F	(8.11)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 544-190-WCG

Report Created: 10-Jan-2023 11:52 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-5 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7422_19754_DF_002
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.84 L	QC Batch No.:	19754
Date Collected:	08-Dec-2022	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	23-Dec-2022	Dilution:	-	Date Analyzed:	10-Jan-2023 02:01
Lab Project No:	B7422	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.2)		6.2	(6.2)	(6.2)	(6.2)
12378-PeCDD	(4.44)		4.44	(2.22)	(4.44)	(4.44)
123478-HxCDD	(2.89)		2.89	(0.289)	(0.289)	(0.289)
123678-HxCDD	(2.77)		2.77	(0.277)	(0.277)	(0.277)
123789-HxCDD	(2.55)		2.55	(0.255)	(0.255)	(0.255)
1234678-HpCDD	(2.94)		2.94	(0.0294)	(0.0294)	(0.0294)
OCDD	89		6.13	0.089	0.0089	0.0267
2378-TCDF	(8.11)		8.11	(0.811)	(0.811)	(0.811)
12378-PeCDF	(2.58)		2.58	(0.129)	(0.129)	(0.0775)
23478-PeCDF	(2.4)		2.4	(1.2)	(1.2)	(0.72)
123478-HxCDF	(2.12)		2.12	(0.212)	(0.212)	(0.212)
123678-HxCDF	(1.94)		1.94	(0.194)	(0.194)	(0.194)
234678-HxCDF	(2.18)		2.18	(0.218)	(0.218)	(0.218)
123789-HxCDF	(2.19)		2.19	(0.219)	(0.219)	(0.219)
1234678-HpCDF	(1.26)		1.26	(0.0126)	(0.0126)	(0.0126)
1234789-HpCDF	(1.59)		1.59	(0.0159)	(0.0159)	(0.0159)
OCDF	[7.88]	J	3.87	[0.00788]	[0.000788]	[0.00236]

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TEQ Summaries			
EMPC = 0, ND = 0	0.089	0.0089	0.0267
EMPC = 0, ND = DL / 2	6.23	7.26	7.01
EMPC = 0, ND = DL	12.4	14.5	14
EMPC = 0, < J-level = 0	0.089	0.0089	0.0267
EMPC = EMPC, ND = 0	0.0968	0.00968	0.0291
EMPC = EMPC, ND = DL / 2	6.24	7.26	7.01
EMPC = EMPC, ND = DL	12.4	14.5	14
EMPC = EMPC, < J-level = 0	0.089	0.0089	0.0267

Checkcode: 544-190-WCG

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Sample ID: Method Blank B7422_19754 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19754_DF_TLX	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:42:47

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	4.37			ES 2378-TCDD	91.6	
12378-PeCDD	ND	2.97			ES 12378-PeCDD	97.9	
123478-HxCDD	ND	2.25			ES 123478-HxCDD	99.5	
123678-HxCDD	ND	2.37			ES 123678-HxCDD	96.3	
123789-HxCDD	ND	2.06			ES 123789-HxCDD	93.8	
1234678-HpCDD	ND	1.62			ES 1234678-HpCDD	90.9	
OCDD	ND	3.97			ES OCDD	72.2	
2378-TCDF	ND	3.77			ES 2378-TCDF	94.3	
12378-PeCDF	ND	2.42			ES 12378-PeCDF	98.1	
23478-PeCDF	ND	2.72			ES 23478-PeCDF	99	
123478-HxCDF	ND	1.59			ES 123478-HxCDF	96.4	
123678-HxCDF	ND	1.72			ES 123678-HxCDF	94.4	
234678-HxCDF	ND	1.92			ES 234678-HxCDF	97.1	
123789-HxCDF	ND	1.93			ES 123789-HxCDF	90.8	
1234678-HpCDF	ND	1.04			ES 1234678-HpCDF	95.1	
1234789-HpCDF	ND	1.11			ES 1234789-HpCDF	86.7	
OCDF	ND	3.49			ES OCDF	70	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.2	
Total TCDD	ND	4.37	ND		CS 12347-PeCDD	102	
Total PeCDD	ND	2.97	ND		CS 12346-PeCDF	104	
Total HxCDD	ND	2.22	ND		CS 123469-HxCDF	97.8	
Total HpCDD	ND	1.62	ND		CS 1234689-HpCDF	91.3	
Total TCDF	ND	3.77	ND				
Total PeCDF	ND	2.57	ND				
Total HxCDF	ND	1.79	ND				
Total HpCDF	ND	1.07	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	5.02	5.02	5.02				
TEQ: ND=DL	10	10	10				

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Sample ID: Method Blank B7422_19754 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19754_DF_TLX	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:42:47

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(4.37)		12479/12468D	(2.97)		124679/124689D	(2.22)		1234679D	(1.62)	
1379D	(4.37)		12469D	(2.97)		123468D	(2.22)		1234678D	(1.62)	
1369D	(4.37)		12368D	(2.97)		123679/123689D	(2.22)				
1469D	(4.37)		12478D	(2.97)		123469D	(2.22)				
1247D...[4]	(4.37)		12379D	(2.97)		123478D	(2.25)				
1378D	(4.37)		12369D...[3]	(2.97)		123678D	(2.37)				
1268D	(4.37)		12346/12347D	(2.97)		123467D	(2.22)				
1478D	(4.37)		12378D	(2.97)		123789D	(2.06)		**Conc.**	0	
1279D	(4.37)		12367D	(2.97)					**EMPC**	0	
1234/1269D	(4.37)		12389D	(2.97)							
1236D	(4.37)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(4.37)										
1239D	(4.37)								OCDD	(3.97)	
2378D	(4.37)										
1278D	(4.37)										
1267D	(4.37)										
1289D	(4.37)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	5.02	5.02
TEQ: ND=DL	10	10

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 297-252-TLL

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: Method Blank B7422_19754 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19754_DF_TLX	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:42:47

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(3.77)		13468/12468F	(1.44)		123468F	(1.79)		1234678F	(1.04)	
1468F	(3.77)		13678F...[3]	(2.57)		124678/134678F	(1.79)		1234679F	(1.07)	
2468F	(3.77)		12368F...[3]	(2.57)		134679F	(1.79)		1234689F	(1.07)	
1346/1246F	(3.77)		14678F	(2.57)		124679F	(1.79)		1234789F	(1.11)	
1347F...[3]	(3.77)		13479F	(2.57)		124689F	(1.79)				
1348F	(3.77)		13469/12479F	(2.57)		123467F	(1.79)				
1248F...[3]	(3.77)		12346F	(2.57)		123478F	(1.59)				
1268F	(3.77)		23468/12469F	(2.57)		123678F	(1.72)				
1467F	(3.77)		12347F	(2.57)		123479F	(1.79)				
1478F	(3.77)		12348F	(2.57)		123469F	(1.79)				
1369/1237F	(3.77)		12378F	(2.42)		123679F	(1.79)				
2467F	(3.77)		12678/12367F	(2.57)		234678F	(1.92)		**Conc.**	0	
2368F	(3.77)		12379F	(2.57)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(3.77)		12679F	(2.57)		123689F	(1.79)				
1278F	(3.77)		23467/12369F	(2.57)		123789F	(1.93)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(3.77)		23478F	(2.72)		123789/123489F	0				
1267F	(3.77)		23478/12489F	0		123489F	(1.79)		OCDF	(3.49)	
2346/1249F	(3.77)		12489F	(2.57)							
2347/1279F	(3.77)		12349F	(2.57)							
2348F	(3.77)		12389F	(2.57)							
2378F	(3.77)										
2367/3467F	(3.77)										
1269F	(3.77)										
1239F	(3.77)										
1289F	(3.77)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 297-252-TLL

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: Method Blank B7422_19754 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19754_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19754
Date Collected:	n/a	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	n/a	Dilution:	-	Date Analyzed:	09-Jan-2023 23:42
Lab Project No:	B7422	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(4.37)		4.37	(4.37)	(4.37)	(4.37)
12378-PeCDD	(2.97)		2.97	(1.49)	(2.97)	(2.97)
123478-HxCDD	(2.25)		2.25	(0.225)	(0.225)	(0.225)
123678-HxCDD	(2.37)		2.37	(0.237)	(0.237)	(0.237)
123789-HxCDD	(2.06)		2.06	(0.206)	(0.206)	(0.206)
1234678-HpCDD	(1.62)		1.62	(0.0162)	(0.0162)	(0.0162)
OCDD	(3.97)		3.97	(0.00397)	(0.000397)	(0.00119)
2378-TCDF	(3.77)		3.77	(0.377)	(0.377)	(0.377)
12378-PeCDF	(2.42)		2.42	(0.121)	(0.121)	(0.0725)
23478-PeCDF	(2.72)		2.72	(1.36)	(1.36)	(0.816)
123478-HxCDF	(1.59)		1.59	(0.159)	(0.159)	(0.159)
123678-HxCDF	(1.72)		1.72	(0.172)	(0.172)	(0.172)
234678-HxCDF	(1.92)		1.92	(0.192)	(0.192)	(0.192)
123789-HxCDF	(1.93)		1.93	(0.193)	(0.193)	(0.193)
1234678-HpCDF	(1.04)		1.04	(0.0104)	(0.0104)	(0.0104)
1234789-HpCDF	(1.11)		1.11	(0.0111)	(0.0111)	(0.0111)
OCDF	(3.49)		3.49	(0.00349)	(0.000349)	(0.00105)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	4.57	5.31	5.02
EMPC = 0, ND = DL	9.14	10.6	10
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	4.57	5.31	5.02
EMPC = EMPC, ND = DL	9.14	10.6	10
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 297-252-TLL

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Sample ID: 0_19754_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19754_DF	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	21:23:52

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.4				ES 2378-TCDD	96.1	
12378-PeCDD	48.9				ES 12378-PeCDD	95.5	
123478-HxCDD	51.6				ES 123478-HxCDD	94.8	
123678-HxCDD	52.5				ES 123678-HxCDD	95.8	
123789-HxCDD	49.4				ES 123789-HxCDD	96.5	
1234678-HpCDD	52.9				ES 1234678-HpCDD	86.2	
OCDD	108				ES OCDD	71	
2378-TCDF	11				ES 2378-TCDF	98.6	
12378-PeCDF	52.1				ES 12378-PeCDF	98	
23478-PeCDF	53.9				ES 23478-PeCDF	96.1	
123478-HxCDF	53				ES 123478-HxCDF	95.2	
123678-HxCDF	52.8				ES 123678-HxCDF	93.6	
234678-HxCDF	54.4				ES 234678-HxCDF	94.1	
123789-HxCDF	49.5				ES 123789-HxCDF	90.9	
1234678-HpCDF	51.4				ES 1234678-HpCDF	92.4	
1234789-HpCDF	51.5				ES 1234789-HpCDF	86.4	
OCDF	102				ES OCDF	71.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	92.4	
Total TCDD	58.7		58.7		CS 12347-PeCDD	98.2	
Total PeCDD	77		77		CS 12346-PeCDF	109	
Total HxCDD	170		170		CS 123469-HxCDF	98.1	
Total HpCDD	67.9		67.9		CS 1234689-HpCDF	95.7	
Total TCDF	68.2		68.2				
Total PeCDF	222		222				
Total HxCDF	351		351				
Total HpCDF	103		103				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	117		117				
TEQ: ND=DL/2	117	0.41	117				
TEQ: ND=DL	117	0.82	117				

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Sample ID: 0_19754_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7422	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19754_DF	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	22:10:10

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.1				ES 2378-TCDD	96.3	
12378-PeCDD	49.6				ES 12378-PeCDD	96.2	
123478-HxCDD	53.5				ES 123478-HxCDD	95.2	
123678-HxCDD	54.5				ES 123678-HxCDD	94.6	
123789-HxCDD	52.2				ES 123789-HxCDD	94.2	
1234678-HpCDD	54.4				ES 1234678-HpCDD	90.5	
OCDD	106				ES OCDD	71.1	
2378-TCDF	11.5				ES 2378-TCDF	98.5	
12378-PeCDF	51.2				ES 12378-PeCDF	100	
23478-PeCDF	54.6				ES 23478-PeCDF	102	
123478-HxCDF	54.2				ES 123478-HxCDF	96.1	
123678-HxCDF	52.4				ES 123678-HxCDF	96.4	
234678-HxCDF	56.6				ES 234678-HxCDF	91.3	
123789-HxCDF	51.1				ES 123789-HxCDF	89.6	
1234678-HpCDF	52.4				ES 1234678-HpCDF	94.4	
1234789-HpCDF	52.2				ES 1234789-HpCDF	87.1	
OCDF	101				ES OCDF	71.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.9	
Total TCDD	56.2		56.2		CS 12347-PeCDD	93.6	
Total PeCDD	77.8		77.8		CS 12346-PeCDF	108	
Total HxCDD	176		176		CS 123469-HxCDF	95	
Total HpCDD	68		68		CS 1234689-HpCDF	92.3	
Total TCDF	67.3		67.3				
Total PeCDF	219		219				
Total HxCDF	356		356				
Total HpCDF	105		105				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.335	119				
TEQ: ND=DL	119	0.669	119				

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Sample DUP			Method 1613B
Sample ID: 0_19754_OPR001			
Analyte	**OPR1_19754_DF pg/uL**	**OPR2_19754_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	11.4	11.1	2.3%
1,2,3,7,8-PeCDD	48.9	49.6	1.4%
1,2,3,4,7,8-HxCDD	51.6	53.5	3.7%
1,2,3,6,7,8-HxCDD	52.5	54.5	3.7%
1,2,3,7,8,9-HxCDD	49.4	52.2	5.5%
1,2,3,4,6,7,8-HpCDD	52.9	54.4	2.7%
OCDD	108	106	1.9%
2,3,7,8-TCDF	11	11.5	5.1%
1,2,3,7,8-PeCDF	52.1	51.2	1.7%
2,3,4,7,8-PeCDF	53.9	54.6	1.4%
1,2,3,4,7,8-HxCDF	53	54.2	2.2%
1,2,3,6,7,8-HxCDF	52.8	52.4	0.7%
2,3,4,6,7,8-HxCDF	54.4	56.6	4.0%
1,2,3,7,8,9-HxCDF	49.5	51.1	3.1%
1,2,3,4,6,7,8-HpCDF	51.4	52.4	1.8%
1,2,3,4,7,8,9-HpCDF	51.5	52.2	1.4%
OCDF	102	101	0.4%
Totals			
Total TCDD	58.7	56.2	4.2%
Total PeCDD	77	77.8	1.0%
Total HxCDD	170	176	3.7%
Total HpCDD	67.9	68	0.2%
Total TCDF	68.2	67.3	1.3%
Total PeCDF	222	219	1.4%
Total HxCDF	351	356	1.3%
Total HpCDF	103	105	1.6%

Sample Receipt Notification

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Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*23-Dec-22 at 10:12*
AP Project name:	*B7422*
Requested TAT:	*15 business days*
Projected due date:	*9-Jan-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-002625*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120822-S-MTK-WC-4	B7422_001	Leachate	2	1L amber	08-Dec-22	09:05	1.4	1	5894 7369 7894
12599404-120822-S-MTK-WC-5	B7422_002	Leachate	2	1L amber	08-Dec-22	10:05	1.4	1	5894 7369 7894

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Erin Cropsey-Sjursen *Logged in by: Erin Cropsey-Sjursen* *QC'ed by:* AK 9 Jan 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

B7422

~~B74160~~

1/2

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page ~~1 of 1~~

FED-EX Tracking #: attached
Bottle Order Control #: N/a
SGS Quote #: N/a
SGS Job #: JD56929

Client / Reporting Information

Company Name:
Street Address:
City / State / Zip:
Project Contact: E-mail: Kelly.Ramos@sgs.com
Phone #:
Sampler(s) Name(s): Phone:

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street:
City / State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis: dioxin/furans - send leachate bottles

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

	SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	dioxin/furans - send leachate bottles	LAB USE ONLY
001	1A	12599404-120822-S-MTK-WC-4		12/8/22	9:05:00 AM		SO										X	
002	2A	12599404-120822-S-MTK-WC-5		12/8/22	10:05:00 AM		SO										X	
	3A	12599404-120822-S-MTK-WC-8		12/8/22	11:20:00 AM		SO										X	
	4A	12599404-120822-S-MTK-WC-10		12/8/22	1:30:00 PM		SO										X	
	5A	12599404-120822-S-MTK-WC-7		12/8/22	2:30:00 PM		SO										X	

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] Other 1/71800

Approved By (SGS PM) / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington with prep paperwork and leachate blanks. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 Eddie C	12/22/22 1:01	1	2	12/23/22 1032	2 [illegible signature]
3		3	4		4
5		5	Custody Seal #		

Intact / Not intact; Preserved where applicable; Absent; Therm ID: IR4-Probe; On Ice ✓; Cooler Temp: 1.4°C

d56929.xls
Rev. Date 4/10/18

B7422

~~B74600~~

2/2

Date / Time: 12/16/2022 9:48:57 AM
CSR: KELLYR
Job #: JD56929
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

	SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
001	JD56929-1A	12599404-120822-S-MTK-WC-4	dioxin/furans - send leachate bottles!	4H5		12/8/2022	9:05:00 AM	
002	JD56929-2A	12599404-120822-S-MTK-WC-5	dioxin/furans - send leachate bottles!			12/8/2022	10:05:00 AM	
	JD56929-3A	12599404-120822-S-MTK-WC-8	dioxin/furans - send leachate bottles!	2H5		12/8/2022	11:20:00 AM	
	JD56929-4A	12599404-120822-S-MTK-WC-10	dioxin/furans - send leachate bottles!	2		12/8/2022	1:30:00 PM	
	JD56929-5A	12599404-120822-S-MTK-WC-7	dioxin/furans - send leachate bottles!			12/8/2022	2:30:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington with prep paperwork and leachate blanks. They will report/bill dioxin/furans to client.
GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: [signature] Date: 12/23/2022 10:12

1/1

B7422

~~B7400~~

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 22DEC22
ACTWGT: 53.00 LB
CAD: 0682838/CAFE9211

BILL SENDER

TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

WILMINGTON NC 28405
(910) 794-1613
INV:
PO:
REF:
DEPT:

12/23/2022
10:12
1.4°

TB 12/23/22

FedEx Express

2 of 2
MPS# 0263 5894 7369 7894
Mstr# 5894 7369 7888

0201

FRI – 23 DEC 10:30A
PRIORITY OVERNIGHT

G5 ILMA

28405
NC-US RDU

Part # 156140-434 MTW EXP 05/23

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2. **TC Batch ID: TCO769**

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	4.02		4.00	4.02	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	4.05
PH Buffer														7.00	7.02		7.00	7.02					7.00	7.05
PH Buffer														10.00	10.00		10.00	10.00					10.00	9.99
LB (fluid #1)	N	58	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.83
LB (fluid #2)	N	NA	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	NA
JD56729-1	N	3	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.69	100	100.69	NA	10.82	5 mins	NA	1.81	1	4.93	YES	2013.8	NA	7.84
JD56833-3	N	6	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.56	100	100.56	NA	9.66	5 mins	NA	2.02	1	4.93	YES	2011.2	NA	7.10
JD56833-5	N	8	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.56	100	100.56	NA	10.52	5 mins	NA	1.83	1	4.93	YES	2011.2	NA	7.82
JD56833-7	N	15	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.74	100	100.74	NA	9.79	5 mins	NA	1.91	1	4.93	YES	2014.8	NA	7.07
JD56833-9	N	18	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.37	100	100.37	NA	10.58	5 mins	NA	1.96	1	4.93	YES	2007.4	NA	8.09
JD56484-6	N	53	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.90	100	100.90	NA	7.04	5 mins	NA	1.87	1	4.93	YES	2018	NA	4.93
JD56929-1A	N	57	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.14	100	100.14	NA	9.08	5 mins	NA	1.82	1	4.93	YES	2002.8	NA	6.48
JD56929-2A	N	62	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.70	100	100.70	NA	9.06	5 mins	NA	1.91	1	4.93	YES	2014	NA	7.01
JD56929-3A	N	64	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.80	100	100.80	NA	9.05	5 mins	NA	1.95	1	4.93	YES	2016	NA	6.57
JD56929-4A	N	65	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.15	100	100.15	NA	9.01	5 mins	NA	1.94	1	4.93	YES	2003	NA	7.59
PH Buffer														4.00	4.06		2.00	2.05					4.00	4.08
PH Buffer														10.00	10.00		4.00	4.06					10.00	10.00
JD56929-5A	N	66	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.33	100	100.33	NA	9.07	5 mins	NA	1.98	1	4.93	YES	2006.6	NA	5.39
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.06		2.00	2.05					4.00	4.08
PH Buffer														10.00	10.00		4.00	4.06					7.00	7.08

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____ Set-up analyst: NF Take-down analyst: NF

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

TC Batch ID: TCO769

Balance ID: B54

pH meter ID: PH 67

Temperature ranges during leaching. (Must be from 20.5-25.4 °C, and recorded for each leaching period).

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	29-Oct-22
5	29	29-Oct-22
7	28	29-Oct-22
8	NA	22-Apr-21
9	32	29-Oct-22
10	32	29-Oct-22
11	NA	7-Sep-21
12	28	29-Oct-22

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID: 5624720

Expiration: 13-Jul-23

Recorded temperature: 50

Heating time: Start:

End:

Reagent Information	Reagent ID or Manufacturer Lot	Expiration Date
Reagent		
Extraction fluid 1	GNE10-72115-TCLP	15-Dec-2022
Extraction fluid 2	GNE10-72116-TCLP	15-Dec-2022
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE7-70898-TCLP	20-Jan-2023
pH 2 buffer	FISHER 210051	1-Mar-2023
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Sep-2023
pH 10 buffer	FISHER 210276	1-Feb-2023
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jan-2023
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	12/2/2022

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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SGS remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120722-S-MTK-WC-12 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.97 L	Lab Sample ID	B7423_19742_DF_001	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	22:31:47

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	4.99			ES 2378-TCDD	98.5	
12378-PeCDD	ND	3.08			ES 12378-PeCDD	102	
123478-HxCDD	ND	2.29			ES 123478-HxCDD	97.3	
123678-HxCDD	ND	2.29			ES 123678-HxCDD	94.7	
123789-HxCDD	ND	2.02			ES 123789-HxCDD	97	
1234678-HpCDD	EMPC		4.87	J	ES 1234678-HpCDD	99.2	
OCDD	140				ES OCDD	91.2	
2378-TCDF	EMPC		17.3		ES 2378-TCDF	96	
12378-PeCDF	ND	2.14			ES 12378-PeCDF	97.4	
23478-PeCDF	ND	2.12			ES 23478-PeCDF	98.1	
123478-HxCDF	ND	1.37			ES 123478-HxCDF	103	
123678-HxCDF	ND	1.38			ES 123678-HxCDF	101	
234678-HxCDF	ND	1.36			ES 234678-HxCDF	98.9	
123789-HxCDF	ND	1.48			ES 123789-HxCDF	90.9	
1234678-HpCDF	ND	0.897			ES 1234678-HpCDF	99.3	
1234789-HpCDF	ND	1.07			ES 1234789-HpCDF	93.7	
OCDF	EMPC		9.74	J	ES OCDF	92.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	ND	4.99	ND		CS 12347-PeCDD	108	
Total PeCDD	ND	3.08	ND		CS 12346-PeCDF	104	
Total HxCDD	ND	2.19	ND		CS 123469-HxCDF	107	
Total HpCDD	7.75		12.6		CS 1234689-HpCDF	102	
Total TCDF	9.75		27				
Total PeCDF	ND	2.13	ND				
Total HxCDF	ND	1.4	ND				
Total HpCDF	ND		2.07				
Total PCDD/Fs	**157**		**191**				
WHO-2005 TEQs							
TEQ: ND=0	0.0419		1.82				
TEQ: ND=DL/2	5.05	5.24	6.82				
TEQ: ND=DL	10.1	10.5	11.8				

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Sample ID: 12599404-120722-S-MTK-WC-12 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.97 L	Lab Sample ID:	B7423_19742_DF_001	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	22:31:47

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(4.99)		12479/12468D	(3.08)		124679/124689D	(2.19)		1234679D	7.75	J
1379D	(4.99)		12469D	(3.08)		123468D	(2.19)		1234678D	[4.87]	J
1369D	(4.99)		12368D	(3.08)		123679/123689D	(2.19)				
1469D	(4.99)		12478D	(3.08)		123469D	(2.19)				
1247D...[4]	(4.99)		12379D	(3.08)		123478D	(2.29)				
1378D	(4.99)		12369D...[3]	(3.08)		123678D	(2.29)				
1268D	(4.99)		12346/12347D	(3.08)		123467D	(2.19)				
1478D	(4.99)		12378D	(3.08)		123789D	(2.02)		**Conc.**	7.75	
1279D	(4.99)		12367D	(3.08)					**EMPC**	12.6	
1234/1269D	(4.99)		12389D	(3.08)							
1236D	(4.99)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(4.99)										
1239D	(4.99)								OCDD	140	
2378D	(4.99)										
1278D	(4.99)										
1267D	(4.99)										
1289D	(4.99)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0419	1.82
TEQ: ND=DL/2	5.05	6.82
TEQ: ND=DL	10.1	11.8

	Conc.	EMPC
Total PCDD/Fs	157	191

Checkcode: 200-683-NMF

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-12 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.97 L	Lab Sample ID:	B7423_19742_DF_001	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	22:31:47

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(4.53)		13468/12468F	(1.71)		123468F	(1.4)		1234678F	(0.897)	
1468F	(4.53)		13678F...[3]	(2.13)		124678/134678F	(1.4)		1234679F	(0.979)	
2468F	(4.53)		12368F...[3]	(2.13)		134679F	(1.4)		1234689F	[2.07]	J
1346/1246F	(4.53)		14678F	(2.13)		124679F	(1.4)		1234789F	(1.07)	
1347F...[3]	(4.53)		13479F	(2.13)		124689F	(1.4)				
1348F	(4.53)		13469/12479F	(2.13)		123467F	(1.4)				
1248F...[3]	(4.53)		12346F	(2.13)		123478F	(1.37)				
1268F	(4.53)		23468/12469F	(2.13)		123678F	(1.38)				
1467F	(4.53)		12347F	(2.13)		123479F	(1.4)				
1478F	(4.53)		12348F	(2.13)		123469F	(1.4)				
1369/1237F	(4.53)		12378F	(2.14)		123679F	(1.4)				
2467F	(4.53)		12678/12367F	(2.13)		234678F	(1.36)		**Conc.**	0	
2368F	(4.53)		12379F	(2.13)		234678/123689F	0		**EMPC**	2.07	
1238F...[5]	(4.53)		12679F	(2.13)		123689F	(1.4)				
1278F	9.75		23467/12369F	(2.13)		123789F	(1.48)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(4.53)		23478F	(2.12)		123789/123489F	0			**(pg/L)**	
1267F	(4.53)		23478/12489F	0		123489F	(1.4)		OCDF	[9.74]	J
2346/1249F	(4.53)		12489F	(2.13)							
2347/1279F	(4.53)		12349F	(2.13)							
2348F	(4.53)		12389F	(2.13)							
2378F	[17.3]										
2367/3467F	(4.53)										
1269F	(4.53)										
1239F	(4.53)										
1289F	(4.53)										
Conc.	9.75		**Conc.**	0		**Conc.**	0				
EMPC	27		**EMPC**	0		**EMPC**	0				

Checkcode: 200-683-NMF

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-12 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7423_19742_DF_001
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.97 L	QC Batch No.:	19742
Date Collected:	07-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	06-Jan-2023 22:31
Lab Project No:	B7423	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(4.99)		4.99	(4.99)	(4.99)	(4.99)
12378-PeCDD	(3.08)		3.08	(1.54)	(3.08)	(3.08)
123478-HxCDD	(2.29)		2.29	(0.229)	(0.229)	(0.229)
123678-HxCDD	(2.29)		2.29	(0.229)	(0.229)	(0.229)
123789-HxCDD	(2.02)		2.02	(0.202)	(0.202)	(0.202)
1234678-HpCDD	[4.87]	J	1.86	[0.0487]	[0.0487]	[0.0487]
OCDD	140		2.24	0.14	0.014	0.0419
2378-TCDF	[17.3]		4.53	[1.73]	[1.73]	[1.73]
12378-PeCDF	(2.14)		2.14	(0.107)	(0.107)	(0.0643)
23478-PeCDF	(2.12)		2.12	(1.06)	(1.06)	(0.637)
123478-HxCDF	(1.37)		1.37	(0.137)	(0.137)	(0.137)
123678-HxCDF	(1.38)		1.38	(0.138)	(0.138)	(0.138)
234678-HxCDF	(1.36)		1.36	(0.136)	(0.136)	(0.136)
123789-HxCDF	(1.48)		1.48	(0.148)	(0.148)	(0.148)
1234678-HpCDF	(0.897)		0.897	(0.00897)	(0.00897)	(0.00897)
1234789-HpCDF	(1.07)		1.07	(0.0107)	(0.0107)	(0.0107)
OCDF	[9.74]	J	2.22	[0.00974]	[0.000974]	[0.00292]

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TEQ Summaries			
EMPC = 0, ND = 0	0.14	0.014	0.0419
EMPC = 0, ND = DL / 2	4.61	5.25	5.05
EMPC = 0, ND = DL	9.08	10.5	10.1
EMPC = 0, < J-level = 0	0.14	0.014	0.0419
EMPC = EMPC, ND = 0	1.92	1.79	1.82
EMPC = EMPC, ND = DL / 2	6.39	7.03	6.82
EMPC = EMPC, ND = DL	10.9	12.3	11.8
EMPC = EMPC, < J-level = 0	1.86	1.74	1.77

Checkcode: 200-683-NMF

SGS North America - DF v0.99

Sample ID: 12599404-120722-S-MTK-WC-11 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.87 L	Lab Sample ID	B7423_19742_DF_002	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:18:05

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	128				ES 2378-TCDD	105	
12378-PeCDD	ND	4.97			ES 12378-PeCDD	103	
123478-HxCDD	ND	2.19			ES 123478-HxCDD	100	
123678-HxCDD	ND	2.14			ES 123678-HxCDD	100	
123789-HxCDD	ND	2.08			ES 123789-HxCDD	102	
1234678-HpCDD	129				ES 1234678-HpCDD	108	
OCDD	3,000				ES OCDD	93.8	
2378-TCDF	456				ES 2378-TCDF	104	
12378-PeCDF	37.3				ES 12378-PeCDF	103	
23478-PeCDF	23.9			J	ES 23478-PeCDF	98.1	
123478-HxCDF	90				ES 123478-HxCDF	109	
123678-HxCDF	25			J	ES 123678-HxCDF	108	
234678-HxCDF	ND	2.75			ES 234678-HxCDF	104	
123789-HxCDF	ND	2.42			ES 123789-HxCDF	101	
1234678-HpCDF	56.1				ES 1234678-HpCDF	105	
1234789-HpCDF	EMPC		11	J	ES 1234789-HpCDF	104	
OCDF	535				ES OCDF	94.9	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	101	
Total TCDD	128		128		CS 12347-PeCDD	96.8	
Total PeCDD	ND	4.97	ND		CS 12346-PeCDF	103	
Total HxCDD	27.9		27.9		CS 123469-HxCDF	105	
Total HpCDD	262		262		CS 1234689-HpCDF	104	
Total TCDF	895		944				
Total PeCDF	82		92.1				
Total HxCDF	130		148				
Total HpCDF	102		113				
Total PCDD/Fs	**5,160**		**5,250**				
WHO-2005 TEQs							
TEQ: ND=0	197		197				
TEQ: ND=DL/2	200	6.69	200				
TEQ: ND=DL	203	13.4	203				

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Sample ID: 12599404-120722-S-MTK-WC-11 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.87 L	Lab Sample ID:	B7423_19742_DF_002	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:18:05

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(5.35)		12479/12468D	(4.97)		124679/124689D	16.4	J	1234679D	133	
1379D	(5.35)		12469D	(4.97)		123468D	(2.13)		1234678D	129	
1369D	(5.35)		12368D	(4.97)		123679/123689D	11.5	J			
1469D	(5.35)		12478D	(4.97)		123469D	(2.13)				
1247D...[4]	(5.35)		12379D	(4.97)		123478D	(2.19)				
1378D	(5.35)		12369D...[3]	(4.97)		123678D	(2.14)				
1268D	(5.35)		12346/12347D	(4.97)		123467D	(2.13)				
1478D	(5.35)		12378D	(4.97)		123789D	(2.08)		**Conc.**	262	
1279D	(5.35)		12367D	(4.97)					**EMPC**	262	
1234/1269D	(5.35)		12389D	(4.97)							
1236D	(5.35)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(5.35)										
1239D	(5.35)								OCDD	3000	
2378D	128										
1278D	(5.35)										
1267D	(5.35)										
1289D	(5.35)										
Conc.	128		**Conc.**	0		**Conc.**	27.9				
EMPC	128		**EMPC**	0		**EMPC**	27.9				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	197	197
TEQ: ND=DL/2	200	200
TEQ: ND=DL	203	203

	Conc.	EMPC
Total PCDD/Fs	5,160	5,250

Checkcode: 161-666-GBG

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-11 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.87 L	Lab Sample ID:	B7423_19742_DF_002	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:18:05

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(5.28)		13468/12468F	(1.92)		123468F	(2.38)		1234678F	56.1	
1468F	(5.28)		13678F...[3]	(2.71)		124678/134678F	14.7	J	1234679F	(1.53)	
2468F	(5.28)		12368F...[3]	20.8	J	134679F	(2.38)		1234689F	46.3	
1346/1246F	(5.28)		14678F	(2.71)		124679F	(2.38)		1234789F	[11]	J
1347F...[3]	5.78		13479F	(2.71)		124689F	[11.1]	J			
1348F	(5.28)		13469/12479F	(2.71)		123467F	(2.38)				
1248F...[3]	31		12346F	(2.71)		123478F	90				
1268F	[8.13]		23468/12469F	(2.71)		123678F	25	J			
1467F	(5.28)		12347F	(2.71)		123479F	(2.38)				
1478F	27		12348F	(2.71)		123469F	(2.38)				
1369/1237F	(5.28)		12378F	37.3		123679F	(2.38)				
2467F	(5.28)		12678/12367F	[10.1]	J	234678F	(2.75)		**Conc.**	102	
2368F	43.4		12379F	(2.71)		234678/123689F	0		**EMPC**	113	
1238F...[5]	(5.28)		12679F	(2.71)		123689F	(2.38)				
1278F	223		23467/12369F	(2.71)		123789F	(2.42)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(5.28)		23478F	23.9	J	123789/123489F	0				
1267F	14.1		23478/12489F	0		123489F	[7.58]	J	OCDF	535	
2346/1249F	(5.28)		12489F	(2.71)							
2347/1279F	(5.28)		12349F	(2.71)							
2348F	51.3		12389F	(2.71)							
2378F	456										
2367/3467F	[40.3]										
1269F	8.68										
1239F	(5.28)										
1289F	34.9										
Conc.	895		**Conc.**	82		**Conc.**	130				
EMPC	944		**EMPC**	92.1		**EMPC**	148				

Checkcode: 161-666-GBG

Report Created: 09-Jan-2023 11:12 Analyst: TF

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Sample ID: 12599404-120722-S-MTK-WC-11 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7423_19742_DF_002
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.87 L	QC Batch No.:	19742
Date Collected:	07-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	06-Jan-2023 23:18
Lab Project No:	B7423	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	128		5.35	128	128	128
12378-PeCDD	(4.97)		4.97	(2.49)	(4.97)	(4.97)
123478-HxCDD	(2.19)		2.19	(0.219)	(0.219)	(0.219)
123678-HxCDD	(2.14)		2.14	(0.214)	(0.214)	(0.214)
123789-HxCDD	(2.08)		2.08	(0.208)	(0.208)	(0.208)
1234678-HpCDD	129		1.62	1.29	1.29	1.29
OCDD	3000		4.79	3	0.3	0.9
2378-TCDF	456		5.28	45.6	45.6	45.6
12378-PeCDF	37.3		2.77	1.87	1.87	1.12
23478-PeCDF	23.9	J	2.65	11.9	11.9	7.17
123478-HxCDF	90		2.19	9	9	9
123678-HxCDF	25	J	2.2	2.5	2.5	2.5
234678-HxCDF	(2.75)		2.75	(0.275)	(0.275)	(0.275)
123789-HxCDF	(2.42)		2.42	(0.242)	(0.242)	(0.242)
1234678-HpCDF	56.1		1.42	0.561	0.561	0.561
1234789-HpCDF	[11]	J	1.65	[0.11]	[0.11]	[0.11]
OCDF	535		4	0.535	0.0535	0.16

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TEQ Summaries			
EMPC = 0, ND = 0	205	201	197
EMPC = 0, ND = DL / 2	206	204	200
EMPC = 0, ND = DL	208	207	203
EMPC = 0, < J-level = 0	190	187	187
EMPC = EMPC, ND = 0	205	201	197
EMPC = EMPC, ND = DL / 2	206	205	200
EMPC = EMPC, ND = DL	208	208	203
EMPC = EMPC, < J-level = 0	190	187	187

Checkcode: 161-666-GBG

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Sample ID: 12599404-120722-S-MTK-WC-9 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	Lab Sample ID	B7423_19742_DF_003	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	5	QC Batch No:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:04:23

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	5.68			ES 2378-TCDD	96.4	
12378-PeCDD	ND	2.92			ES 12378-PeCDD	100	
123478-HxCDD	ND	2.97			ES 123478-HxCDD	99.2	
123678-HxCDD	ND	3.08			ES 123678-HxCDD	98.1	
123789-HxCDD	ND	2.86			ES 123789-HxCDD	93.6	
1234678-HpCDD	3.54			J	ES 1234678-HpCDD	97.1	
OCDD	80.7				ES OCDD	97.2	
2378-TCDF	EMPC		6.23		ES 2378-TCDF	98.9	
12378-PeCDF	ND	1.75			ES 12378-PeCDF	109	
23478-PeCDF	ND	1.71			ES 23478-PeCDF	105	
123478-HxCDF	ND	1.3			ES 123478-HxCDF	102	
123678-HxCDF	ND	1.2			ES 123678-HxCDF	104	
234678-HxCDF	ND	1.34			ES 234678-HxCDF	103	
123789-HxCDF	ND	1.38			ES 123789-HxCDF	90.7	
1234678-HpCDF	ND	1.04			ES 1234678-HpCDF	102	
1234789-HpCDF	ND	1.03			ES 1234789-HpCDF	97.5	
OCDF	ND	3.63			ES OCDF	96.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	92.3	
Total TCDD	ND	5.68	ND		CS 12347-PeCDD	106	
Total PeCDD	ND	2.92	ND		CS 12346-PeCDF	109	
Total HxCDD	ND	2.96	ND		CS 123469-HxCDF	103	
Total HpCDD	7.05		7.05		CS 1234689-HpCDF	103	
Total TCDF	ND		6.23				
Total PeCDF	ND	1.73	ND				
Total HxCDF	ND	1.3	ND				
Total HpCDF	ND	1.04	ND				
Total PCDD/Fs	**87.7**		**94**				
WHO-2005 TEQs							
TEQ: ND=0	0.0596		0.683				
TEQ: ND=DL/2	5.36	5.59	5.98				
TEQ: ND=DL	10.7	11.2	11.3				

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Sample ID: 12599404-120722-S-MTK-WC-9 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	Lab Sample ID:	B7423_19742_DF_003	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	5	QC Batch No.:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:04:23

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(5.68)		12479/12468D	(2.92)		124679/124689D	(2.96)		1234679D	3.5	J
1379D	(5.68)		12469D	(2.92)		123468D	(2.96)		1234678D	3.54	J
1369D	(5.68)		12368D	(2.92)		123679/123689D	(2.96)				
1469D	(5.68)		12478D	(2.92)		123469D	(2.96)				
1247D...[4]	(5.68)		12379D	(2.92)		123478D	(2.97)				
1378D	(5.68)		12369D...[3]	(2.92)		123678D	(3.08)				
1268D	(5.68)		12346/12347D	(2.92)		123467D	(2.96)				
1478D	(5.68)		12378D	(2.92)		123789D	(2.86)		**Conc.**	7.05	
1279D	(5.68)		12367D	(2.92)					**EMPC**	7.05	
1234/1269D	(5.68)		12389D	(2.92)							
1236D	(5.68)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(5.68)										
1239D	(5.68)								OCDD	80.7	
2378D	(5.68)										
1278D	(5.68)										
1267D	(5.68)										
1289D	(5.68)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0596	0.683
TEQ: ND=DL/2	5.36	5.98
TEQ: ND=DL	10.7	11.3

	Conc.	EMPC
Total PCDD/Fs	87.7	94

Checkcode: 904-903-MZK

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-9 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	Lab Sample ID:	B7423_19742_DF_003	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	5	QC Batch No.:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:04:23

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(5.63)		13468/12468F	(1.93)		123468F	(1.3)		1234678F	(1.04)	
1468F	(5.63)		13678F...[3]	(1.73)		124678/134678F	(1.3)		1234679F	(1.04)	
2468F	(5.63)		12368F...[3]	(1.73)		134679F	(1.3)		1234689F	(1.04)	
1346/1246F	(5.63)		14678F	(1.73)		124679F	(1.3)		1234789F	(1.03)	
1347F...[3]	(5.63)		13479F	(1.73)		124689F	(1.3)				
1348F	(5.63)		13469/12479F	(1.73)		123467F	(1.3)				
1248F...[3]	(5.63)		12346F	(1.73)		123478F	(1.3)				
1268F	(5.63)		23468/12469F	(1.73)		123678F	(1.2)				
1467F	(5.63)		12347F	(1.73)		123479F	(1.3)				
1478F	(5.63)		12348F	(1.73)		123469F	(1.3)				
1369/1237F	(5.63)		12378F	(1.75)		123679F	(1.3)				
2467F	(5.63)		12678/12367F	(1.73)		234678F	(1.34)		**Conc.**	0	
2368F	(5.63)		12379F	(1.73)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(5.63)		12679F	(1.73)		123689F	(1.3)				
1278F	(5.63)		23467/12369F	(1.73)		123789F	(1.38)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(5.63)		23478F	(1.71)		123789/123489F	0				
1267F	(5.63)		23478/12489F	0		123489F	(1.3)		OCDF	(3.63)	
2346/1249F	(5.63)		12489F	(1.73)							
2347/1279F	(5.63)		12349F	(1.73)							
2348F	(5.63)		12389F	(1.73)							
2378F	[6.23]										
2367/3467F	(5.63)										
1269F	(5.63)										
1239F	(5.63)										
1289F	(5.63)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	6.23		**EMPC**	0		**EMPC**	0				

Checkcode: 904-903-MZK

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-9 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7423_19742_DF_003
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	QC Batch No.:	19742
Date Collected:	07-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	07-Jan-2023 00:04
Lab Project No:	B7423	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(5.68)		5.68	(5.68)	(5.68)	(5.68)
12378-PeCDD	(2.92)		2.92	(1.46)	(2.92)	(2.92)
123478-HxCDD	(2.97)		2.97	(0.297)	(0.297)	(0.297)
123678-HxCDD	(3.08)		3.08	(0.308)	(0.308)	(0.308)
123789-HxCDD	(2.86)		2.86	(0.286)	(0.286)	(0.286)
1234678-HpCDD	3.54	J	2.59	0.0354	0.0354	0.0354
OCDD	80.7		2.77	0.0807	0.00807	0.0242
2378-TCDF	[6.23]		5.63	[0.623]	[0.623]	[0.623]
12378-PeCDF	(1.75)		1.75	(0.0876)	(0.0876)	(0.0525)
23478-PeCDF	(1.71)		1.71	(0.855)	(0.855)	(0.513)
123478-HxCDF	(1.3)		1.3	(0.13)	(0.13)	(0.13)
123678-HxCDF	(1.2)		1.2	(0.12)	(0.12)	(0.12)
234678-HxCDF	(1.34)		1.34	(0.134)	(0.134)	(0.134)
123789-HxCDF	(1.38)		1.38	(0.138)	(0.138)	(0.138)
1234678-HpCDF	(1.04)		1.04	(0.0104)	(0.0104)	(0.0104)
1234789-HpCDF	(1.03)		1.03	(0.0103)	(0.0103)	(0.0103)
OCDF	(3.63)		3.63	(0.00363)	(0.000363)	(0.00109)

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TEQ Summaries			
EMPC = 0, ND = 0	0.116	0.0435	0.0596
EMPC = 0, ND = DL / 2	4.87	5.53	5.36
EMPC = 0, ND = DL	9.63	11	10.7
EMPC = 0, < J-level = 0	0.0807	0.00807	0.0242
EMPC = EMPC, ND = 0	0.74	0.667	0.683
EMPC = EMPC, ND = DL / 2	5.5	6.15	5.98
EMPC = EMPC, ND = DL	10.3	11.6	11.3
EMPC = EMPC, < J-level = 0	0.704	0.632	0.648

Checkcode: 904-903-MZK

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Sample ID: 12599404-120722-S-MTK-WC-6 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	Lab Sample ID	B7423_19742_DF_004	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:50:41

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.99			ES 2378-TCDD	95.6	
12378-PeCDD	ND	3.36			ES 12378-PeCDD	101	
123478-HxCDD	ND	2.79			ES 123478-HxCDD	93.9	
123678-HxCDD	ND	2.74			ES 123678-HxCDD	90.9	
123789-HxCDD	ND	2.54			ES 123789-HxCDD	89.4	
1234678-HpCDD	ND	2.15			ES 1234678-HpCDD	90.8	
OCDD	18.9			J	ES OCDD	85.5	
2378-TCDF	EMPC		9.91		ES 2378-TCDF	95.8	
12378-PeCDF	ND	2.55			ES 12378-PeCDF	94	
23478-PeCDF	ND	2.39			ES 23478-PeCDF	93.2	
123478-HxCDF	ND	2.06			ES 123478-HxCDF	94.8	
123678-HxCDF	ND	2.05			ES 123678-HxCDF	95.1	
234678-HxCDF	ND	2.49			ES 234678-HxCDF	90.4	
123789-HxCDF	ND	2.36			ES 123789-HxCDF	83.3	
1234678-HpCDF	ND	1.52			ES 1234678-HpCDF	90.1	
1234789-HpCDF	ND	1.8			ES 1234789-HpCDF	86.5	
OCDF	ND	4.2			ES OCDF	83.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	98.1	
Total TCDD	ND	6.99	ND		CS 12347-PeCDD	101	
Total PeCDD	ND	3.36	ND		CS 12346-PeCDF	101	
Total HxCDD	ND	2.68	ND		CS 123469-HxCDF	95.7	
Total HpCDD	ND	2.15	ND		CS 1234689-HpCDF	97.7	
Total TCDF	ND		9.91				
Total PeCDF	ND	2.47	ND				
Total HxCDF	ND	2.23	ND				
Total HpCDF	ND	1.65	ND				
Total PCDD/Fs	**18.9**		**28.8**				
WHO-2005 TEQs							
TEQ: ND=0	0.00566		0.997				
TEQ: ND=DL/2	6.45	6.75	7.44				
TEQ: ND=DL	12.9	13.5	13.9				

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Sample ID: 12599404-120722-S-MTK-WC-6 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	Lab Sample ID:	B7423_19742_DF_004	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:50:41

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.99)		12479/12468D	(3.36)		124679/124689D	(2.68)		1234679D	(2.15)	
1379D	(6.99)		12469D	(3.36)		123468D	(2.68)		1234678D	(2.15)	
1369D	(6.99)		12368D	(3.36)		123679/123689D	(2.68)				
1469D	(6.99)		12478D	(3.36)		123469D	(2.68)				
1247D...[4]	(6.99)		12379D	(3.36)		123478D	(2.79)				
1378D	(6.99)		12369D...[3]	(3.36)		123678D	(2.74)				
1268D	(6.99)		12346/12347D	(3.36)		123467D	(2.68)				
1478D	(6.99)		12378D	(3.36)		123789D	(2.54)		**Conc.**	0	
1279D	(6.99)		12367D	(3.36)					**EMPC**	0	
1234/1269D	(6.99)		12389D	(3.36)							
1236D	(6.99)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(6.99)										
1239D	(6.99)								OCDD	18.9	J
2378D	(6.99)										
1278D	(6.99)										
1267D	(6.99)										
1289D	(6.99)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.00566	0.997
TEQ: ND=DL/2	6.45	7.44
TEQ: ND=DL	12.9	13.9

	Conc.	EMPC
Total PCDD/Fs	18.9	28.8

Checkcode: 919-140-JFD

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-6 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	Lab Sample ID:	B7423_19742_DF_004	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:50:41

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(6.07)		13468/12468F	(1.99)		123468F	(2.23)		1234678F	(1.52)	
1468F	(6.07)		13678F...[3]	(2.47)		124678/134678F	(2.23)		1234679F	(1.65)	
2468F	(6.07)		12368F...[3]	(2.47)		134679F	(2.23)		1234689F	(1.65)	
1346/1246F	(6.07)		14678F	(2.47)		124679F	(2.23)		1234789F	(1.8)	
1347F...[3]	(6.07)		13479F	(2.47)		124689F	(2.23)				
1348F	(6.07)		13469/12479F	(2.47)		123467F	(2.23)				
1248F...[3]	(6.07)		12346F	(2.47)		123478F	(2.06)				
1268F	(6.07)		23468/12469F	(2.47)		123678F	(2.05)				
1467F	(6.07)		12347F	(2.47)		123479F	(2.23)				
1478F	(6.07)		12348F	(2.47)		123469F	(2.23)				
1369/1237F	(6.07)		12378F	(2.55)		123679F	(2.23)				
2467F	(6.07)		12678/12367F	(2.47)		234678F	(2.49)		**Conc.**	0	
2368F	(6.07)		12379F	(2.47)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(6.07)		12679F	(2.47)		123689F	(2.23)				
1278F	(6.07)		23467/12369F	(2.47)		123789F	(2.36)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(6.07)		23478F	(2.39)		123789/123489F	0				
1267F	(6.07)		23478/12489F	0		123489F	(2.23)		OCDF	(4.2)	
2346/1249F	(6.07)		12489F	(2.47)							
2347/1279F	(6.07)		12349F	(2.47)							
2348F	(6.07)		12389F	(2.47)							
2378F	[9.91]										
2367/3467F	(6.07)										
1269F	(6.07)										
1239F	(6.07)										
1289F	(6.07)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	9.91		**EMPC**	0		**EMPC**	0				

Checkcode: 919-140-JFD

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-6 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7423_19742_DF_004
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.88 L	QC Batch No.:	19742
Date Collected:	07-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	07-Jan-2023 00:50
Lab Project No:	B7423	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.99)		6.99	(6.99)	(6.99)	(6.99)
12378-PeCDD	(3.36)		3.36	(1.68)	(3.36)	(3.36)
123478-HxCDD	(2.79)		2.79	(0.279)	(0.279)	(0.279)
123678-HxCDD	(2.74)		2.74	(0.274)	(0.274)	(0.274)
123789-HxCDD	(2.54)		2.54	(0.254)	(0.254)	(0.254)
1234678-HpCDD	(2.15)		2.15	(0.0215)	(0.0215)	(0.0215)
OCDD	18.9	J	4.2	0.0189	0.00189	0.00566
2378-TCDF	[9.91]		6.07	[0.991]	[0.991]	[0.991]
12378-PeCDF	(2.55)		2.55	(0.128)	(0.128)	(0.0766)
23478-PeCDF	(2.39)		2.39	(1.2)	(1.2)	(0.718)
123478-HxCDF	(2.06)		2.06	(0.206)	(0.206)	(0.206)
123678-HxCDF	(2.05)		2.05	(0.205)	(0.205)	(0.205)
234678-HxCDF	(2.49)		2.49	(0.249)	(0.249)	(0.249)
123789-HxCDF	(2.36)		2.36	(0.236)	(0.236)	(0.236)
1234678-HpCDF	(1.52)		1.52	(0.0152)	(0.0152)	(0.0152)
1234789-HpCDF	(1.8)		1.8	(0.018)	(0.018)	(0.018)
OCDF	(4.2)		4.2	(0.0042)	(0.00042)	(0.00126)

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TEQ Summaries			
EMPC = 0, ND = 0	0.0189	0.00189	0.00566
EMPC = 0, ND = DL / 2	5.89	6.71	6.45
EMPC = 0, ND = DL	11.8	13.4	12.9
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	1.01	0.993	0.997
EMPC = EMPC, ND = DL / 2	6.88	7.7	7.44
EMPC = EMPC, ND = DL	12.8	14.4	13.9
EMPC = EMPC, < J-level = 0	0.991	0.991	0.991

Checkcode: 919-140-JFD

SGS North America - DF v0.99

Sample ID: 12599404-120722-S-MTK-WC-3 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.85 L	Lab Sample ID	B7423_19742_DF_005	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	1:36:58

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.52			ES 2378-TCDD	96.5	
12378-PeCDD	ND	3.64			ES 12378-PeCDD	96.4	
123478-HxCDD	ND	2.33			ES 123478-HxCDD	98.5	
123678-HxCDD	ND	2.39			ES 123678-HxCDD	95.7	
123789-HxCDD	ND	2.19			ES 123789-HxCDD	98.4	
1234678-HpCDD	ND	1.9			ES 1234678-HpCDD	102	
OCDD	31.1			J	ES OCDD	91.5	
2378-TCDF	EMPC		12.6		ES 2378-TCDF	104	
12378-PeCDF	ND	2.45			ES 12378-PeCDF	99.9	
23478-PeCDF	ND	2.17			ES 23478-PeCDF	104	
123478-HxCDF	ND	1.91			ES 123478-HxCDF	97.6	
123678-HxCDF	ND	1.66			ES 123678-HxCDF	104	
234678-HxCDF	ND	1.95			ES 234678-HxCDF	102	
123789-HxCDF	ND	2			ES 123789-HxCDF	88.8	
1234678-HpCDF	ND	1.24			ES 1234678-HpCDF	101	
1234789-HpCDF	ND	1.35			ES 1234789-HpCDF	93.4	
OCDF	EMPC		11.5	J	ES OCDF	88	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.3	
Total TCDD	ND	6.52	ND		CS 12347-PeCDD	99.6	
Total PeCDD	ND	3.64	ND		CS 12346-PeCDF	104	
Total HxCDD	ND	2.3	ND		CS 123469-HxCDF	101	
Total HpCDD	ND		2.53		CS 1234689-HpCDF	96.7	
Total TCDF	ND		12.6				
Total PeCDF	ND	2.31	ND				
Total HxCDF	ND	1.87	ND				
Total HpCDF	ND	1.29	ND				
Total PCDD/Fs	**31.1**		**57.7**				
WHO-2005 TEQs							
TEQ: ND=0	0.00932		1.27				
TEQ: ND=DL/2	6.2	6.48	7.46				
TEQ: ND=DL	12.4	13	13.6				

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Sample ID: 12599404-120722-S-MTK-WC-3 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.85 L	Lab Sample ID:	B7423_19742_DF_005	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	1:36:58

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.52)		12479/12468D	(3.64)		124679/124689D	(2.3)		1234679D	[2.53]	J
1379D	(6.52)		12469D	(3.64)		123468D	(2.3)		1234678D	(1.9)	
1369D	(6.52)		12368D	(3.64)		123679/123689D	(2.3)				
1469D	(6.52)		12478D	(3.64)		123469D	(2.3)				
1247D...[4]	(6.52)		12379D	(3.64)		123478D	(2.33)				
1378D	(6.52)		12369D...[3]	(3.64)		123678D	(2.39)				
1268D	(6.52)		12346/12347D	(3.64)		123467D	(2.3)				
1478D	(6.52)		12378D	(3.64)		123789D	(2.19)		**Conc.**	0	
1279D	(6.52)		12367D	(3.64)					**EMPC**	2.53	
1234/1269D	(6.52)		12389D	(3.64)							
1236D	(6.52)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(6.52)										
1239D	(6.52)								OCDD	31.1	J
2378D	(6.52)										
1278D	(6.52)										
1267D	(6.52)										
1289D	(6.52)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.00932	1.27
TEQ: ND=DL/2	6.2	7.46
TEQ: ND=DL	12.4	13.6

	Conc.	EMPC
Total PCDD/Fs	31.1	57.7

Checkcode: 864-332-KDN

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-3 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.85 L	Lab Sample ID:	B7423_19742_DF_005	Date Extracted:	29-Dec-2022
Date Collected:	07-Dec-2022	pH:	6	QC Batch No.:	19742	Date Analyzed:	07-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	1:36:58

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(5.8)		13468/12468F	(1.84)		123468F	(1.87)		1234678F	(1.24)	
1468F	(5.8)		13678F...[3]	(2.31)		124678/134678F	(1.87)		1234679F	(1.29)	
2468F	(5.8)		12368F...[3]	(2.31)		134679F	(1.87)		1234689F	(1.29)	
1346/1246F	(5.8)		14678F	(2.31)		124679F	(1.87)		1234789F	(1.35)	
1347F...[3]	(5.8)		13479F	(2.31)		124689F	(1.87)				
1348F	(5.8)		13469/12479F	(2.31)		123467F	(1.87)				
1248F...[3]	(5.8)		12346F	(2.31)		123478F	(1.91)				
1268F	(5.8)		23468/12469F	(2.31)		123678F	(1.66)				
1467F	(5.8)		12347F	(2.31)		123479F	(1.87)				
1478F	(5.8)		12348F	(2.31)		123469F	(1.87)				
1369/1237F	(5.8)		12378F	(2.45)		123679F	(1.87)				
2467F	(5.8)		12678/12367F	(2.31)		234678F	(1.95)		**Conc.**	0	
2368F	(5.8)		12379F	(2.31)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(5.8)		12679F	(2.31)		123689F	(1.87)				
1278F	(5.8)		23467/12369F	(2.31)		123789F	(2)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(5.8)		23478F	(2.17)		123789/123489F	0				
1267F	(5.8)		23478/12489F	0		123489F	(1.87)		OCDF	[11.5]	J
2346/1249F	(5.8)		12489F	(2.31)							
2347/1279F	(5.8)		12349F	(2.31)							
2348F	(5.8)		12389F	(2.31)							
2378F	[12.6]										
2367/3467F	(5.8)										
1269F	(5.8)										
1239F	(5.8)										
1289F	(5.8)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	12.6		**EMPC**	0		**EMPC**	0				

Checkcode: 864-332-KDN

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: 12599404-120722-S-MTK-WC-3 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7423_19742_DF_005
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.85 L	QC Batch No.:	19742
Date Collected:	07-Dec-2022	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	07-Jan-2023 01:36
Lab Project No:	B7423	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.52)		6.52	(6.52)	(6.52)	(6.52)
12378-PeCDD	(3.64)		3.64	(1.82)	(3.64)	(3.64)
123478-HxCDD	(2.33)		2.33	(0.233)	(0.233)	(0.233)
123678-HxCDD	(2.39)		2.39	(0.239)	(0.239)	(0.239)
123789-HxCDD	(2.19)		2.19	(0.219)	(0.219)	(0.219)
1234678-HpCDD	(1.9)		1.9	(0.019)	(0.019)	(0.019)
OCDD	31.1	J	2.97	0.0311	0.00311	0.00932
2378-TCDF	[12.6]		5.8	[1.26]	[1.26]	[1.26]
12378-PeCDF	(2.45)		2.45	(0.122)	(0.122)	(0.0734)
23478-PeCDF	(2.17)		2.17	(1.09)	(1.09)	(0.651)
123478-HxCDF	(1.91)		1.91	(0.191)	(0.191)	(0.191)
123678-HxCDF	(1.66)		1.66	(0.166)	(0.166)	(0.166)
234678-HxCDF	(1.95)		1.95	(0.195)	(0.195)	(0.195)
123789-HxCDF	(2)		2	(0.2)	(0.2)	(0.2)
1234678-HpCDF	(1.24)		1.24	(0.0124)	(0.0124)	(0.0124)
1234789-HpCDF	(1.35)		1.35	(0.0135)	(0.0135)	(0.0135)
OCDF	[11.5]	J	3.35	[0.0115]	[0.00115]	[0.00344]

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TEQ Summaries			
EMPC = 0, ND = 0	0.0311	0.00311	0.00932
EMPC = 0, ND = DL / 2	5.55	6.43	6.2
EMPC = 0, ND = DL	11.1	12.9	12.4
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	1.3	1.26	1.27
EMPC = EMPC, ND = DL / 2	6.82	7.69	7.46
EMPC = EMPC, ND = DL	12.3	14.1	13.6
EMPC = EMPC, < J-level = 0	1.26	1.26	1.26

Checkcode: 864-332-KDN

SGS North America - DF v0.99

Sample ID: Method Blank B7423_19742 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19742_DF_TLX	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:53:56

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	5.46			ES 2378-TCDD	89	
12378-PeCDD	ND	3.16			ES 12378-PeCDD	99	
123478-HxCDD	ND	2.49			ES 123478-HxCDD	93.8	
123678-HxCDD	ND	2.5			ES 123678-HxCDD	93.9	
123789-HxCDD	ND	2.12			ES 123789-HxCDD	93.5	
1234678-HpCDD	ND	2.27			ES 1234678-HpCDD	89.4	
OCDD	ND	2.93			ES OCDD	90.9	
2378-TCDF	ND	4.79			ES 2378-TCDF	84.7	
12378-PeCDF	ND	2.45			ES 12378-PeCDF	92.2	
23478-PeCDF	ND	2.49			ES 23478-PeCDF	88.1	
123478-HxCDF	ND	2			ES 123478-HxCDF	91.5	
123678-HxCDF	ND	1.94			ES 123678-HxCDF	97.3	
234678-HxCDF	ND	1.97			ES 234678-HxCDF	96.9	
123789-HxCDF	ND	2.27			ES 123789-HxCDF	84.1	
1234678-HpCDF	ND	1.15			ES 1234678-HpCDF	93.9	
1234789-HpCDF	ND	1.45			ES 1234789-HpCDF	80.3	
OCDF	ND	3.51			ES OCDF	83.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88	
Total TCDD	ND	5.46	ND		CS 12347-PeCDD	101	
Total PeCDD	ND	3.16	ND		CS 12346-PeCDF	93.3	
Total HxCDD	ND	2.36	ND		CS 123469-HxCDF	97.8	
Total HpCDD	ND	2.27	ND		CS 1234689-HpCDF	91.1	
Total TCDF	ND	4.79	ND				
Total PeCDF	ND	2.47	ND				
Total HxCDF	ND	2.03	ND				
Total HpCDF	ND	1.28	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	5.75	5.75	5.75				
TEQ: ND=DL	11.5	11.5	11.5				

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Sample ID: Method Blank B7423_19742 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19742_DF_TLX	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:53:56

Tetra-Dioxins	Conc. (pg/L)	Qualifiers
1368D	(5.46)	
1379D	(5.46)	
1369D	(5.46)	
1469D	(5.46)	
1247D...[4]	(5.46)	
1378D	(5.46)	
1268D	(5.46)	
1478D	(5.46)	
1279D	(5.46)	
1234/1269D	(5.46)	
1236D	(5.46)	
1237/1238D	(5.46)	
1239D	(5.46)	
2378D	(5.46)	
1278D	(5.46)	
1267D	(5.46)	
1289D	(5.46)	
Conc.	0	
EMPC	0	

Penta-Dioxins	Conc. (pg/L)	Qualifiers
12479/12468D	(3.16)	
12469D	(3.16)	
12368D	(3.16)	
12478D	(3.16)	
12379D	(3.16)	
12369D...[3]	(3.16)	
12346/12347D	(3.16)	
12378D	(3.16)	
12367D	(3.16)	
12389D	(3.16)	
Conc.	0	
EMPC	0	

Hexa-Dioxins	Conc (pg/L)	Qualifiers
124679/124689D	(2.36)	
123468D	(2.36)	
123679/123689D	(2.36)	
123469D	(2.36)	
123478D	(2.49)	
123678D	(2.5)	
123467D	(2.36)	
123789D	(2.12)	
Conc.	0	
EMPC	0	

Hepta-Dioxins	Conc (pg/L)	Qualifiers
1234679D	(2.27)	
1234678D	(2.27)	
Conc.	0	
EMPC	0	

Octa-Dioxin	Conc (pg/L)	Qualifiers
OCDD	(2.93)	

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	5.75	5.75
TEQ: ND=DL	11.5	11.5

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 243-065-BYN

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: Method Blank B7423_19742 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19742_DF_TLX	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:53:56

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(4.79)		13468/12468F	(2.29)		123468F	(2.03)		1234678F	(1.15)	
1468F	(4.79)		13678F...[3]	(2.47)		124678/134678F	(2.03)		1234679F	(1.28)	
2468F	(4.79)		12368F...[3]	(2.47)		134679F	(2.03)		1234689F	(1.28)	
1346/1246F	(4.79)		14678F	(2.47)		124679F	(2.03)		1234789F	(1.45)	
1347F...[3]	(4.79)		13479F	(2.47)		124689F	(2.03)				
1348F	(4.79)		13469/12479F	(2.47)		123467F	(2.03)				
1248F...[3]	(4.79)		12346F	(2.47)		123478F	(2)				
1268F	(4.79)		23468/12469F	(2.47)		123678F	(1.94)				
1467F	(4.79)		12347F	(2.47)		123479F	(2.03)				
1478F	(4.79)		12348F	(2.47)		123469F	(2.03)				
1369/1237F	(4.79)		12378F	(2.45)		123679F	(2.03)				
2467F	(4.79)		12678/12367F	(2.47)		234678F	(1.97)		**Conc.**	0	
2368F	(4.79)		12379F	(2.47)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(4.79)		12679F	(2.47)		123689F	(2.03)				
1278F	(4.79)		23467/12369F	(2.47)		123789F	(2.27)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(4.79)		23478F	(2.49)		123789/123489F	0				
1267F	(4.79)		23478/12489F	0		123489F	(2.03)		OCDF	(3.51)	
2346/1249F	(4.79)		12489F	(2.47)							
2347/1279F	(4.79)		12349F	(2.47)							
2348F	(4.79)		12389F	(2.47)							
2378F	(4.79)										
2367/3467F	(4.79)										
1269F	(4.79)										
1239F	(4.79)										
1289F	(4.79)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 243-065-BYN

Report Created: 09-Jan-2023 11:12 Analyst: TF

Sample ID: Method Blank B7423_19742 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19742_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19742
Date Collected:	n/a	Split:	-	Date Extracted:	29-Dec-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	06-Jan-2023 17:53
Lab Project No:	B7423	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(5.46)		5.46	(5.46)	(5.46)	(5.46)
12378-PeCDD	(3.16)		3.16	(1.58)	(3.16)	(3.16)
123478-HxCDD	(2.49)		2.49	(0.249)	(0.249)	(0.249)
123678-HxCDD	(2.5)		2.5	(0.25)	(0.25)	(0.25)
123789-HxCDD	(2.12)		2.12	(0.212)	(0.212)	(0.212)
1234678-HpCDD	(2.27)		2.27	(0.0227)	(0.0227)	(0.0227)
OCDD	(2.93)		2.93	(0.00293)	(0.000293)	(0.00088)
2378-TCDF	(4.79)		4.79	(0.479)	(0.479)	(0.479)
12378-PeCDF	(2.45)		2.45	(0.123)	(0.123)	(0.0736)
23478-PeCDF	(2.49)		2.49	(1.25)	(1.25)	(0.748)
123478-HxCDF	(2)		2	(0.2)	(0.2)	(0.2)
123678-HxCDF	(1.94)		1.94	(0.194)	(0.194)	(0.194)
234678-HxCDF	(1.97)		1.97	(0.197)	(0.197)	(0.197)
123789-HxCDF	(2.27)		2.27	(0.227)	(0.227)	(0.227)
1234678-HpCDF	(1.15)		1.15	(0.0115)	(0.0115)	(0.0115)
1234789-HpCDF	(1.45)		1.45	(0.0145)	(0.0145)	(0.0145)
OCDF	(3.51)		3.51	(0.00351)	(0.000351)	(0.00105)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	5.24	6.02	5.75
EMPC = 0, ND = DL	10.5	12	11.5
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	5.24	6.02	5.75
EMPC = EMPC, ND = DL	10.5	12	11.5
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 243-065-BYN

SGS North America - DF v0.99

Sample ID: 0_19742_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19742_DF	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:35:36

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.1				ES 2378-TCDD	84.2	
12378-PeCDD	50.1				ES 12378-PeCDD	84.3	
123478-HxCDD	58.9				ES 123478-HxCDD	87.2	
123678-HxCDD	59.1				ES 123678-HxCDD	87.7	
123789-HxCDD	53.3				ES 123789-HxCDD	92.4	
1234678-HpCDD	56.5				ES 1234678-HpCDD	89.2	
OCDD	110				ES OCDD	88.3	
2378-TCDF	11.5				ES 2378-TCDF	87.4	
12378-PeCDF	51.9				ES 12378-PeCDF	87	
23478-PeCDF	54.9				ES 23478-PeCDF	80.7	
123478-HxCDF	52.7				ES 123478-HxCDF	95.1	
123678-HxCDF	53.5				ES 123678-HxCDF	98	
234678-HxCDF	55.4				ES 234678-HxCDF	92.7	
123789-HxCDF	54.7				ES 123789-HxCDF	79.5	
1234678-HpCDF	52.2				ES 1234678-HpCDF	92.5	
1234789-HpCDF	51.2				ES 1234789-HpCDF	88.5	
OCDF	100				ES OCDF	89.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	82.4	
Total TCDD	60		60		CS 12347-PeCDD	91	
Total PeCDD	76.9		76.9		CS 12346-PeCDF	94.8	
Total HxCDD	188		188		CS 123469-HxCDF	97.1	
Total HpCDD	70		70		CS 1234689-HpCDF	97.4	
Total TCDF	66.7		66.7				
Total PeCDF	209		209				
Total HxCDF	347		347				
Total HpCDF	103		103				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	122		122				
TEQ: ND=DL/2	122	0.468	122				
TEQ: ND=DL	122	0.937	122				

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Sample ID: 0_19742_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7423	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19742_DF	Date Extracted:	29-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19742	Date Analyzed:	06-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:21:20

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.8				ES 2378-TCDD	89	
12378-PeCDD	50.8				ES 12378-PeCDD	88.8	
123478-HxCDD	56.4				ES 123478-HxCDD	87	
123678-HxCDD	56.9				ES 123678-HxCDD	85.5	
123789-HxCDD	54.7				ES 123789-HxCDD	86.3	
1234678-HpCDD	56.1				ES 1234678-HpCDD	91.5	
OCDD	112				ES OCDD	82.3	
2378-TCDF	10.4				ES 2378-TCDF	87.4	
12378-PeCDF	51.8				ES 12378-PeCDF	87.4	
23478-PeCDF	57.1				ES 23478-PeCDF	80	
123478-HxCDF	53.3				ES 123478-HxCDF	88.6	
123678-HxCDF	51				ES 123678-HxCDF	92.8	
234678-HxCDF	53.8				ES 234678-HxCDF	91.8	
123789-HxCDF	50.9				ES 123789-HxCDF	77.8	
1234678-HpCDF	53.5				ES 1234678-HpCDF	89.3	
1234789-HpCDF	52.6				ES 1234789-HpCDF	84.8	
OCDF	105				ES OCDF	82.9	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	87.6	
Total TCDD	58.3		58.3		CS 12347-PeCDD	88.1	
Total PeCDD	77.6		77.6		CS 12346-PeCDF	88.7	
Total HxCDD	185		185		CS 123469-HxCDF	93.8	
Total HpCDD	68.9		68.9		CS 1234689-HpCDF	92.4	
Total TCDF	63.3		63.3				
Total PeCDF	211		211				
Total HxCDF	342		342				
Total HpCDF	106		106				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	122		122				
TEQ: ND=DL/2	122	0.401	122				
TEQ: ND=DL	122	0.802	122				

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Sample DUP			Method 1613B
Sample ID: 0_19742_OPR001			
Analyte	**OPR1_19742_DF pg/uL**	**OPR2_19742_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	12.1	11.8	2.4%
1,2,3,7,8-PeCDD	50.1	50.8	1.4%
1,2,3,4,7,8-HxCDD	58.9	56.4	4.3%
1,2,3,6,7,8-HxCDD	59.1	56.9	3.8%
1,2,3,7,8,9-HxCDD	53.3	54.7	2.6%
1,2,3,4,6,7,8-HpCDD	56.5	56.1	0.7%
OCDD	110	112	1.6%
2,3,7,8-TCDF	11.5	10.4	10.6%
1,2,3,7,8-PeCDF	51.9	51.8	0.1%
2,3,4,7,8-PeCDF	54.9	57.1	3.9%
1,2,3,4,7,8-HxCDF	52.7	53.3	1.0%
1,2,3,6,7,8-HxCDF	53.5	51	4.7%
2,3,4,6,7,8-HxCDF	55.4	53.8	2.9%
1,2,3,7,8,9-HxCDF	54.7	50.9	7.2%
1,2,3,4,6,7,8-HpCDF	52.2	53.5	2.5%
1,2,3,4,7,8,9-HpCDF	51.2	52.6	2.6%
OCDF	100	105	4.3%
Totals			
Total TCDD	60	58.3	2.8%
Total PeCDD	76.9	77.6	0.9%
Total HxCDD	188	185	1.7%
Total HpCDD	70	68.9	1.5%
Total TCDF	66.7	63.3	5.2%
Total PeCDF	209	211	0.9%
Total HxCDF	347	342	1.2%
Total HpCDF	103	106	2.6%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*15-Dec-22 at 10:33*
AP Project name:	*B7423*
Requested TAT:	*15 business days*
Projected due date:	*9-Jan-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-00265*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120722-S-MTK-WC-12	B7423_001	Leachate	2	1L amber	07-Dec-22	09:30	1.2	1	589473694347
12599404-120722-S-MTK-WC-11	B7423_002	Leachate	2	1L amber	07-Dec-22	10:20	1.2	1	589473694347
12599404-120722-S-MTK-WC-9	B7423_003	Leachate	2	1L amber	07-Dec-22	11:20	2.3	2	589473694358
12599404-120722-S-MTK-WC-6	B7423_004	Leachate	2	1L amber	07-Dec-22	13:25	1.2	1	589473694347
12599404-120722-S-MTK-WC-3	B7423_005	Leachate	2	1L amber	07-Dec-22	14:30	1.2, 2.3	1, 2	589473694347,589473694358,

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Erin Cropsey-Sjursen *Logged in by: Erin Cropsey-Sjursen* *QC'ed by:* AK 15 Dec 22

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

CHAIN OF CUSTODY

1/2

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD56827X

Client / Reporting Information	Project Information	
Company Name:	Project Name: SJRWP - PCFSE, Harris County, TX	
Street Address	Street	Billing Information (if different from Report to)
City State Zip	City State	Company Name
Project Contact E-mail: Kelly.Ramos@sgs.com	Project #	Street Address
Phone #	Client Purchase Order #	City State Zip
Sampler(s) Name(s) Phone: MTK	Project Manager	Attention:

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	dioxin/furans - leachate bottles!								LAB USE ONLY
1A	12599404-120722-S-MTK-WC-12		12/7/22	9:30:00 AM	MTK	SO										X								
2A	12599404-120722-S-MTK-WC-11		12/7/22	10:20:00 AM	MTK	SO										X								
3A	12599404-120722-S-MTK-WC-9		12/7/22	11:20:00 AM	MTK	SO										X								
4A	12599404-120722-S-MTK-WC-6		12/7/22	1:25:00 PM	MTK	SO										X								
5A	12599404-120722-S-MTK-WC-3		12/7/22	2:30:00 PM	MTK	SO										X								

Requested Analysis

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- ☐ Standard 10 Business Days
- ☐ 5 Business Days RUSH
- ☐ 3 Business Days RUSH
- ☐ 2 Business Days RUSH
- ☐ 1 Business Day EMERGENCY
- ☒ Other 1/7/1900

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3-4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☒ Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington with prep paperwork. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	Eddie C	12/14/22 15:26	1	2		2
3			3	4		4
5		12/15 10:33	5	Custody Seal #	☑ Intact ☐ Not Intact	Preserved where applicable ☐ Absent ☑ Therm. ID: IR4 On Ice ☑ Cooler Temp. °C 1-2, 2.3°C

jd56827x.xls

B7423 2/2

Date / Time: 12/12/2022 4:09:18 PM
CSR: KELLYR
Job #: JD56827X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD56827-1A	12599404-120722-S-MTK-WC-12	dioxin/furans - leachate bottles!		MTK	12/7/2022	9:30:00 AM	
JD56827-2A	12599404-120722-S-MTK-WC-11	dioxin/furans - leachate bottles!		MTK	12/7/2022	10:20:00 AM	
JD56827-3A	12599404-120722-S-MTK-WC-9	dioxin/furans - leachate bottles!		MTK	12/7/2022	11:20:00 AM	
JD56827-4A	12599404-120722-S-MTK-WC-6	dioxin/furans - leachate bottles!		MTK	12/7/2022	1:25:00 PM	
JD56827-5A	12599404-120722-S-MTK-WC-3	dioxin/furans - leachate bottles!		MTK	12/7/2022	2:30:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington with prep paperwork. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: Date: 12/15/22

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2. **TC Batch ID: TCO769**

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	4.01		4.00	4.01	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	4.00
PH Buffer														7.00	7.01		7.00	7.01					7.00	7.01
PH Buffer														10.00	10.00		10.00	10.00					10.00	10.01
LB (fluid #1)	N	64	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.74
LB (fluid #2)	N	NA	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	NA
JD56629-1A	N	3	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.40	100	100.40	NA	8.82	5 mins	NA	1.63	1	4.93	YES	2008	NA	6.08
JD56629-2A	N	6	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.63	100	100.63	NA	8.92	5 mins	NA	1.61	1	4.93	YES	2012.6	NA	5.66
JD56730-1A	N	8	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.21	100	100.21	NA	9.23	5 mins	NA	3.94	1	4.93	YES	2004.2	NA	6.33
JD56730-2A	N	15	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.13	100	100.13	NA	10.43	5 mins	NA	3.96	1	4.93	YES	2002.6	NA	6.82
JD56730-3A	N	18	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.69	100	100.69	NA	9.03	5 mins	NA	3.97	1	4.93	YES	2013.8	NA	6.23
JD56730-4A	N	32	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.25	100	100.25	NA	9.13	5 mins	NA	3.90	1	4.93	YES	2005	NA	6.33
JD56827-1	N	46	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.40	100	100.40	NA	9.04	5 mins	NA	1.67	1	4.93	YES	2008	NA	6.22
JD56827-2	N	48	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.53	100	100.53	NA	9.14	5 mins	NA	1.66	1	4.93	YES	2010.6	NA	6.24
JD56827-3	N	49	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.20	100	100.20	NA	8.79	5 mins	NA	1.56	1	4.93	YES	2004	NA	5.69
JD56827-4	N	52	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.63	100	100.63	NA	9.34	5 mins	NA	1.56	1	4.93	YES	2012.6	NA	6.14
PH Buffer														4.00	4.04		2.00	2.01					4.00	4.02
PH Buffer														10.00	10.00		4.00	4.04					10.00	10.01
JD56827-5	N	53	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.28	100	100.28	NA	9.33	5 mins	NA	1.54	1	4.93	YES	2005.6	NA	6.23
JD56827-1A	N	57	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.53	100	100.53	NA	9.04	5 mins	NA	1.67	1	4.93	YES	2010.6	NA	6.27
JD56827-2A	N	58	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.42	100	100.42	NA	9.14	5 mins	NA	1.66	1	4.93	YES	2008.4	NA	6.18
JD56827-3A	N	59	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.89	100	100.89	NA	8.79	5 mins	NA	1.56	1	4.93	YES	2017.8	NA	5.33
JD56827-4A	N	62	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.74	100	100.74	NA	9.34	5 mins	NA	1.56	1	4.93	YES	2014.8	NA	6.27
JD56827-5A	N	65	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.40	100	100.40	NA	9.33	5 mins	NA	1.54	1	4.93	YES	2008	NA	6.36
JD56863-1	N	66	M/E	9	9-Dec-22	10-Dec-22	18:09	10:09	14:09	10:10	100.61	100	100.61	NA	9.44	5 mins	NA	1.63	1	4.93	YES	2012.2	NA	5.79
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.04		2.00	2.01					4.00	4.05
PH Buffer														10.00	10.00		4.00	4.04					7.00	7.03

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____ Set-up analyst: NF Take-down analyst: NF

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

TC Batch ID: TCO769

Balance ID: B54

pH meter ID: PH 67

Temperature ranges during leaching. (Must be from 20.5-25.4 °C, and recorded for each leaching period).

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	29-Oct-22
5	29	29-Oct-22
7	28	29-Oct-22
8	NA	22-Apr-21
9	32	29-Oct-22
10	32	29-Oct-22
11	NA	7-Sep-21
12	28	29-Oct-22

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID: 5624720

Expiration: 13-Jul-23

Recorded temperature: 50

Heating time: Start:

End:

Reagent Information	**Reagent ID or Manufacturer Lot**	**Expiration Date**
Reagent		
Extraction fluid 1	GNE10-72115-TCLP	15-Dec-2022
Extraction fluid 2	GNE10-72116-TCLP	15-Dec-2022
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE7-70898-TCLP	20-Jan-2023
pH 2 buffer	FISHER 210051	1-Mar-2023
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Sep-2023
pH 10 buffer	FISHER 210276	1-Feb-2023
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jan-2023
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	13/2/2022

B7423

1

ORIGIN ID:ZRPA (732) 328-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 14DEC22
ACTWGT: 45.05 LB
CAD: 0692838/CAFE3211

BILL SENDER

TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

WILMINGTON NC 28405

(910) 794-1613 REF:
INV:
PO: DEPT:

12/15 10:33

1.2°C

551C3/9897/104C

FedEx Express

E

J181118060501uv

1 of 2

TRK# 0201 5894 7369 4347

MASTER

G5 ILMA

THU - 15 DEC 10:30A
PRIORITY OVERNIGHT

28405
NC-US RDU

Part # 156148-434 MTW EXP 05/23

B7423

(2)

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 14DEC22
ACTWGT: 45.05 LB
CAD: 0692838/CAFE3211

BILL SENDER

TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

WILMINGTON NC 28405
(910) 794-1613

12/15 10:33
2.3°C

REF:
INV:
PO:
DEPT:

FedEx
Express

2 of 2
MPS# 0263 5894 7369 4358
Mstr# 5894 7369 4347

0201

THU - 15 DEC 10:30A
PRIORITY OVERNIGHT

G5 ILMA

28405
NC-US **RDU**

Part # 156148-434 MTW EXP 05/23

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-120522-S-MTK-WC-18 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.59 L	Lab Sample ID	B7460_19730_DF_001	Date Extracted:	22-Dec-2022
Date Collected:	05-Dec-2022	pH:	6	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:30:35

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.63			ES 2378-TCDD	88.3	
12378-PeCDD	ND	3.42			ES 12378-PeCDD	112	
123478-HxCDD	ND	2.7			ES 123478-HxCDD	85.3	
123678-HxCDD	ND	3.21			ES 123678-HxCDD	77.3	
123789-HxCDD	ND	3.12			ES 123789-HxCDD	81.2	
1234678-HpCDD	ND	2.1			ES 1234678-HpCDD	97.6	
OCDD	47.7			J	ES OCDD	81	
2378-TCDF	EMPC		28.4		ES 2378-TCDF	92.7	
12378-PeCDF	ND	1.98			ES 12378-PeCDF	112	
23478-PeCDF	ND	1.9			ES 23478-PeCDF	109	
123478-HxCDF	ND	1.97			ES 123478-HxCDF	77.5	
123678-HxCDF	ND	1.93			ES 123678-HxCDF	74.6	
234678-HxCDF	ND	2.02			ES 234678-HxCDF	76.4	
123789-HxCDF	ND	2.26			ES 123789-HxCDF	83.8	
1234678-HpCDF	ND	1.84			ES 1234678-HpCDF	91.5	
1234789-HpCDF	ND	2.16			ES 1234789-HpCDF	90.9	
OCDF	EMPC		12.3	J	ES OCDF	76.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	102	
Total TCDD	ND	6.63	ND		CS 12347-PeCDD	128	
Total PeCDD	ND	3.42	ND		CS 12346-PeCDF	117	
Total HxCDD	ND	3	ND		CS 123469-HxCDF	85.6	
Total HpCDD	ND		5.52		CS 1234689-HpCDF	103	
Total TCDF	ND		40.1				
Total PeCDF	ND	1.94	ND				
Total HxCDF	ND	2.04	ND				
Total HpCDF	ND	1.98	ND				
Total PCDD/Fs	**47.7**		**106**				
WHO-2005 TEQs							
TEQ: ND=0	0.0143		2.86				
TEQ: ND=DL/2	6.24	6.36	9.09				
TEQ: ND=DL	12.5	12.7	15.3				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 12599404-120522-S-MTK-WC-18 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.59 L	Lab Sample ID:	B7460_19730_DF_001	Date Extracted:	22-Dec-2022
Date Collected:	05-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:30:35

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.63)		12479/12468D	(3.42)		124679/124689D	(3)		1234679D	[5.52]	J
1379D	(6.63)		12469D	(3.42)		123468D	(3)		1234678D	(2.1)	
1369D	(6.63)		12368D	(3.42)		123679/123689D	(3)				
1469D	(6.63)		12478D	(3.42)		123469D	(3)				
1247D...[4]	(6.63)		12379D	(3.42)		123478D	(2.7)				
1378D	(6.63)		12369D...[3]	(3.42)		123678D	(3.21)				
1268D	(6.63)		12346/12347D	(3.42)		123467D	(3)				
1478D	(6.63)		12378D	(3.42)		123789D	(3.12)		**Conc.**	0	
1279D	(6.63)		12367D	(3.42)					**EMPC**	5.52	
1234/1269D	(6.63)		12389D	(3.42)							
1236D	(6.63)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(6.63)										
1239D	(6.63)								OCDD	47.7	J
2378D	(6.63)										
1278D	(6.63)										
1267D	(6.63)										
1289D	(6.63)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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Tel: +1 910 794-1613
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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0143	2.86
TEQ: ND=DL/2	6.24	9.09
TEQ: ND=DL	12.5	15.3

	Conc.	EMPC
Total PCDD/Fs	47.7	106

Checkcode: 882-270-TKN

Report Created: 05-Jan-2023 09:45 Analyst: pw

Sample ID: 12599404-120522-S-MTK-WC-18 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.59 L	Lab Sample ID:	B7460_19730_DF_001	Date Extracted:	22-Dec-2022
Date Collected:	05-Dec-2022	pH:	6	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:30:35

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.6)		13468/12468F	(1.69)		123468F	(2.04)		1234678F	(1.84)	
1468F	(2.6)		13678F...[3]	(1.94)		124678/134678F	(2.04)		1234679F	(1.98)	
2468F	(2.6)		12368F...[3]	(1.94)		134679F	(2.04)		1234689F	(1.98)	
1346/1246F	(2.6)		14678F	(1.94)		124679F	(2.04)		1234789F	(2.16)	
1347F...[3]	(2.6)		13479F	(1.94)		124689F	(2.04)				
1348F	(2.6)		13469/12479F	(1.94)		123467F	(2.04)				
1248F...[3]	(2.6)		12346F	(1.94)		123478F	(1.97)				
1268F	(2.6)		23468/12469F	(1.94)		123678F	(1.93)				
1467F	(2.6)		12347F	(1.94)		123479F	(2.04)				
1478F	(2.6)		12348F	(1.94)		123469F	(2.04)				
1369/1237F	(2.6)		12378F	(1.98)		123679F	(2.04)				
2467F	(2.6)		12678/12367F	(1.94)		234678F	(2.02)		**Conc.**	0	
2368F	(2.6)		12379F	(1.94)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.6)		12679F	(1.94)		123689F	(2.04)				
1278F	[11.7]		23467/12369F	(1.94)		123789F	(2.26)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.6)		23478F	(1.9)		123789/123489F	0				
1267F	(2.6)		23478/12489F	0		123489F	(2.04)		OCDF	[12.3]	J
2346/1249F	(2.6)		12489F	(1.94)							
2347/1279F	(2.6)		12349F	(1.94)							
2348F	(2.6)		12389F	(1.94)							
2378F	[28.4]										
2367/3467F	(2.6)										
1269F	(2.6)										
1239F	(2.6)										
1289F	(2.6)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	40.1		**EMPC**	0		**EMPC**	0				

Checkcode: 882-270-TKN

Report Created: 05-Jan-2023 09:45 Analyst: pw

Sample ID: 12599404-120522-S-MTK-WC-18 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7460_19730_DF_001
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.59 L	QC Batch No.:	19730
Date Collected:	05-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 16:30
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.63)		6.63	(6.63)	(6.63)	(6.63)
12378-PeCDD	(3.42)		3.42	(1.71)	(3.42)	(3.42)
123478-HxCDD	(2.7)		2.7	(0.27)	(0.27)	(0.27)
123678-HxCDD	(3.21)		3.21	(0.321)	(0.321)	(0.321)
123789-HxCDD	(3.12)		3.12	(0.312)	(0.312)	(0.312)
1234678-HpCDD	(2.1)		2.1	(0.021)	(0.021)	(0.021)
OCDD	47.7	J	3.68	0.0477	0.00477	0.0143
2378-TCDF	[28.4]		2.6	[2.84]	[2.84]	[2.84]
12378-PeCDF	(1.98)		1.98	(0.0992)	(0.0992)	(0.0595)
23478-PeCDF	(1.9)		1.9	(0.948)	(0.948)	(0.569)
123478-HxCDF	(1.97)		1.97	(0.197)	(0.197)	(0.197)
123678-HxCDF	(1.93)		1.93	(0.193)	(0.193)	(0.193)
234678-HxCDF	(2.02)		2.02	(0.202)	(0.202)	(0.202)
123789-HxCDF	(2.26)		2.26	(0.226)	(0.226)	(0.226)
1234678-HpCDF	(1.84)		1.84	(0.0184)	(0.0184)	(0.0184)
1234789-HpCDF	(2.16)		2.16	(0.0216)	(0.0216)	(0.0216)
OCDF	[12.3]	J	3.62	[0.0123]	[0.00123]	[0.00368]

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TEQ Summaries			
EMPC = 0, ND = 0	0.0477	0.00477	0.0143
EMPC = 0, ND = DL / 2	5.63	6.44	6.24
EMPC = 0, ND = DL	11.2	12.9	12.5
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	2.9	2.85	2.86
EMPC = EMPC, ND = DL / 2	8.49	9.29	9.09
EMPC = EMPC, ND = DL	14.1	15.7	15.3
EMPC = EMPC, < J-level = 0	2.84	2.84	2.84

Checkcode: 882-270-TKN

SGS North America - DF v0.99

Sample ID: 12599404-120522-S-MTK-WC-17 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	Lab Sample ID	B7460_19730_DF_002	Date Extracted:	22-Dec-2022
Date Collected:	05-Dec-2022	pH:	7	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:18:10

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	3.34			ES 2378-TCDD	89.2	
12378-PeCDD	ND	2.09			ES 12378-PeCDD	109	
123478-HxCDD	ND	2.14			ES 123478-HxCDD	88	
123678-HxCDD	ND	2.16			ES 123678-HxCDD	82.1	
123789-HxCDD	ND	2.23			ES 123789-HxCDD	85.2	
1234678-HpCDD	EMPC		1.52	J	ES 1234678-HpCDD	99.9	
OCDD	ND	2.93			ES OCDD	92	
2378-TCDF	4.06			J	ES 2378-TCDF	91.7	
12378-PeCDF	ND	1.91			ES 12378-PeCDF	102	
23478-PeCDF	ND	1.8			ES 23478-PeCDF	102	
123478-HxCDF	ND	1.71			ES 123478-HxCDF	82.1	
123678-HxCDF	ND	1.52			ES 123678-HxCDF	80.7	
234678-HxCDF	ND	1.78			ES 234678-HxCDF	83.2	
123789-HxCDF	ND	2.01			ES 123789-HxCDF	87.2	
1234678-HpCDF	ND	1.19			ES 1234678-HpCDF	94.3	
1234789-HpCDF	ND	1.42			ES 1234789-HpCDF	102	
OCDF	ND	2.79			ES OCDF	90.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	104	
Total TCDD	ND	3.34	ND		CS 12347-PeCDD	129	
Total PeCDD	ND	2.09	ND		CS 12346-PeCDF	111	
Total HxCDD	ND	2.17	ND		CS 123469-HxCDF	92.5	
Total HpCDD	ND		1.52		CS 1234689-HpCDF	110	
Total TCDF	4.06		4.06				
Total PeCDF	ND	1.85	ND				
Total HxCDF	ND	1.74	ND				
Total HpCDF	ND	1.3	ND				
Total PCDD/Fs	**4.06**		**5.58**				
WHO-2005 TEQs							
TEQ: ND=0	0.406		0.421				
TEQ: ND=DL/2	4.11	3.8	4.12				
TEQ: ND=DL	7.81	7.6	7.83				

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Sample ID: 12599404-120522-S-MTK-WC-17 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	Lab Sample ID:	B7460_19730_DF_002	Date Extracted:	22-Dec-2022
Date Collected:	05-Dec-2022	pH:	7	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:18:10

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(3.34)		12479/12468D	(2.09)		124679/124689D	(2.17)		1234679D	(1.81)	
1379D	(3.34)		12469D	(2.09)		123468D	(2.17)		1234678D	[1.52]	J
1369D	(3.34)		12368D	(2.09)		123679/123689D	(2.17)				
1469D	(3.34)		12478D	(2.09)		123469D	(2.17)				
1247D...[4]	(3.34)		12379D	(2.09)		123478D	(2.14)				
1378D	(3.34)		12369D...[3]	(2.09)		123678D	(2.16)				
1268D	(3.34)		12346/12347D	(2.09)		123467D	(2.17)				
1478D	(3.34)		12378D	(2.09)		123789D	(2.23)		**Conc.**	0	
1279D	(3.34)		12367D	(2.09)					**EMPC**	1.52	
1234/1269D	(3.34)		12389D	(2.09)							
1236D	(3.34)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(3.34)									**(pg/L)**	
1239D	(3.34)								OCDD	(2.93)	
2378D	(3.34)										
1278D	(3.34)										
1267D	(3.34)										
1289D	(3.34)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.406	0.421
TEQ: ND=DL/2	4.11	4.12
TEQ: ND=DL	7.81	7.83

	Conc.	EMPC
Total PCDD/Fs	4.06	5.58

Checkcode: 118-065-BLP

Report Created: 05-Jan-2023 09:45 Analyst: pw

Sample ID: 12599404-120522-S-MTK-WC-17 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	15-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	Lab Sample ID:	B7460_19730_DF_002	Date Extracted:	22-Dec-2022
Date Collected:	05-Dec-2022	pH:	7	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	17:18:10

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.76)		13468/12468F	(2.27)		123468F	(1.74)		1234678F	(1.19)	
1468F	(1.76)		13678F...[3]	(1.85)		124678/134678F	(1.74)		1234679F	(1.3)	
2468F	(1.76)		12368F...[3]	(1.85)		134679F	(1.74)		1234689F	(1.3)	
1346/1246F	(1.76)		14678F	(1.85)		124679F	(1.74)		1234789F	(1.42)	
1347F...[3]	(1.76)		13479F	(1.85)		124689F	(1.74)				
1348F	(1.76)		13469/12479F	(1.85)		123467F	(1.74)				
1248F...[3]	(1.76)		12346F	(1.85)		123478F	(1.71)				
1268F	(1.76)		23468/12469F	(1.85)		123678F	(1.52)				
1467F	(1.76)		12347F	(1.85)		123479F	(1.74)				
1478F	(1.76)		12348F	(1.85)		123469F	(1.74)				
1369/1237F	(1.76)		12378F	(1.91)		123679F	(1.74)				
2467F	(1.76)		12678/12367F	(1.85)		234678F	(1.78)		**Conc.**	0	
2368F	(1.76)		12379F	(1.85)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.76)		12679F	(1.85)		123689F	(1.74)				
1278F	(1.76)		23467/12369F	(1.85)		123789F	(2.01)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.76)		23478F	(1.8)		123789/123489F	0				
1267F	(1.76)		23478/12489F	0		123489F	(1.74)		OCDF	(2.79)	
2346/1249F	(1.76)		12489F	(1.85)							
2347/1279F	(1.76)		12349F	(1.85)							
2348F	(1.76)		12389F	(1.85)							
2378F	4.06	J									
2367/3467F	(1.76)										
1269F	(1.76)										
1239F	(1.76)										
1289F	(1.76)										
Conc.	4.06		**Conc.**	0		**Conc.**	0				
EMPC	4.06		**EMPC**	0		**EMPC**	0				

Checkcode: 118-065-BLP

Report Created: 05-Jan-2023 09:45 Analyst: pw

Sample ID: 12599404-120522-S-MTK-WC-17 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7460_19730_DF_002
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.62 L	QC Batch No.:	19730
Date Collected:	05-Dec-2022	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	15-Dec-2022	Dilution:	-	Date Analyzed:	04-Jan-2023 17:18
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(3.34)		3.34	(3.34)	(3.34)	(3.34)
12378-PeCDD	(2.09)		2.09	(1.04)	(2.09)	(2.09)
123478-HxCDD	(2.14)		2.14	(0.214)	(0.214)	(0.214)
123678-HxCDD	(2.16)		2.16	(0.216)	(0.216)	(0.216)
123789-HxCDD	(2.23)		2.23	(0.223)	(0.223)	(0.223)
1234678-HpCDD	[1.52]	J	1.81	[0.0152]	[0.0152]	[0.0152]
OCDD	(2.93)		2.93	(0.00293)	(0.000293)	(0.000879)
2378-TCDF	4.06	J	1.76	0.406	0.406	0.406
12378-PeCDF	(1.91)		1.91	(0.0956)	(0.0956)	(0.0574)
23478-PeCDF	(1.8)		1.8	(0.898)	(0.898)	(0.539)
123478-HxCDF	(1.71)		1.71	(0.171)	(0.171)	(0.171)
123678-HxCDF	(1.52)		1.52	(0.152)	(0.152)	(0.152)
234678-HxCDF	(1.78)		1.78	(0.178)	(0.178)	(0.178)
123789-HxCDF	(2.01)		2.01	(0.201)	(0.201)	(0.201)
1234678-HpCDF	(1.19)		1.19	(0.0119)	(0.0119)	(0.0119)
1234789-HpCDF	(1.42)		1.42	(0.0142)	(0.0142)	(0.0142)
OCDF	(2.79)		2.79	(0.00279)	(0.000279)	(0.000837)

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TEQ Summaries			
EMPC = 0, ND = 0	0.406	0.406	0.406
EMPC = 0, ND = DL / 2	3.79	4.31	4.11
EMPC = 0, ND = DL	7.17	8.21	7.81
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.421	0.421	0.421
EMPC = EMPC, ND = DL / 2	3.8	4.32	4.12
EMPC = EMPC, ND = DL	7.18	8.22	7.83
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 118-065-BLP

SGS North America - DF v0.99

Sample ID: 12599404-120822-S-MTK-WC-8 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	Lab Sample ID	B7460_19754_DF_003	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	2:48:05

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	6.5			ES 2378-TCDD	97.4	
12378-PeCDD	ND	5.54			ES 12378-PeCDD	88.9	
123478-HxCDD	ND	4.76			ES 123478-HxCDD	98.3	
123678-HxCDD	ND	4.46			ES 123678-HxCDD	94.9	
123789-HxCDD	ND	4.33			ES 123789-HxCDD	98.8	
1234678-HpCDD	ND	5.21			ES 1234678-HpCDD	80.5	
OCDD	41.5			J	ES OCDD	68.6	
2378-TCDF	EMPC		13.4		ES 2378-TCDF	97.1	
12378-PeCDF	ND	4.41			ES 12378-PeCDF	91.4	
23478-PeCDF	ND	4.08			ES 23478-PeCDF	91.9	
123478-HxCDF	ND	4.27			ES 123478-HxCDF	96	
123678-HxCDF	ND	4.47			ES 123678-HxCDF	94.7	
234678-HxCDF	ND	4.76			ES 234678-HxCDF	94.4	
123789-HxCDF	ND	4.94			ES 123789-HxCDF	88.9	
1234678-HpCDF	ND	4.86			ES 1234678-HpCDF	82.6	
1234789-HpCDF	ND	6.12			ES 1234789-HpCDF	76.5	
OCDF	21.6			J	ES OCDF	64.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	87.7	
Total TCDD	ND	6.5	ND		CS 12347-PeCDD	89.4	
Total PeCDD	ND	5.54	ND		CS 12346-PeCDF	89.6	
Total HxCDD	ND	4.51	ND		CS 123469-HxCDF	92.2	
Total HpCDD	ND	5.21	ND		CS 1234689-HpCDF	78.4	
Total TCDF	ND		13.4				
Total PeCDF	ND	4.24	ND				
Total HxCDF	ND	4.6	ND				
Total HpCDF	ND	5.44	ND				
Total PCDD/Fs	**63.1**		**76.4**				
WHO-2005 TEQs							
TEQ: ND=0	0.0189		1.36				
TEQ: ND=DL/2	8.4	8.67	9.74				
TEQ: ND=DL	16.8	17.3	18.1				

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Sample ID: 12599404-120822-S-MTK-WC-8 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	Lab Sample ID:	B7460_19754_DF_003	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	2:48:05

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(6.5)		12479/12468D	(5.54)		124679/124689D	(4.51)		1234679D	(5.21)	
1379D	(6.5)		12469D	(5.54)		123468D	(4.51)		1234678D	(5.21)	
1369D	(6.5)		12368D	(5.54)		123679/123689D	(4.51)				
1469D	(6.5)		12478D	(5.54)		123469D	(4.51)				
1247D...[4]	(6.5)		12379D	(5.54)		123478D	(4.76)				
1378D	(6.5)		12369D...[3]	(5.54)		123678D	(4.46)				
1268D	(6.5)		12346/12347D	(5.54)		123467D	(4.51)				
1478D	(6.5)		12378D	(5.54)		123789D	(4.33)		**Conc.**	0	
1279D	(6.5)		12367D	(5.54)					**EMPC**	0	
1234/1269D	(6.5)		12389D	(5.54)							
1236D	(6.5)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(6.5)										
1239D	(6.5)								OCDD	41.5	J
2378D	(6.5)										
1278D	(6.5)										
1267D	(6.5)										
1289D	(6.5)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0189	1.36
TEQ: ND=DL/2	8.4	9.74
TEQ: ND=DL	16.8	18.1

	Conc.	EMPC
Total PCDD/Fs	63.1	76.4

Checkcode: 545-501-LDD

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-8 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	Lab Sample ID:	B7460_19754_DF_003	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	2:48:05

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(5.83)		13468/12468F	(2.05)		123468F	(4.6)		1234678F	(4.86)	
1468F	(5.83)		13678F...[3]	(4.24)		124678/134678F	(4.6)		1234679F	(5.44)	
2468F	(5.83)		12368F...[3]	(4.24)		134679F	(4.6)		1234689F	(5.44)	
1346/1246F	(5.83)		14678F	(4.24)		124679F	(4.6)		1234789F	(6.12)	
1347F...[3]	(5.83)		13479F	(4.24)		124689F	(4.6)				
1348F	(5.83)		13469/12479F	(4.24)		123467F	(4.6)				
1248F...[3]	(5.83)		12346F	(4.24)		123478F	(4.27)				
1268F	(5.83)		23468/12469F	(4.24)		123678F	(4.47)				
1467F	(5.83)		12347F	(4.24)		123479F	(4.6)				
1478F	(5.83)		12348F	(4.24)		123469F	(4.6)				
1369/1237F	(5.83)		12378F	(4.41)		123679F	(4.6)				
2467F	(5.83)		12678/12367F	(4.24)		234678F	(4.76)		**Conc.**	0	
2368F	(5.83)		12379F	(4.24)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(5.83)		12679F	(4.24)		123689F	(4.6)				
1278F	(5.83)		23467/12369F	(4.24)		123789F	(4.94)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(5.83)		23478F	(4.08)		123789/123489F	0				
1267F	(5.83)		23478/12489F	0		123489F	(4.6)		OCDF	21.6	J
2346/1249F	(5.83)		12489F	(4.24)							
2347/1279F	(5.83)		12349F	(4.24)							
2348F	(5.83)		12389F	(4.24)							
2378F	[13.4]										
2367/3467F	(5.83)										
1269F	(5.83)										
1239F	(5.83)										
1289F	(5.83)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	13.4		**EMPC**	0		**EMPC**	0				

Checkcode: 545-501-LDD

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-8 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7460_19754_DF_003
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.74 L	QC Batch No.:	19754
Date Collected:	08-Dec-2022	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	23-Dec-2022	Dilution:	-	Date Analyzed:	10-Jan-2023 02:48
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(6.5)		6.5	(6.5)	(6.5)	(6.5)
12378-PeCDD	(5.54)		5.54	(2.77)	(5.54)	(5.54)
123478-HxCDD	(4.76)		4.76	(0.476)	(0.476)	(0.476)
123678-HxCDD	(4.46)		4.46	(0.446)	(0.446)	(0.446)
123789-HxCDD	(4.33)		4.33	(0.433)	(0.433)	(0.433)
1234678-HpCDD	(5.21)		5.21	(0.0521)	(0.0521)	(0.0521)
OCDD	41.5	J	11.1	0.0415	0.00415	0.0124
2378-TCDF	[13.4]		5.83	[1.34]	[1.34]	[1.34]
12378-PeCDF	(4.41)		4.41	(0.22)	(0.22)	(0.132)
23478-PeCDF	(4.08)		4.08	(2.04)	(2.04)	(1.22)
123478-HxCDF	(4.27)		4.27	(0.427)	(0.427)	(0.427)
123678-HxCDF	(4.47)		4.47	(0.447)	(0.447)	(0.447)
234678-HxCDF	(4.76)		4.76	(0.476)	(0.476)	(0.476)
123789-HxCDF	(4.94)		4.94	(0.494)	(0.494)	(0.494)
1234678-HpCDF	(4.86)		4.86	(0.0486)	(0.0486)	(0.0486)
1234789-HpCDF	(6.12)		6.12	(0.0612)	(0.0612)	(0.0612)
OCDF	21.6	J	5.7	0.0216	0.00216	0.00648

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TEQ Summaries			
EMPC = 0, ND = 0	0.0631	0.00631	0.0189
EMPC = 0, ND = DL / 2	7.51	8.84	8.4
EMPC = 0, ND = DL	15	17.7	16.8
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	1.4	1.35	1.36
EMPC = EMPC, ND = DL / 2	8.85	10.2	9.74
EMPC = EMPC, ND = DL	16.3	19	18.1
EMPC = EMPC, < J-level = 0	1.34	1.34	1.34

Checkcode: 545-501-LDD

SGS North America - DF v0.99

Sample ID: 12599404-120822-S-MTK-WC-10 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.89 L	Lab Sample ID	B7460_19754_DF_004	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	3:34:23

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	4.41			ES 2378-TCDD	95	
12378-PeCDD	ND	3.29			ES 12378-PeCDD	98.1	
123478-HxCDD	ND	2.74			ES 123478-HxCDD	96.8	
123678-HxCDD	ND	2.73			ES 123678-HxCDD	95.8	
123789-HxCDD	ND	2.55			ES 123789-HxCDD	94.4	
1234678-HpCDD	ND	3.05			ES 1234678-HpCDD	77.9	
OCDD	EMPC		27.2	J	ES OCDD	64.5	
2378-TCDF	9.66				ES 2378-TCDF	94.9	
12378-PeCDF	ND	2.33			ES 12378-PeCDF	99.2	
23478-PeCDF	ND	2.21			ES 23478-PeCDF	99.5	
123478-HxCDF	ND	1.78			ES 123478-HxCDF	94.9	
123678-HxCDF	ND	1.85			ES 123678-HxCDF	94.5	
234678-HxCDF	ND	2.09			ES 234678-HxCDF	93.8	
123789-HxCDF	ND	1.82			ES 123789-HxCDF	89.8	
1234678-HpCDF	ND	2.19			ES 1234678-HpCDF	85.4	
1234789-HpCDF	ND	2.82			ES 1234789-HpCDF	74.8	
OCDF	ND	5.48			ES OCDF	62.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	90.6	
Total TCDD	ND	4.41	ND		CS 12347-PeCDD	95.8	
Total PeCDD	ND	3.29	ND		CS 12346-PeCDF	101	
Total HxCDD	ND	2.66	ND		CS 123469-HxCDF	94.3	
Total HpCDD	ND	3.05	ND		CS 1234689-HpCDF	80.5	
Total TCDF	9.66		9.66				
Total PeCDF	ND	2.27	ND				
Total HxCDF	ND	1.89	ND				
Total HpCDF	ND	2.47	ND				
Total PCDD/Fs	**9.66**		**36.9**				
WHO-2005 TEQs							
TEQ: ND=0	0.966		0.974				
TEQ: ND=DL/2	6.01	5.29	6.01				
TEQ: ND=DL	11	10.6	11.1				

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Sample ID: 12599404-120822-S-MTK-WC-10 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.89 L	Lab Sample ID:	B7460_19754_DF_004	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	3:34:23

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(4.41)		12479/12468D	(3.29)		124679/124689D	(2.66)		1234679D	(3.05)	
1379D	(4.41)		12469D	(3.29)		123468D	(2.66)		1234678D	(3.05)	
1369D	(4.41)		12368D	(3.29)		123679/123689D	(2.66)				
1469D	(4.41)		12478D	(3.29)		123469D	(2.66)				
1247D...[4]	(4.41)		12379D	(3.29)		123478D	(2.74)				
1378D	(4.41)		12369D...[3]	(3.29)		123678D	(2.73)				
1268D	(4.41)		12346/12347D	(3.29)		123467D	(2.66)				
1478D	(4.41)		12378D	(3.29)		123789D	(2.55)		**Conc.**	0	
1279D	(4.41)		12367D	(3.29)					**EMPC**	0	
1234/1269D	(4.41)		12389D	(3.29)							
1236D	(4.41)								**Octa-Dioxin**	**Conc**	**Qualifiers**
1237/1238D	(4.41)									**(pg/L)**	
1239D	(4.41)								OCDD	[27.2]	J
2378D	(4.41)										
1278D	(4.41)										
1267D	(4.41)										
1289D	(4.41)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.966	0.974
TEQ: ND=DL/2	6.01	6.01
TEQ: ND=DL	11	11.1

	Conc.	EMPC
Total PCDD/Fs	9.66	36.9

Checkcode: 648-387-TXH

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-10 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.89 L	Lab Sample ID:	B7460_19754_DF_004	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	7	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	3:34:23

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(4.99)		13468/12468F	(1.62)		123468F	(1.89)		1234678F	(2.19)	
1468F	(4.99)		13678F...[3]	(2.27)		124678/134678F	(1.89)		1234679F	(2.47)	
2468F	(4.99)		12368F...[3]	(2.27)		134679F	(1.89)		1234689F	(2.47)	
1346/1246F	(4.99)		14678F	(2.27)		124679F	(1.89)		1234789F	(2.82)	
1347F...[3]	(4.99)		13479F	(2.27)		124689F	(1.89)				
1348F	(4.99)		13469/12479F	(2.27)		123467F	(1.89)				
1248F...[3]	(4.99)		12346F	(2.27)		123478F	(1.78)				
1268F	(4.99)		23468/12469F	(2.27)		123678F	(1.85)				
1467F	(4.99)		12347F	(2.27)		123479F	(1.89)				
1478F	(4.99)		12348F	(2.27)		123469F	(1.89)				
1369/1237F	(4.99)		12378F	(2.33)		123679F	(1.89)				
2467F	(4.99)		12678/12367F	(2.27)		234678F	(2.09)		**Conc.**	0	
2368F	(4.99)		12379F	(2.27)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(4.99)		12679F	(2.27)		123689F	(1.89)				
1278F	(4.99)		23467/12369F	(2.27)		123789F	(1.82)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(4.99)		23478F	(2.21)		123789/123489F	0				
1267F	(4.99)		23478/12489F	0		123489F	(1.89)		OCDF	(5.48)	
2346/1249F	(4.99)		12489F	(2.27)							
2347/1279F	(4.99)		12349F	(2.27)							
2348F	(4.99)		12389F	(2.27)							
2378F	9.66										
2367/3467F	(4.99)										
1269F	(4.99)										
1239F	(4.99)										
1289F	(4.99)										
Conc.	9.66		**Conc.**	0		**Conc.**	0				
EMPC	9.66		**EMPC**	0		**EMPC**	0				

Checkcode: 648-387-TXH

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-10 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7460_19754_DF_004
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.89 L	QC Batch No.:	19754
Date Collected:	08-Dec-2022	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	23-Dec-2022	Dilution:	-	Date Analyzed:	10-Jan-2023 03:34
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(4.41)		4.41	(4.41)	(4.41)	(4.41)
12378-PeCDD	(3.29)		3.29	(1.65)	(3.29)	(3.29)
123478-HxCDD	(2.74)		2.74	(0.274)	(0.274)	(0.274)
123678-HxCDD	(2.73)		2.73	(0.273)	(0.273)	(0.273)
123789-HxCDD	(2.55)		2.55	(0.255)	(0.255)	(0.255)
1234678-HpCDD	(3.05)		3.05	(0.0305)	(0.0305)	(0.0305)
OCDD	[27.2]	J	5.48	[0.0272]	[0.00272]	[0.00816]
2378-TCDF	9.66		4.99	0.966	0.966	0.966
12378-PeCDF	(2.33)		2.33	(0.116)	(0.116)	(0.0698)
23478-PeCDF	(2.21)		2.21	(1.11)	(1.11)	(0.664)
123478-HxCDF	(1.78)		1.78	(0.178)	(0.178)	(0.178)
123678-HxCDF	(1.85)		1.85	(0.185)	(0.185)	(0.185)
234678-HxCDF	(2.09)		2.09	(0.209)	(0.209)	(0.209)
123789-HxCDF	(1.82)		1.82	(0.182)	(0.182)	(0.182)
1234678-HpCDF	(2.19)		2.19	(0.0219)	(0.0219)	(0.0219)
1234789-HpCDF	(2.82)		2.82	(0.0282)	(0.0282)	(0.0282)
OCDF	(5.48)		5.48	(0.00548)	(0.000548)	(0.00164)

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TEQ Summaries			
EMPC = 0, ND = 0	0.966	0.966	0.966
EMPC = 0, ND = DL / 2	5.43	6.25	6.01
EMPC = 0, ND = DL	9.89	11.5	11
EMPC = 0, < J-level = 0	0.966	0.966	0.966
EMPC = EMPC, ND = 0	0.993	0.969	0.974
EMPC = EMPC, ND = DL / 2	5.46	6.25	6.01
EMPC = EMPC, ND = DL	9.92	11.5	11.1
EMPC = EMPC, < J-level = 0	0.966	0.966	0.966

Checkcode: 648-387-TXH

SGS North America - DF v0.99

Sample ID: 12599404-120822-S-MTK-WC-7 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.46 L	Lab Sample ID	B7460_19754_DF_005	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	5	QC Batch No:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:20:42

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	9.84			ES 2378-TCDD	92.2	
12378-PeCDD	ND	6.36			ES 12378-PeCDD	101	
123478-HxCDD	ND	5.28			ES 123478-HxCDD	91.8	
123678-HxCDD	ND	4.57			ES 123678-HxCDD	93	
123789-HxCDD	ND	4.4			ES 123789-HxCDD	95.3	
1234678-HpCDD	ND	4.86			ES 1234678-HpCDD	83.5	
OCDD	ND	18.6			ES OCDD	62.5	
2378-TCDF	ND	9.06			ES 2378-TCDF	93.9	
12378-PeCDF	ND	3.89			ES 12378-PeCDF	103	
23478-PeCDF	ND	3.88			ES 23478-PeCDF	101	
123478-HxCDF	ND	3.51			ES 123478-HxCDF	91.1	
123678-HxCDF	ND	3.49			ES 123678-HxCDF	90.8	
234678-HxCDF	ND	3.47			ES 234678-HxCDF	93.5	
123789-HxCDF	ND	3.61			ES 123789-HxCDF	86.5	
1234678-HpCDF	ND	2.56			ES 1234678-HpCDF	86.5	
1234789-HpCDF	ND	3.18			ES 1234789-HpCDF	78	
OCDF	ND	7.59			ES OCDF	62.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	90.6	
Total TCDD	ND	9.84	ND		CS 12347-PeCDD	98.7	
Total PeCDD	ND	6.36	ND		CS 12346-PeCDF	102	
Total HxCDD	ND	4.73	ND		CS 123469-HxCDF	90.5	
Total HpCDD	ND	4.86	ND		CS 1234689-HpCDF	85	
Total TCDF	ND	9.06	ND				
Total PeCDF	ND	3.88	ND				
Total HxCDF	ND	3.52	ND				
Total HpCDF	ND	2.84	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	10.7	10.7	10.7				
TEQ: ND=DL	21.3	21.3	21.3				

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Sample ID: 12599404-120822-S-MTK-WC-7 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.46 L	Lab Sample ID:	B7460_19754_DF_005	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	5	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:20:42

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(9.84)		12479/12468D	(6.36)		124679/124689D	(4.73)		1234679D	(4.86)	
1379D	(9.84)		12469D	(6.36)		123468D	(4.73)		1234678D	(4.86)	
1369D	(9.84)		12368D	(6.36)		123679/123689D	(4.73)				
1469D	(9.84)		12478D	(6.36)		123469D	(4.73)				
1247D...[4]	(9.84)		12379D	(6.36)		123478D	(5.28)				
1378D	(9.84)		12369D...[3]	(6.36)		123678D	(4.57)				
1268D	(9.84)		12346/12347D	(6.36)		123467D	(4.73)				
1478D	(9.84)		12378D	(6.36)		123789D	(4.4)		**Conc.**	0	
1279D	(9.84)		12367D	(6.36)					**EMPC**	0	
1234/1269D	(9.84)		12389D	(6.36)							
1236D	(9.84)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(9.84)										
1239D	(9.84)								OCDD	(18.6)	
2378D	(9.84)										
1278D	(9.84)										
1267D	(9.84)										
1289D	(9.84)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	10.7	10.7
TEQ: ND=DL	21.3	21.3

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 371-946-ZFR

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-7 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	23-Dec-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.46 L	Lab Sample ID:	B7460_19754_DF_005	Date Extracted:	03-Jan-2023
Date Collected:	08-Dec-2022	pH:	5	QC Batch No.:	19754	Date Analyzed:	10-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:20:42

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(9.06)		13468/12468F	(4.43)		123468F	(3.52)		1234678F	(2.56)	
1468F	(9.06)		13678F...[3]	(3.88)		124678/134678F	(3.52)		1234679F	(2.84)	
2468F	(9.06)		12368F...[3]	(3.88)		134679F	(3.52)		1234689F	(2.84)	
1346/1246F	(9.06)		14678F	(3.88)		124679F	(3.52)		1234789F	(3.18)	
1347F...[3]	(9.06)		13479F	(3.88)		124689F	(3.52)				
1348F	(9.06)		13469/12479F	(3.88)		123467F	(3.52)				
1248F...[3]	(9.06)		12346F	(3.88)		123478F	(3.51)				
1268F	(9.06)		23468/12469F	(3.88)		123678F	(3.49)				
1467F	(9.06)		12347F	(3.88)		123479F	(3.52)				
1478F	(9.06)		12348F	(3.88)		123469F	(3.52)				
1369/1237F	(9.06)		12378F	(3.89)		123679F	(3.52)				
2467F	(9.06)		12678/12367F	(3.88)		234678F	(3.47)		**Conc.**	0	
2368F	(9.06)		12379F	(3.88)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(9.06)		12679F	(3.88)		123689F	(3.52)				
1278F	(9.06)		23467/12369F	(3.88)		123789F	(3.61)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(9.06)		23478F	(3.88)		123789/123489F	0				
1267F	(9.06)		23478/12489F	0		123489F	(3.52)		OCDF	(7.59)	
2346/1249F	(9.06)		12489F	(3.88)							
2347/1279F	(9.06)		12349F	(3.88)							
2348F	(9.06)		12389F	(3.88)							
2378F	(9.06)										
2367/3467F	(9.06)										
1269F	(9.06)										
1239F	(9.06)										
1289F	(9.06)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 371-946-ZFR

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: 12599404-120822-S-MTK-WC-7 TEQ Summary Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7460_19754_DF_005
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	0.46 L	QC Batch No.:	19754
Date Collected:	08-Dec-2022	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	23-Dec-2022	Dilution:	-	Date Analyzed:	10-Jan-2023 04:20
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(9.84)		9.84	(9.84)	(9.84)	(9.84)
12378-PeCDD	(6.36)		6.36	(3.18)	(6.36)	(6.36)
123478-HxCDD	(5.28)		5.28	(0.528)	(0.528)	(0.528)
123678-HxCDD	(4.57)		4.57	(0.457)	(0.457)	(0.457)
123789-HxCDD	(4.4)		4.4	(0.44)	(0.44)	(0.44)
1234678-HpCDD	(4.86)		4.86	(0.0486)	(0.0486)	(0.0486)
OCDD	(18.6)		18.6	(0.0186)	(0.00186)	(0.00557)
2378-TCDF	(9.06)		9.06	(0.906)	(0.906)	(0.906)
12378-PeCDF	(3.89)		3.89	(0.195)	(0.195)	(0.117)
23478-PeCDF	(3.88)		3.88	(1.94)	(1.94)	(1.16)
123478-HxCDF	(3.51)		3.51	(0.351)	(0.351)	(0.351)
123678-HxCDF	(3.49)		3.49	(0.349)	(0.349)	(0.349)
234678-HxCDF	(3.47)		3.47	(0.347)	(0.347)	(0.347)
123789-HxCDF	(3.61)		3.61	(0.361)	(0.361)	(0.361)
1234678-HpCDF	(2.56)		2.56	(0.0256)	(0.0256)	(0.0256)
1234789-HpCDF	(3.18)		3.18	(0.0318)	(0.0318)	(0.0318)
OCDF	(7.59)		7.59	(0.00759)	(0.000759)	(0.00228)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	9.52	11.1	10.7
EMPC = 0, ND = DL	19	22.2	21.3
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	9.52	11.1	10.7
EMPC = EMPC, ND = DL	19	22.2	21.3
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 371-946-ZFR

SGS North America - DF v0.99

Sample ID: Method Blank B7460_19730 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19730_DF_TLX	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:51:59

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	1.68			ES 2378-TCDD	89.9	
12378-PeCDD	ND	1.21			ES 12378-PeCDD	109	
123478-HxCDD	ND	1.09			ES 123478-HxCDD	86.3	
123678-HxCDD	ND	1.13			ES 123678-HxCDD	78.9	
123789-HxCDD	ND	1.1			ES 123789-HxCDD	86.2	
1234678-HpCDD	ND	0.942			ES 1234678-HpCDD	105	
OCDD	ND	1.37			ES OCDD	92.8	
2378-TCDF	ND	1.21			ES 2378-TCDF	91.6	
12378-PeCDF	ND	0.842			ES 12378-PeCDF	106	
23478-PeCDF	ND	0.794			ES 23478-PeCDF	102	
123478-HxCDF	ND	1.31			ES 123478-HxCDF	72.6	
123678-HxCDF	ND	1.14			ES 123678-HxCDF	70.1	
234678-HxCDF	ND	1.4			ES 234678-HxCDF	71.4	
123789-HxCDF	ND	1.58			ES 123789-HxCDF	77.3	
1234678-HpCDF	ND	1.64			ES 1234678-HpCDF	87.3	
1234789-HpCDF	ND	1.82			ES 1234789-HpCDF	93	
OCDF	ND	1.31			ES OCDF	84.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.3	
Total TCDD	ND	1.68	ND		CS 12347-PeCDD	119	
Total PeCDD	ND	1.21	ND		CS 12346-PeCDF	105	
Total HxCDD	ND	1.1	ND		CS 123469-HxCDF	76.1	
Total HpCDD	ND	0.942	ND		CS 1234689-HpCDF	92.4	
Total TCDF	ND	1.21	ND				
Total PeCDF	ND	0.819	ND				
Total HxCDF	ND	1.35	ND				
Total HpCDF	ND	1.72	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	2.1	2.1	2.1				
TEQ: ND=DL	4.19	4.19	4.19				

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Sample ID: Method Blank B7460_19730 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19730_DF_TLX	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:51:59

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(1.68)		12479/12468D	(1.21)		124679/124689D	(1.1)		1234679D	(0.942)	
1379D	(1.68)		12469D	(1.21)		123468D	(1.1)		1234678D	(0.942)	
1369D	(1.68)		12368D	(1.21)		123679/123689D	(1.1)				
1469D	(1.68)		12478D	(1.21)		123469D	(1.1)				
1247D...[4]	(1.68)		12379D	(1.21)		123478D	(1.09)				
1378D	(1.68)		12369D...[3]	(1.21)		123678D	(1.13)				
1268D	(1.68)		12346/12347D	(1.21)		123467D	(1.1)				
1478D	(1.68)		12378D	(1.21)		123789D	(1.1)		**Conc.**	0	
1279D	(1.68)		12367D	(1.21)					**EMPC**	0	
1234/1269D	(1.68)		12389D	(1.21)							
1236D	(1.68)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(1.68)										
1239D	(1.68)								OCDD	(1.37)	
2378D	(1.68)										
1278D	(1.68)										
1267D	(1.68)										
1289D	(1.68)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	2.1	2.1
TEQ: ND=DL	4.19	4.19

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 815-993-NJV

Report Created: 05-Jan-2023 09:43 Analyst: pw

Sample ID: Method Blank B7460_19730 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19730_DF_TLX	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	6:51:59

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.21)		13468/12468F	(1.15)		123468F	(1.35)		1234678F	(1.64)	
1468F	(1.21)		13678F...[3]	(0.819)		124678/134678F	(1.35)		1234679F	(1.72)	
2468F	(1.21)		12368F...[3]	(0.819)		134679F	(1.35)		1234689F	(1.72)	
1346/1246F	(1.21)		14678F	(0.819)		124679F	(1.35)		1234789F	(1.82)	
1347F...[3]	(1.21)		13479F	(0.819)		124689F	(1.35)				
1348F	(1.21)		13469/12479F	(0.819)		123467F	(1.35)				
1248F...[3]	(1.21)		12346F	(0.819)		123478F	(1.31)				
1268F	(1.21)		23468/12469F	(0.819)		123678F	(1.14)				
1467F	(1.21)		12347F	(0.819)		123479F	(1.35)				
1478F	(1.21)		12348F	(0.819)		123469F	(1.35)				
1369/1237F	(1.21)		12378F	(0.842)		123679F	(1.35)				
2467F	(1.21)		12678/12367F	(0.819)		234678F	(1.4)		**Conc.**	0	
2368F	(1.21)		12379F	(0.819)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.21)		12679F	(0.819)		123689F	(1.35)				
1278F	(1.21)		23467/12369F	(0.819)		123789F	(1.58)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.21)		23478F	(0.794)		123789/123489F	0				
1267F	(1.21)		23478/12489F	0		123489F	(1.35)		OCDF	(1.31)	
2346/1249F	(1.21)		12489F	(0.819)							
2347/1279F	(1.21)		12349F	(0.819)							
2348F	(1.21)		12389F	(0.819)							
2378F	(1.21)										
2367/3467F	(1.21)										
1269F	(1.21)										
1239F	(1.21)										
1289F	(1.21)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 815-993-NJV

Report Created: 05-Jan-2023 09:43 Analyst: pw

Sample ID: Method Blank B7460_19730 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19730_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19730
Date Collected:	n/a	Split:	-	Date Extracted:	22-Dec-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	04-Jan-2023 06:51
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(1.68)		1.68	(1.68)	(1.68)	(1.68)
12378-PeCDD	(1.21)		1.21	(0.605)	(1.21)	(1.21)
123478-HxCDD	(1.09)		1.09	(0.109)	(0.109)	(0.109)
123678-HxCDD	(1.13)		1.13	(0.113)	(0.113)	(0.113)
123789-HxCDD	(1.1)		1.1	(0.11)	(0.11)	(0.11)
1234678-HpCDD	(0.942)		0.942	(0.00942)	(0.00942)	(0.00942)
OCDD	(1.37)		1.37	(0.00137)	(0.000137)	(0.000411)
2378-TCDF	(1.21)		1.21	(0.121)	(0.121)	(0.121)
12378-PeCDF	(0.842)		0.842	(0.0421)	(0.0421)	(0.0253)
23478-PeCDF	(0.794)		0.794	(0.397)	(0.397)	(0.238)
123478-HxCDF	(1.31)		1.31	(0.131)	(0.131)	(0.131)
123678-HxCDF	(1.14)		1.14	(0.114)	(0.114)	(0.114)
234678-HxCDF	(1.4)		1.4	(0.14)	(0.14)	(0.14)
123789-HxCDF	(1.58)		1.58	(0.158)	(0.158)	(0.158)
1234678-HpCDF	(1.64)		1.64	(0.0164)	(0.0164)	(0.0164)
1234789-HpCDF	(1.82)		1.82	(0.0182)	(0.0182)	(0.0182)
OCDF	(1.31)		1.31	(0.00131)	(0.000131)	(0.000394)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	1.88	2.18	2.1
EMPC = 0, ND = DL	3.77	4.37	4.19
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	1.88	2.18	2.1
EMPC = EMPC, ND = DL	3.77	4.37	4.19
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 815-993-NJV

SGS North America - DF v0.99

Sample ID: Method Blank B7460_19754 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID	MB1_19754_DF_TLX	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:42:47

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	4.37			ES 2378-TCDD	91.6	
12378-PeCDD	ND	2.97			ES 12378-PeCDD	97.9	
123478-HxCDD	ND	2.25			ES 123478-HxCDD	99.5	
123678-HxCDD	ND	2.37			ES 123678-HxCDD	96.3	
123789-HxCDD	ND	2.06			ES 123789-HxCDD	93.8	
1234678-HpCDD	ND	1.62			ES 1234678-HpCDD	90.9	
OCDD	ND	3.97			ES OCDD	72.2	
2378-TCDF	ND	3.77			ES 2378-TCDF	94.3	
12378-PeCDF	ND	2.42			ES 12378-PeCDF	98.1	
23478-PeCDF	ND	2.72			ES 23478-PeCDF	99	
123478-HxCDF	ND	1.59			ES 123478-HxCDF	96.4	
123678-HxCDF	ND	1.72			ES 123678-HxCDF	94.4	
234678-HxCDF	ND	1.92			ES 234678-HxCDF	97.1	
123789-HxCDF	ND	1.93			ES 123789-HxCDF	90.8	
1234678-HpCDF	ND	1.04			ES 1234678-HpCDF	95.1	
1234789-HpCDF	ND	1.11			ES 1234789-HpCDF	86.7	
OCDF	ND	3.49			ES OCDF	70	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.2	
Total TCDD	ND	4.37	ND		CS 12347-PeCDD	102	
Total PeCDD	ND	2.97	ND		CS 12346-PeCDF	104	
Total HxCDD	ND	2.22	ND		CS 123469-HxCDF	97.8	
Total HpCDD	ND	1.62	ND		CS 1234689-HpCDF	91.3	
Total TCDF	ND	3.77	ND				
Total PeCDF	ND	2.57	ND				
Total HxCDF	ND	1.79	ND				
Total HpCDF	ND	1.07	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	5.02	5.02	5.02				
TEQ: ND=DL	10	10	10				

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Sample ID: Method Blank B7460_19754 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19754_DF_TLX	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:42:47

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(4.37)		12479/12468D	(2.97)		124679/124689D	(2.22)		1234679D	(1.62)	
1379D	(4.37)		12469D	(2.97)		123468D	(2.22)		1234678D	(1.62)	
1369D	(4.37)		12368D	(2.97)		123679/123689D	(2.22)				
1469D	(4.37)		12478D	(2.97)		123469D	(2.22)				
1247D...[4]	(4.37)		12379D	(2.97)		123478D	(2.25)				
1378D	(4.37)		12369D...[3]	(2.97)		123678D	(2.37)				
1268D	(4.37)		12346/12347D	(2.97)		123467D	(2.22)				
1478D	(4.37)		12378D	(2.97)		123789D	(2.06)		**Conc.**	0	
1279D	(4.37)		12367D	(2.97)					**EMPC**	0	
1234/1269D	(4.37)		12389D	(2.97)							
1236D	(4.37)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(4.37)										
1239D	(4.37)								OCDD	(3.97)	
2378D	(4.37)										
1278D	(4.37)										
1267D	(4.37)										
1289D	(4.37)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	5.02	5.02
TEQ: ND=DL	10	10

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 297-252-TLL

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: Method Blank B7460_19754 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_19754_DF_TLX	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:42:47

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(3.77)		13468/12468F	(1.44)		123468F	(1.79)		1234678F	(1.04)	
1468F	(3.77)		13678F...[3]	(2.57)		124678/134678F	(1.79)		1234679F	(1.07)	
2468F	(3.77)		12368F...[3]	(2.57)		134679F	(1.79)		1234689F	(1.07)	
1346/1246F	(3.77)		14678F	(2.57)		124679F	(1.79)		1234789F	(1.11)	
1347F...[3]	(3.77)		13479F	(2.57)		124689F	(1.79)				
1348F	(3.77)		13469/12479F	(2.57)		123467F	(1.79)				
1248F...[3]	(3.77)		12346F	(2.57)		123478F	(1.59)				
1268F	(3.77)		23468/12469F	(2.57)		123678F	(1.72)				
1467F	(3.77)		12347F	(2.57)		123479F	(1.79)				
1478F	(3.77)		12348F	(2.57)		123469F	(1.79)				
1369/1237F	(3.77)		12378F	(2.42)		123679F	(1.79)				
2467F	(3.77)		12678/12367F	(2.57)		234678F	(1.92)		**Conc.**	0	
2368F	(3.77)		12379F	(2.57)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(3.77)		12679F	(2.57)		123689F	(1.79)				
1278F	(3.77)		23467/12369F	(2.57)		123789F	(1.93)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(3.77)		23478F	(2.72)		123789/123489F	0				
1267F	(3.77)		23478/12489F	0		123489F	(1.79)		OCDF	(3.49)	
2346/1249F	(3.77)		12489F	(2.57)							
2347/1279F	(3.77)		12349F	(2.57)							
2348F	(3.77)		12389F	(2.57)							
2378F	(3.77)										
2367/3467F	(3.77)										
1269F	(3.77)										
1239F	(3.77)										
1289F	(3.77)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 297-252-TLL

Report Created: 10-Jan-2023 09:06 Analyst: TF

Sample ID: Method Blank B7460_19754 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_19754_DF_TLX
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1.00 L	QC Batch No.:	19754
Date Collected:	n/a	Split:	-	Date Extracted:	03-Jan-2023
Date Received:	n/a	Dilution:	-	Date Analyzed:	09-Jan-2023 23:42
Lab Project No:	B7460	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(4.37)		4.37	(4.37)	(4.37)	(4.37)
12378-PeCDD	(2.97)		2.97	(1.49)	(2.97)	(2.97)
123478-HxCDD	(2.25)		2.25	(0.225)	(0.225)	(0.225)
123678-HxCDD	(2.37)		2.37	(0.237)	(0.237)	(0.237)
123789-HxCDD	(2.06)		2.06	(0.206)	(0.206)	(0.206)
1234678-HpCDD	(1.62)		1.62	(0.0162)	(0.0162)	(0.0162)
OCDD	(3.97)		3.97	(0.00397)	(0.000397)	(0.00119)
2378-TCDF	(3.77)		3.77	(0.377)	(0.377)	(0.377)
12378-PeCDF	(2.42)		2.42	(0.121)	(0.121)	(0.0725)
23478-PeCDF	(2.72)		2.72	(1.36)	(1.36)	(0.816)
123478-HxCDF	(1.59)		1.59	(0.159)	(0.159)	(0.159)
123678-HxCDF	(1.72)		1.72	(0.172)	(0.172)	(0.172)
234678-HxCDF	(1.92)		1.92	(0.192)	(0.192)	(0.192)
123789-HxCDF	(1.93)		1.93	(0.193)	(0.193)	(0.193)
1234678-HpCDF	(1.04)		1.04	(0.0104)	(0.0104)	(0.0104)
1234789-HpCDF	(1.11)		1.11	(0.0111)	(0.0111)	(0.0111)
OCDF	(3.49)		3.49	(0.00349)	(0.000349)	(0.00105)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	4.57	5.31	5.02
EMPC = 0, ND = DL	9.14	10.6	10
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	4.57	5.31	5.02
EMPC = EMPC, ND = DL	9.14	10.6	10
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 297-252-TLL

SGS North America - DF v0.99

Sample ID: 0_19730_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19730_DF	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	4:29:13

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.2				ES 2378-TCDD	92.2	
12378-PeCDD	48.4				ES 12378-PeCDD	119	
123478-HxCDD	50.5				ES 123478-HxCDD	89.4	
123678-HxCDD	55.6				ES 123678-HxCDD	79.1	
123789-HxCDD	52.3				ES 123789-HxCDD	86.5	
1234678-HpCDD	54.2				ES 1234678-HpCDD	92.3	
OCDD	107				ES OCDD	84.5	
2378-TCDF	10.7				ES 2378-TCDF	97	
12378-PeCDF	51.1				ES 12378-PeCDF	120	
23478-PeCDF	54.8				ES 23478-PeCDF	114	
123478-HxCDF	56.7				ES 123478-HxCDF	72.5	
123678-HxCDF	56.2				ES 123678-HxCDF	69.8	
234678-HxCDF	58.3				ES 234678-HxCDF	72.2	
123789-HxCDF	54.9				ES 123789-HxCDF	76	
1234678-HpCDF	58.2				ES 1234678-HpCDF	80.8	
1234789-HpCDF	57				ES 1234789-HpCDF	81.1	
OCDF	112				ES OCDF	71.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	101	
Total TCDD	55.6		55.6		CS 12347-PeCDD	133	
Total PeCDD	72.4		72.4		CS 12346-PeCDF	122	
Total HxCDD	173		173		CS 123469-HxCDF	80.1	
Total HpCDD	67.6		67.6		CS 1234689-HpCDF	90.7	
Total TCDF	59.9		59.9				
Total PeCDF	239		239				
Total HxCDF	369		369				
Total HpCDF	115		115				
Total PCDD/Fs	**1,370**		**1,370**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.335	119				
TEQ: ND=DL	119	0.67	119				

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Sample ID: 0_19730_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19730_DF	Date Extracted:	22-Dec-2022
Date Collected:	n/a	pH:	n/a	QC Batch No:	19730	Date Analyzed:	04-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:16:48

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.1				ES 2378-TCDD	86.1	
12378-PeCDD	48.7				ES 12378-PeCDD	113	
123478-HxCDD	52.4				ES 123478-HxCDD	83	
123678-HxCDD	54.2				ES 123678-HxCDD	77.7	
123789-HxCDD	50.9				ES 123789-HxCDD	83.5	
1234678-HpCDD	53.2				ES 1234678-HpCDD	98.3	
OCDD	106				ES OCDD	86.8	
2378-TCDF	10.4				ES 2378-TCDF	92	
12378-PeCDF	51.5				ES 12378-PeCDF	112	
23478-PeCDF	54.6				ES 23478-PeCDF	110	
123478-HxCDF	54.9				ES 123478-HxCDF	69.2	
123678-HxCDF	56				ES 123678-HxCDF	68	
234678-HxCDF	56.5				ES 234678-HxCDF	71.7	
123789-HxCDF	54.9				ES 123789-HxCDF	74.5	
1234678-HpCDF	57.3				ES 1234678-HpCDF	82.5	
1234789-HpCDF	57.6				ES 1234789-HpCDF	83.3	
OCDF	109				ES OCDF	76.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	98.5	
Total TCDD	55.4		55.4		CS 12347-PeCDD	131	
Total PeCDD	73.8		73.8		CS 12346-PeCDF	119	
Total HxCDD	172		172		CS 123469-HxCDF	77.5	
Total HpCDD	65.9		65.9		CS 1234689-HpCDF	96.4	
Total TCDF	60		60				
Total PeCDF	239		239				
Total HxCDF	361		361				
Total HpCDF	115		115				
Total PCDD/Fs	**1,360**		**1,360**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.231	119				
TEQ: ND=DL	119	0.462	119				

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Sample DUP			Method 1613B
Sample ID: 0_19730_OPR001			
Analyte	**OPR1_19730_DF pg/uL**	**OPR2_19730_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	11.2	11.1	0.6%
1,2,3,7,8-PeCDD	48.4	48.7	0.8%
1,2,3,4,7,8-HxCDD	50.5	52.4	3.7%
1,2,3,6,7,8-HxCDD	55.6	54.2	2.6%
1,2,3,7,8,9-HxCDD	52.3	50.9	2.8%
1,2,3,4,6,7,8-HpCDD	54.2	53.2	1.8%
OCDD	107	106	1.0%
2,3,7,8-TCDF	10.7	10.4	2.8%
1,2,3,7,8-PeCDF	51.1	51.5	0.9%
2,3,4,7,8-PeCDF	54.8	54.6	0.4%
1,2,3,4,7,8-HxCDF	56.7	54.9	3.2%
1,2,3,6,7,8-HxCDF	56.2	56	0.4%
2,3,4,6,7,8-HxCDF	58.3	56.5	3.1%
1,2,3,7,8,9-HxCDF	54.9	54.9	0.1%
1,2,3,4,6,7,8-HpCDF	58.2	57.3	1.4%
1,2,3,4,7,8,9-HpCDF	57	57.6	1.0%
OCDF	112	109	2.4%
Totals			
Total TCDD	55.6	55.4	0.4%
Total PeCDD	72.4	73.8	1.8%
Total HxCDD	173	172	0.8%
Total HpCDD	67.6	65.9	2.5%
Total TCDF	59.9	60	0.1%
Total PeCDF	239	239	0.1%
Total HxCDF	369	361	2.1%
Total HpCDF	115	115	0.2%

Sample ID: 0_19754_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19754_DF	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	21:23:52

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.4				ES 2378-TCDD	96.1	
12378-PeCDD	48.9				ES 12378-PeCDD	95.5	
123478-HxCDD	51.6				ES 123478-HxCDD	94.8	
123678-HxCDD	52.5				ES 123678-HxCDD	95.8	
123789-HxCDD	49.4				ES 123789-HxCDD	96.5	
1234678-HpCDD	52.9				ES 1234678-HpCDD	86.2	
OCDD	108				ES OCDD	71	
2378-TCDF	11				ES 2378-TCDF	98.6	
12378-PeCDF	52.1				ES 12378-PeCDF	98	
23478-PeCDF	53.9				ES 23478-PeCDF	96.1	
123478-HxCDF	53				ES 123478-HxCDF	95.2	
123678-HxCDF	52.8				ES 123678-HxCDF	93.6	
234678-HxCDF	54.4				ES 234678-HxCDF	94.1	
123789-HxCDF	49.5				ES 123789-HxCDF	90.9	
1234678-HpCDF	51.4				ES 1234678-HpCDF	92.4	
1234789-HpCDF	51.5				ES 1234789-HpCDF	86.4	
OCDF	102				ES OCDF	71.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	92.4	
Total TCDD	58.7		58.7		CS 12347-PeCDD	98.2	
Total PeCDD	77		77		CS 12346-PeCDF	109	
Total HxCDD	170		170		CS 123469-HxCDF	98.1	
Total HpCDD	67.9		67.9		CS 1234689-HpCDF	95.7	
Total TCDF	68.2		68.2				
Total PeCDF	222		222				
Total HxCDF	351		351				
Total HpCDF	103		103				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	117		117				
TEQ: ND=DL/2	117	0.41	117				
TEQ: ND=DL	117	0.82	117				

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Sample ID: 0_19754_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7460	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19754_DF	Date Extracted:	03-Jan-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	19754	Date Analyzed:	09-Jan-2023
		Split:	-	Dilution:	-	Time Analyzed:	22:10:10

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.1				ES 2378-TCDD	96.3	
12378-PeCDD	49.6				ES 12378-PeCDD	96.2	
123478-HxCDD	53.5				ES 123478-HxCDD	95.2	
123678-HxCDD	54.5				ES 123678-HxCDD	94.6	
123789-HxCDD	52.2				ES 123789-HxCDD	94.2	
1234678-HpCDD	54.4				ES 1234678-HpCDD	90.5	
OCDD	106				ES OCDD	71.1	
2378-TCDF	11.5				ES 2378-TCDF	98.5	
12378-PeCDF	51.2				ES 12378-PeCDF	100	
23478-PeCDF	54.6				ES 23478-PeCDF	102	
123478-HxCDF	54.2				ES 123478-HxCDF	96.1	
123678-HxCDF	52.4				ES 123678-HxCDF	96.4	
234678-HxCDF	56.6				ES 234678-HxCDF	91.3	
123789-HxCDF	51.1				ES 123789-HxCDF	89.6	
1234678-HpCDF	52.4				ES 1234678-HpCDF	94.4	
1234789-HpCDF	52.2				ES 1234789-HpCDF	87.1	
OCDF	101				ES OCDF	71.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.9	
Total TCDD	56.2		56.2		CS 12347-PeCDD	93.6	
Total PeCDD	77.8		77.8		CS 12346-PeCDF	108	
Total HxCDD	176		176		CS 123469-HxCDF	95	
Total HpCDD	68		68		CS 1234689-HpCDF	92.3	
Total TCDF	67.3		67.3				
Total PeCDF	219		219				
Total HxCDF	356		356				
Total HpCDF	105		105				
Total PCDD/Fs	**1,330**		**1,330**				
WHO-2005 TEQs							
TEQ: ND=0	119		119				
TEQ: ND=DL/2	119	0.335	119				
TEQ: ND=DL	119	0.669	119				

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Sample DUP			Method 1613B
Sample ID: 0_19754_OPR001			
Analyte	**OPR1_19754_DF pg/uL**	**OPR2_19754_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	11.4	11.1	2.3%
1,2,3,7,8-PeCDD	48.9	49.6	1.4%
1,2,3,4,7,8-HxCDD	51.6	53.5	3.7%
1,2,3,6,7,8-HxCDD	52.5	54.5	3.7%
1,2,3,7,8,9-HxCDD	49.4	52.2	5.5%
1,2,3,4,6,7,8-HpCDD	52.9	54.4	2.7%
OCDD	108	106	1.9%
2,3,7,8-TCDF	11	11.5	5.1%
1,2,3,7,8-PeCDF	52.1	51.2	1.7%
2,3,4,7,8-PeCDF	53.9	54.6	1.4%
1,2,3,4,7,8-HxCDF	53	54.2	2.2%
1,2,3,6,7,8-HxCDF	52.8	52.4	0.7%
2,3,4,6,7,8-HxCDF	54.4	56.6	4.0%
1,2,3,7,8,9-HxCDF	49.5	51.1	3.1%
1,2,3,4,6,7,8-HpCDF	51.4	52.4	1.8%
1,2,3,4,7,8,9-HpCDF	51.5	52.2	1.4%
OCDF	102	101	0.4%
Totals			
Total TCDD	58.7	56.2	4.2%
Total PeCDD	77	77.8	1.0%
Total HxCDD	170	176	3.7%
Total HpCDD	67.9	68	0.2%
Total TCDF	68.2	67.3	1.3%
Total PeCDF	222	219	1.4%
Total HxCDF	351	356	1.3%
Total HpCDF	103	105	1.6%

Sample Receipt Notification

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Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*23-Dec-22 at 10:12, 15-Dec-22 at 10:33*
AP Project name:	*B7460*
Requested TAT:	*15 business days*
Projected due date:	*17-Jan-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	*340-009117*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-120522-S-MTK-WC-18	B7460_001	Leachate	2	1-Liter Amber	05-Dec-22	09:00	2.3	2	5894 7369 4358
12599404-120522-S-MTK-WC-17	B7460_002	Leachate	2	1-Liter Amber	05-Dec-22	10:15	2.3	2	5894 7369 4358
12599404-120822-S-MTK-WC-8	B7460_003	Leachate	2	1-Liter Amber	08-Dec-22	11:20	1.4	2	5894 7369 7894
12599404-120822-S-MTK-WC-10	B7460_004	Leachate	2	1-Liter Amber	08-Dec-22	13:30	1.4	2	5894 7369 7894
12599404-120822-S-MTK-WC-7	B7460_005	Leachate	2	1-Liter Amber	08-Dec-22	14:30	1.4	2	5894 7369 7894

Preservation Type: **Sample Seals:** No

Notes/Comments:
Samples received intact.

Samples missing sample IDs. Able to determine placement from SGS-NJ Sample number. Sample collection dates on samples do not match COC.
Samples missing sample collection times. Logged in as listed on COC.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* TB 12/23/2022

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

~~B7422~~ 1/2

B7460 1/4

CHAIN OF CUSTODY

~~Page 1 of 1~~

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD56629X

Client / Reporting Information

Company Name:
Street Address:
City State Zip
Project Contact E-mail: Kelly.Ramos@sgs.com
Phone #:
Sampler(s) Name(s) Phone: MTK

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street:
City State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip
Attention:

Requested Analysis

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS	Field ID / Point of Collection	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles	Dioxin/furans - send leachate bottles!	LAB USE ONLY
001 1A	12599404-120522-S-MTK-WC-18	12/5/22	9:00:00 AM	MTK	SO			X	
002 2A	12599404-120522-S-MTK-WC-17	12/5/22	10:15:00 AM	MTK	SO			X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [x] Other 1/7/1900

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington with prep paperwork. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	Eddie C	12/14/22 15:26	1	2		2
3			3	4		4
5		12/15 10:35	5	Custody Seal #	Intact / Not Intact	Preserved where applicable / Absent

Therm. ID: IR4 On Ice: ☑ Cooler Temp. °C: 2.3°C

id5662Bx.xls

1/8

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

B7460

~~Page 1 of 1~~

FED-EX Tracking # attached	Bottle Order Control # N/a
SGS Quote # N/a	SGS Job # JD56929

Client / Reporting Information

Company Name:
Street Address
City State Zip
Project Contact E-mail: Kelly.Ramos@sgs.com
Phone #
Sampler(s) Name(s) Phone

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street
City State
Project #
Client Purchase Order #
Project Manager

Billing Information (if different from Report to)
Company Name
Street Address
City State Zip
Attention:

Requested Analysis

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	dioxin/furans - send leachate bottles!	LAB USE ONLY
1A	12599404-120822-S-MTK-WC-4		12/8/22	9:05:00 AM		SO										X	
2A	12599404-120822-S-MTK-WC-5		12/8/22	10:05:00 AM		SO										X	
3A	12599404-120822-S-MTK-WC-8		12/8/22	11:20:00 AM		SO										X	
4A	12599404-120822-S-MTK-WC-10		12/8/22	1:30:00 PM		SO										X	
5A	12599404-120822-S-MTK-WC-7		12/8/22	2:30:00 PM		SO										X	

reported in B7422

003
004
005

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [x] Other 1/7/1900

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

send 2 x liters of leachate to SGS - Wilmington with prep paperwork and leachate blanks. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 Eddie C	12/22/22 1:01	1	2	12/23/22 1072	2 Ashley Owens
3		3	4		4
5		5	Custody Seal #	☑ Intact ☐ Not intact ☐ Absent	Preserved where applicable ☐ Therm. ID: NR4-Probe On Ice ☑ Cooler Temp °C 1.4°

jd56929.xls
Rev. Date: 4/10/18

~~B7422 2/2~~

Date / Time: 12/12/2022 4:01:15 PM
CSR: KELLYR
Job #: JD56629X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

	SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
001	JD56629-1A	12599404-120522-S-MTK-WC-18	dioxin/furans - send leachate bottles!		MTK	12/5/2022	9:00:00 AM	
002	JD56629-2A	12599404-120522-S-MTK-WC-17	dioxin/furans - send leachate bottles!		MTK	12/5/2022	10:15:00 AM	

Comments: send 2 x liters of leachate to SGS - Wilmington with prep paperwork. They will report/bill dioxin/furans to client. GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: [signature]

Date: 12/15/22

B74460

Date / Time: 12/16/2022 9:48:57 AM
CSR: KELLYR
Job #: JD56929
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 7

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

	SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
reported in B7422	JD56929-1A	12599404-120822-S-MTK-WC-4	dioxin/furans - send leachate bottles!	4H5		12/8/2022	9:05:00 AM	
	JD56929-2A	12599404-120822-S-MTK-WC-5	dioxin/furans - send leachate bottles!			12/8/2022	10:05:00 AM	
003	JD56929-3A	12599404-120822-S-MTK-WC-8	dioxin/furans - send leachate bottles!	4I5		12/8/2022	11:20:00 AM	
004	JD56929-4A	12599404-120822-S-MTK-WC-10	dioxin/furans - send leachate bottles!	2		12/8/2022	1:30:00 PM	
005	JD56929-5A	12599404-120822-S-MTK-WC-7	dioxin/furans - send leachate bottles!			12/8/2022	2:30:00 PM	

Comments: send 2 x liters of leachate to SGS - Wilmington with prep paperwork and leachate blanks. They will report/bill dioxin/furans to client.
GHD/GSH - San Jacinto Waste Pits project

Sample Management Receipt: Ashley Owens Date: 12/23/2022 10:12

B74.60
B7422
(2)

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 14DEC22
ACTWGT: 45.05 LB
CAD: 0882898/CAFE3211

BILL SENDER

TO SAMPLE RECEIVING
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

WILMINGTON NC 28405

12/15 10:33
2.3°C

(910) 794-1613 REF:
INV:
PO:
DEPT:

FedEx Express

2 of 2
MPS# 0283 5894 7369 4358
Mstr# 5894 7369 4347

THU - 15 DEC 10:30A
PRIORITY OVERNIGHT

0201

G5 ILMA

28405
NC-US RDU

Part# 156148-454 MTW EXP 05/23

1/1

B7460

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 22DEC22
ACTWGT: 53.00 LB
CAD: 0692838/CAFE3211

BILL SENDER

TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

WILMINGTON NC 28405
(910) 794-1613 REF:
INV:
PO: DEPT:

12/23/2022
10:12
1.4°

551C5/CBCF/104C

TB 12/23/22

FedEx Express

E

J181118060501uv

2 of 2
MPS# 0263 5894 7369 7894
Mstr# 5894 7369 7883 0201

FRI - 23 DEC 10:30A
PRIORITY OVERNIGHT

G5 ILMA

28405
NC-US RDU

Part # 156148-434 MTW EXP 05/23

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2.

TC Batch ID: TCO769

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	4.02		4.00	4.02	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	4.05
PH Buffer														7.00	7.02		7.00	7.02					7.00	7.05
PH Buffer														10.00	10.00		10.00	10.00					10.00	9.99
LB (fluid #1)	N	58	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.83
LB (fluid #2)	N	NA	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	NA
JD56729-1	N	3	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.69	100	100.69	NA	10.82	5 mins	NA	1.81	1	4.93	YES	2013.8	NA	7.84
JD56833-3	N	6	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.56	100	100.56	NA	9.66	5 mins	NA	2.02	1	4.93	YES	2011.2	NA	7.10
JD56833-5	N	8	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.56	100	100.56	NA	10.52	5 mins	NA	1.83	1	4.93	YES	2011.2	NA	7.82
JD56833-7	N	15	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.74	100	100.74	NA	9.79	5 mins	NA	1.91	1	4.93	YES	2014.8	NA	7.07
JD56833-9	N	18	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.37	100	100.37	NA	10.58	5 mins	NA	1.96	1	4.93	YES	2007.4	NA	8.09
JD56484-6	N	53	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.90	100	100.90	NA	7.04	5 mins	NA	1.87	1	4.93	YES	2018	NA	4.93
JD56929-1A	N	57	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.14	100	100.14	NA	9.08	5 mins	NA	1.82	1	4.93	YES	2002.8	NA	6.48
JD56929-2A	N	62	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.70	100	100.70	NA	9.06	5 mins	NA	1.91	1	4.93	YES	2014	NA	7.01
JD56929-3A	N	64	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.80	100	100.80	NA	9.05	5 mins	NA	1.95	1	4.93	YES	2016	NA	6.57
JD56929-4A	N	65	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.15	100	100.15	NA	9.01	5 mins	NA	1.94	1	4.93	YES	2003	NA	7.59
PH Buffer														4.00	4.06		2.00	2.05					4.00	4.08
PH Buffer														10.00	10.00		4.00	4.06					10.00	10.00
JD56929-5A	N	66	M/E	9	13-Dec-22	14-Dec-22	15:36	7:36	11:36	9:00	100.33	100	100.33	NA	9.07	5 mins	NA	1.98	1	4.93	YES	2006.6	NA	5.39
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.06		2.00	2.05					4.00	4.08
PH Buffer														10.00	10.00		4.00	4.06					7.00	7.08

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____

Set-up analyst: NF

Take-down analyst: NF

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

TC Batch ID: TCO769

Balance ID: B54

pH meter ID: PH 67

Temperature ranges during leaching. (Must be from 20.5-25.4 °C, and recorded for each leaching period).

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	29-Oct-22
5	29	29-Oct-22
7	28	29-Oct-22
8	NA	22-Apr-21
9	32	29-Oct-22
10	32	29-Oct-22
11	NA	7-Sep-21
12	28	29-Oct-22

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID: 5624720

Expiration: 13-Jul-23

Recorded temperature: 50

Heating time: Start:

End:

Reagent Information	**Reagent ID or Manufacturer Lot**	**Expiration Date**
Reagent		
Extraction fluid 1	GNE10-72115-TCLP	15-Dec-2022
Extraction fluid 2	GNE10-72116-TCLP	15-Dec-2022
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE7-70898-TCLP	20-Jan-2023
pH 2 buffer	FISHER 210051	1-Mar-2023
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Sep-2023
pH 10 buffer	FISHER 210276	1-Feb-2023
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jan-2023
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	12/2/2022

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404 SSOW: 12599404-2022-002 PO# 340-009117

SGS Job Number: JD56547

Sampling Date: 12/01/22

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: 221

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD56547

SJRWP - PCFSE, Harris County, TX
Project No: 12599404 SSOW: 12599404-2022-002 PO# 340-009117

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD56547-1	12/01/22	10:30	MTK	12/02/22	SO	Soil	12599404-120122-S-MTK-WC-1
JD56547-2	12/01/22	11:50	MTK	12/02/22	SO	Soil	12599404-120122-S-MTK-WC-2
JD56547-3	12/01/22	14:20	MTK	12/02/22	SO	Soil	12599404-120122-S-MTK-WC-24
JD56547-4	12/01/22	15:35	MTK	12/02/22	SO	Soil	12599404-120122-S-MTK-WC-25

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD56547
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	12/8/2022 3:17:56 PM

On 12/02/2022, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD56547 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Metals Analysis By Method SW846 6010D

Matrix: LEACHATE **Batch ID:** MP36790

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56483-1AMS, JD56483-1AMSD, JD56483-1ASDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Antimony, Arsenic, Beryllium, Selenium, Silver, Vanadium are outside control limits for sample MP36790-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP36802

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56483-1AMS, JD56483-1AMSD were used as the QC samples for metals.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD56547
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 12/01/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD56547-1	**12599404-120122-S-MTK-WC-1**					
Barium		0.70	0.20		mg/l	SW846 6010D
Beryllium		0.0021	0.0020		mg/l	SW846 6010D
Cadmium		0.0067	0.0040		mg/l	SW846 6010D
Lead		0.16	0.10		mg/l	SW846 6010D
Nickel		0.030	0.010		mg/l	SW846 6010D
JD56547-2	**12599404-120122-S-MTK-WC-2**					
Barium		0.79	0.20		mg/l	SW846 6010D
Nickel		0.048	0.010		mg/l	SW846 6010D
JD56547-3	**12599404-120122-S-MTK-WC-24**					
Barium		1.2	0.20		mg/l	SW846 6010D
Nickel		0.023	0.010		mg/l	SW846 6010D
JD56547-4	**12599404-120122-S-MTK-WC-25**					
Barium		0.97	0.20		mg/l	SW846 6010D
Cadmium		0.0054	0.0040		mg/l	SW846 6010D
Nickel		0.017	0.010		mg/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 12599404-120122-S-MTK-WC-1
Lab Sample ID: JD56547-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/01/22
Date Received: 12/02/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.70	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	0.0021			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0067	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	0.16	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.030			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120122-S-MTK-WC-2
Lab Sample ID: JD56547-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/01/22
Date Received: 12/02/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.79	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.048			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120122-S-MTK-WC-24
Lab Sample ID: JD56547-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/01/22
Date Received: 12/02/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	1.2	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.023			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120122-S-MTK-WC-25
Lab Sample ID: JD56547-4
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/01/22
Date Received: 12/02/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.97	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0054	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.017			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SO
SME

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #	Bottle Order Control # 5915-1685-7143
SGS Quote #	SGS Job # JD 56547

Client / Reporting Information

Company Name: GHD Services Inc
Street Address: 5551 Corporate Blvd #200
City: Baton Rouge State: LA Zip: 70808
Project Contact: Alice Harpole E-mail: Alice.Harpole@ghd.com
Phone #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016

Project Information

Project Name: San Jacinto Waste Pits
Street:
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TCLP Dioxins/Furans 1311 1613B	TCLP Metals 1311/6010C	TCLP Mercury 1311/7470A	TPH	LAB USE ONLY
1	12599404-120122-S-MTK-WC-1		12/1/22	1030	MTK	C		S	3					3				X	X	X	X	D32
2	↓ - ↓ - ↓ - WC-2		↓	1150	MTK	C		S	3					3				X	X	X	X	
3	↓ - ↓ - ↓ - WC-24		↓	1420	MTK	C		S	3					3				X	X	X	X	
4	↓ - ↓ - ↓ - WC-25		↓	1535	MTK	C		S	3					3				X	X	X	X	
	Temp Blank		—	—	—	—		W	1													

pH Check (Lab Use Only)

12-01-2022

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- ☐ 10 Business Days
- ☒ 5 Business Days See comments
- ☐ 3 Business Days*
- ☐ 2 Business Days*
- ☐ 1 Business Day*
- ☐ Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria
- ☐ CT RCP Criteria
- ☐ State Forms
- ☐ EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

- TPH collected in bulk jar, not per TNRCC method
- See SSOW
- 5 Day TAT on WC-1 + WC-2, normal TAT on WC-24 + WC-25

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	12-01-22/17:00	1 FX	2 FY	12/2/22 10:20	2 JD
3		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact ☐ Absent	Therm ID: See Sample Receipt Summary On Ice ☑ Cooler Temp. °C 3.2°

EHSA-QAC-0023-05 Rev.Date:8/5/22

5.1
5

JD56547: Chain of Custody
Page 1 of 3

SGS Sample Receipt Summary

Job Number: JD56547 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 12/2/2022 10:20:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments 1). All sample GRO not collected to 5035 specifications. Lab will prep from intact GRO volume for medium level VOA analysis within hold time.

Responded to by: Kelly Ramos Response Date: 12/5/2022

GRO is not needed. TPH is for BTX1005TPH3R. Please cancel BTX1005TPH3R, it is unable to be analyzed via meOH vials and will be re-collected

JD56547: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

GHD Services Inc.

Job No: JD56547

SJRWP - PCFSE, Harris County, TX
Project No: 12599404 SSOW: 12599404-2022-002 PO# 340-009117

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD56547-1 Collected: 01-DEC-22 10:30 By: MTK Received: 02-DEC-22 By: JP 12599404-120122-S-MTK-WC-1						
JD56547-1	SW846 7470A	07-DEC-22 15:22	LM	07-DEC-22	LM	EHG
JD56547-1	SW846 6010D	08-DEC-22 03:38	ND	07-DEC-22	SF	EAG,EAS,EBA,EBE,ECD,ECR, ENI,EPB,ESB,ESE,EVA
JD56547-2 Collected: 01-DEC-22 11:50 By: MTK Received: 02-DEC-22 By: JP 12599404-120122-S-MTK-WC-2						
JD56547-2	SW846 7470A	07-DEC-22 15:24	LM	07-DEC-22	LM	EHG
JD56547-2	SW846 6010D	08-DEC-22 03:43	ND	07-DEC-22	SF	EAG,EAS,EBA,EBE,ECD,ECR, ENI,EPB,ESB,ESE,EVA
JD56547-3 Collected: 01-DEC-22 14:20 By: MTK Received: 02-DEC-22 By: JP 12599404-120122-S-MTK-WC-24						
JD56547-3	SW846 7470A	07-DEC-22 15:28	LM	07-DEC-22	LM	EHG
JD56547-3	SW846 6010D	08-DEC-22 03:49	ND	07-DEC-22	SF	EAG,EAS,EBA,EBE,ECD,ECR, ENI,EPB,ESB,ESE,EVA
JD56547-4 Collected: 01-DEC-22 15:35 By: MTK Received: 02-DEC-22 By: JP 12599404-120122-S-MTK-WC-25						
JD56547-4	SW846 7470A	07-DEC-22 15:30	LM	07-DEC-22	LM	EHG
JD56547-4	SW846 6010D	08-DEC-22 03:54	ND	07-DEC-22	SF	EAG,EAS,EBA,EBE,ECD,ECR, ENI,EPB,ESB,ESE,EVA

SGS Internal Chain of Custody

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Received: 12/02/22

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD56547-1.1	Aleandi Rodriguez	Secured Storage	12/02/22 23:10	Return to Storage
JD56547-1.1	Secured Storage	Todd Shoemaker	12/05/22 13:56	Retrieve from Storage
JD56547-1.1	Todd Shoemaker	Secured Staging Area	12/05/22 13:56	Return to Storage
JD56547-1.1	Secured Staging Area	Noah Fite	12/05/22 14:57	Retrieve from Storage
JD56547-1.1	Noah Fite	Secured Storage	12/05/22 16:47	Return to Storage
JD56547-1.1	Secured Storage	Todd Shoemaker	12/06/22 10:01	Retrieve from Storage
JD56547-1.1	Todd Shoemaker	Secured Staging Area	12/06/22 10:02	Return to Storage
JD56547-1.1	Secured Staging Area	Noah Fite	12/06/22 13:19	Retrieve from Storage
JD56547-1.1	Noah Fite	Secured Storage	12/06/22 13:19	Return to Storage
JD56547-1.1.1	Noah Fite	TCLP	12/05/22 14:57	Leachate from JD56547-1.1
JD56547-1.1.1	TCLP	Noah Fite	12/06/22 09:28	Leachate from JD56547-1.1
JD56547-1.1.1	Noah Fite	Secured Storage	12/06/22 09:28	Return to Storage
JD56547-1.1.2	Noah Fite	TCLP	12/06/22 13:19	Leachate from JD56547-1.1
JD56547-1.1.2	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-1.1
JD56547-1.1.2	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-1.1.3	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-1.1
JD56547-1.1.3	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-1.2	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-1.3	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-1.4	Naomi Baxter	Secured Storage	12/03/22 09:21	Return to Storage
JD56547-2.1	Aleandi Rodriguez	Secured Storage	12/02/22 23:10	Return to Storage
JD56547-2.1	Secured Storage	Todd Shoemaker	12/05/22 13:56	Retrieve from Storage
JD56547-2.1	Todd Shoemaker	Secured Staging Area	12/05/22 13:56	Return to Storage
JD56547-2.1	Secured Staging Area	Noah Fite	12/05/22 14:57	Retrieve from Storage
JD56547-2.1	Noah Fite	Secured Storage	12/05/22 16:47	Return to Storage
JD56547-2.1	Secured Storage	Todd Shoemaker	12/06/22 10:01	Retrieve from Storage
JD56547-2.1	Todd Shoemaker	Secured Staging Area	12/06/22 10:02	Return to Storage
JD56547-2.1	Secured Staging Area	Noah Fite	12/06/22 13:19	Retrieve from Storage
JD56547-2.1	Noah Fite	Secured Storage	12/06/22 13:19	Return to Storage
JD56547-2.1.1	Noah Fite	TCLP	12/05/22 14:57	Leachate from JD56547-2.1
JD56547-2.1.1	TCLP	Noah Fite	12/06/22 09:28	Leachate from JD56547-2.1
JD56547-2.1.1	Noah Fite	Secured Storage	12/06/22 09:28	Return to Storage
JD56547-2.1.2	Noah Fite	TCLP	12/06/22 13:19	Leachate from JD56547-2.1
JD56547-2.1.2	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-2.1
JD56547-2.1.2	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage

SGS Internal Chain of Custody

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Received: 12/02/22

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD56547-2.1.3	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-2.1
JD56547-2.1.3	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-2.2	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-2.3	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-2.4	Naomi Baxter	Secured Storage	12/03/22 09:21	Return to Storage
JD56547-3.1	Aleandi Rodriguez	Secured Storage	12/02/22 23:10	Return to Storage
JD56547-3.1	Secured Storage	Todd Shoemaker	12/05/22 13:56	Retrieve from Storage
JD56547-3.1	Todd Shoemaker	Secured Staging Area	12/05/22 13:56	Return to Storage
JD56547-3.1	Secured Staging Area	Noah Fite	12/05/22 14:57	Retrieve from Storage
JD56547-3.1	Noah Fite	Secured Storage	12/05/22 16:47	Return to Storage
JD56547-3.1	Secured Storage	Todd Shoemaker	12/06/22 10:01	Retrieve from Storage
JD56547-3.1	Todd Shoemaker	Secured Staging Area	12/06/22 10:02	Return to Storage
JD56547-3.1	Secured Staging Area	Noah Fite	12/06/22 13:19	Retrieve from Storage
JD56547-3.1	Noah Fite	Secured Storage	12/06/22 13:19	Return to Storage
JD56547-3.1.1	Noah Fite	TCLP	12/05/22 14:57	Leachate from JD56547-3.1
JD56547-3.1.1	TCLP	Noah Fite	12/06/22 09:28	Leachate from JD56547-3.1
JD56547-3.1.1	Noah Fite	Secured Storage	12/06/22 09:28	Return to Storage
JD56547-3.1.2	Noah Fite	TCLP	12/06/22 13:19	Leachate from JD56547-3.1
JD56547-3.1.2	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-3.1
JD56547-3.1.2	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-3.1.3	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-3.1
JD56547-3.1.3	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-3.2	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-3.3	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-3.4	Naomi Baxter	Secured Storage	12/03/22 09:21	Return to Storage
JD56547-4.1	Aleandi Rodriguez	Secured Storage	12/02/22 23:10	Return to Storage
JD56547-4.1	Secured Storage	Todd Shoemaker	12/05/22 13:56	Retrieve from Storage
JD56547-4.1	Todd Shoemaker	Secured Staging Area	12/05/22 13:56	Return to Storage
JD56547-4.1	Secured Staging Area	Noah Fite	12/05/22 14:57	Retrieve from Storage
JD56547-4.1	Noah Fite	Secured Storage	12/05/22 16:47	Return to Storage
JD56547-4.1	Secured Storage	Todd Shoemaker	12/06/22 10:01	Retrieve from Storage
JD56547-4.1	Todd Shoemaker	Secured Staging Area	12/06/22 10:02	Return to Storage

SGS Internal Chain of Custody

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Received: 12/02/22

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD56547-4.1	Secured Staging Area	Noah Fite	12/06/22 13:19	Retrieve from Storage
JD56547-4.1	Noah Fite	Secured Storage	12/06/22 13:19	Return to Storage
JD56547-4.1.1	Noah Fite	TCLP	12/05/22 14:57	Leachate from JD56547-4.1
JD56547-4.1.1	TCLP	Noah Fite	12/06/22 09:28	Leachate from JD56547-4.1
JD56547-4.1.1	Noah Fite	Secured Storage	12/06/22 09:28	Return to Storage
JD56547-4.1.2	Noah Fite	TCLP	12/06/22 13:19	Leachate from JD56547-4.1
JD56547-4.1.2	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-4.1
JD56547-4.1.2	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-4.1.3	TCLP	Noah Fite	12/06/22 14:09	Leachate from JD56547-4.1
JD56547-4.1.3	Noah Fite	Secured Storage	12/06/22 14:09	Return to Storage
JD56547-4.2	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-4.3	Aleandi Rodriguez	Secured Storage	12/02/22 23:12	Return to Storage
JD56547-4.4	Naomi Baxter	Secured Storage	12/03/22 09:21	Return to Storage

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
Analyst: LM Run ID: MA53423
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:52	MA53423-STD1	1		b=1.5169e-004,c=7.6221e-002,rho=0.9996312
13:54	MA53423-STD2	1		STDB
13:55	MA53423-STD3	1		STDC
13:57	MA53423-STD4	1		STDD
13:58	MA53423-STD5	1		STDE
14:00	MA53423-STD6	1		STDF
14:03	ZZZZZZ	1		
14:05	MA53423-ICV1	1		
14:06	MA53423-ICB1	1		
14:08	MA53423-CCV1	1		
14:09	MA53423-CCB1	1		
14:11	MA53423-CRI1	1		
14:15	MP36800-MB1	1		
14:16	MP36800-B1	1		
14:17	MP36800-S1	1		
14:19	MP36800-S2	1		
14:21	JD56464-16	1		(sample used for QC only; not part of login JD56547)
14:23	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:29	MA53423-CCV2	1		
14:30	MA53423-CCB2	1		
14:33	MP36800-S1	20		
14:34	MP36800-S2	20		
14:36	JD56464-16	20		(sample used for QC only; not part of login JD56547)
14:38	MA53423-CCV3	1		
14:39	MA53423-CCB3	1		
14:41	MA53423-CRI2	1		
14:44	MA53423-CCV4	1		
14:46	MA53423-CCB4	1		
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:50	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
Analyst: LM Run ID: MA53423
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:59	MA53423-CCV5	1		
15:00	MA53423-CCB5	1		
15:02	MP36801-MB1	1		
15:03	MP36801-B1	1		
15:05	MP36801-S1	1		
15:06	MP36801-S2	1		
15:08	JD56551-1A	1		(sample used for QC only; not part of login JD56547)
15:10	MA53423-CCV6	1		
15:11	MA53423-CCB6	1		
15:13	MP36802-MB1	1		
15:14	MP36802-B1	1		
15:16	MP36802-S1	1		
15:17	MP36802-S2	1		
15:19	JD56483-1A	1		(sample used for QC only; not part of login JD56547)
15:21	ZZZZZZ	1		
15:22	JD56547-1	1		
15:24	JD56547-2	1		
15:25	MA53423-CCV7	1		
15:27	MA53423-CCB7	1		
15:28	JD56547-3	1		
15:30	JD56547-4	1		
---------->	Last reportable sample/prep for job JD56547			
15:31	ZZZZZZ	1		
15:32	ZZZZZZ	1		
15:34	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:37	ZZZZZZ	1		
15:38	ZZZZZZ	1		
15:40	MA53423-CCV8	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
Analyst: LM Run ID: MA53423
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:41	MA53423-CCB8	1		
---------->	Last reportable CCB for job JD56547			
	Refer to raw data for calibration curve and standards.			

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
Analyst: LM Run ID: MA53423
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg	
14:03	ZZZZZZ	1		
14:05	MA53423-ICV1	1	X	
14:06	MA53423-ICB1	1	X	
14:08	MA53423-CCV1	1	X	
14:09	MA53423-CCB1	1	X	
14:11	MA53423-CRI1	1	X	
14:15	MP36800-MB1	1	X	
14:16	MP36800-B1	1	X	
14:17	MP36800-S1	1		
14:19	MP36800-S2	1		
14:21	JD56464-16	1		
14:23	ZZZZZZ	1		
14:25	ZZZZZZ	1		
14:27	ZZZZZZ	1		
14:29	MA53423-CCV2	1	X	
14:30	MA53423-CCB2	1	X	
14:33	MP36800-S1	20	X	
14:34	MP36800-S2	20	X	
14:36	JD56464-16	20	X	(a)
14:38	MA53423-CCV3	1	X	
14:39	MA53423-CCB3	1	X	
14:41	MA53423-CRI2	1	X	
14:44	MA53423-CCV4	1	X	
14:46	MA53423-CCB4	1	X	
14:48	ZZZZZZ	1		
14:49	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:52	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:59	MA53423-CCV5	1	X	
		Element:	Hg	

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
Analyst: LM Run ID: MA53423
Parameters: Hg

Time	Sample Description	Element: Dilution	Hg
15:00	MA53423-CCB5	1	X
15:02	MP36801-MB1	1	X
15:03	MP36801-B1	1	X
15:05	MP36801-S1	1	X
15:06	MP36801-S2	1	X
15:08	JD56551-1A	1	X (a)
15:10	MA53423-CCV6	1	X
15:11	MA53423-CCB6	1	X
15:13	MP36802-MB1	1	X
15:14	MP36802-B1	1	X
15:16	MP36802-S1	1	X
15:17	MP36802-S2	1	X
15:19	JD56483-1A	1	X (a)
15:21	ZZZZZZ	1	
15:22	JD56547-1	1	X
15:24	JD56547-2	1	X
15:25	MA53423-CCV7	1	X
15:27	MA53423-CCB7	1	X
15:28	JD56547-3	1	X
15:30	JD56547-4	1	X
15:31	ZZZZZZ	1	
15:32	ZZZZZZ	1	
15:34	ZZZZZZ	1	
15:35	ZZZZZZ	1	
15:37	ZZZZZZ	1	
15:38	ZZZZZZ	1	
15:40	MA53423-CCV8	1	X
15:41	MA53423-CCB8	1	X

(a) Sample used for QC only; not part of login JD56547.

Element: Hg

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA53423 Units: ug/l

Time:			14:06		14:09		14:30		14:39	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.024	-0.0529	<0.20	-0.0541	<0.20	-0.0489	<0.20	-0.0149	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA53423 Units: ug/l

Time:			14:46		15:00		15:11		15:27	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.20	.024	-0.0380	<0.20	-0.0242	<0.20	-0.0353	<0.20	-0.0272	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: result < RL Run ID: MA53423 Units: ug/l

Time:			15:41	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	0.20	.024	0.0298	<0.20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA53423 Units: ug/l

Time:		14:05			14:08			14:29	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	3.22	107.3	2.5	2.53	101.2	2.5	2.50	100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA53423 Units: ug/l

Time:		14:38			14:44			14:59	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.46	98.4	2.5	2.58	103.2	2.5	2.49	99.6

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA53423 Units: ug/l

Time:		15:10			15:25			15:40	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	2.5	2.41	96.4	2.5	2.43	97.2	2.5	2.41	96.4

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: H8120722W1.CSV Date Analyzed: 12/07/22 Methods: SW846 7470A
QC Limits: 70 to 130 % Recovery Run ID: MA53423 Units: ug/l

Time:			14:11		14:41	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.186	93.0	0.198	99.0

(*) Outside of QC limits
(anr) Analyte not requested

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:01	MA53430-STD1	1		STDA
12:06	MA53430-STD2	1		STDB
12:11	MA53430-ICV1	1		
12:18	MA53430-ICV2	1		
12:27	MA53430-ICB1	1		
12:33	MA53430-ICCV1	1		
12:44	MA53430-CCB1	1		
12:49	MA53430-CRI1	1		
12:54	MA53430-CRID1	1		
12:59	MA53430-ICSA1	1		
13:05	MA53430-ICSAB1	1		
13:09	MA53430-HSTD1	1		
13:14	MA53430-HSTD2	1		
13:20	ZZZZZZ	1		
13:25	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:40	MA53430-CCV1	1		
13:45	MA53430-CCB2	1		
13:50	MP36771-MB1	1		
13:55	MP36771-B1	1		
14:00	MP36771-S1	1		
14:05	MP36771-S2	1		
14:10	JD56522-1	1		(sample used for QC only; not part of login JD56547)
14:15	MP36771-SD1	5		
14:20	MP36771-PS1	1		needs post spike on dilution
14:25	MA53430-CCV2	1		
14:30	MA53430-CCB3	1		
14:35	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:45	ZZZZZZ	1		
14:50	ZZZZZZ	1		
14:55	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:00	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:15	ZZZZZZ	1		
15:20	MA53430-CCV3	1		
15:25	MA53430-CCB4	1		
15:30	ZZZZZZ	1		
15:35	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:45	ZZZZZZ	1		
15:50	ZZZZZZ	1		
15:56	ZZZZZZ	1		
16:01	ZZZZZZ	1		
16:06	ZZZZZZ	1		
16:11	ZZZZZZ	1		
16:16	ZZZZZZ	1		
16:21	MA53430-CCV4	1		
16:26	MA53430-CCB5	1		
16:31	MP36771-MB1	1		CCB out
16:36	MP36771-B1	1		CCB out
16:41	MP36771-S1	1		
16:46	MP36771-S2	1		
16:51	JD56522-1	1		(sample used for QC only; not part of login JD56547)
16:56	MP36771-SD1	5		
17:01	MP36771-S1	2		CCB out
17:06	MP36771-S2	2		CCB out
17:11	JD56522-1	2		(sample used for QC only; not part of login JD56547)
17:16	MP36771-SD1	10		CCB out
17:21	MA53430-CCV5	1		
17:25	MA53430-CCB6	1		
17:31	MP36766-MB1	1		CCB out
17:36	MP36766-B1	1		CCB out
17:41	MP36766-B2	1		CCB out

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
17:45	MP36766-S1	1		CCB out
17:50	MP36766-S2	1		CCB out
17:55	JD56542-1F	1		(sample used for QC only; not part of login JD56547)
18:00	MP36766-SD1	5		CCB out
18:05	ZZZZZZ	1		
18:11	ZZZZZZ	1		
18:16	ZZZZZZ	1		
18:21	MA53430-CCV6	1		
18:26	MA53430-CCB7	1		
18:31	ZZZZZZ	1		
18:36	ZZZZZZ	1		
18:41	ZZZZZZ	1		
18:46	ZZZZZZ	1		
18:51	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:06	ZZZZZZ	1		
19:12	ZZZZZZ	1		
19:17	ZZZZZZ	1		
19:22	MA53430-CCV7	1		
19:27	MA53430-CCB8	1		
19:32	ZZZZZZ	1		
19:37	ZZZZZZ	1		
19:42	ZZZZZZ	1		
19:47	ZZZZZZ	1		
19:53	ZZZZZZ	1		
19:58	ZZZZZZ	1		
20:03	ZZZZZZ	1		
20:08	ZZZZZZ	10		
20:13	ZZZZZZ	10		
20:18	ZZZZZZ	10		
20:23	MA53430-CCV8	1		
20:28	MA53430-CCB9	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
20:33	ZZZZZZ	1		
20:39	ZZZZZZ	2		
20:44	ZZZZZZ	2		
20:49	ZZZZZZ	5		
20:54	ZZZZZZ	2		
20:59	ZZZZZZ	2		
21:04	ZZZZZZ	2		
21:09	ZZZZZZ	1		
21:14	ZZZZZZ	5		
21:19	ZZZZZZ	2		
21:24	MA53430-CCV9	1		
21:28	MA53430-CCB10	1		
21:34	ZZZZZZ	1		
21:39	ZZZZZZ	2		
21:44	ZZZZZZ	2		
21:49	ZZZZZZ	5		
21:54	ZZZZZZ	5		
21:59	ZZZZZZ	1		
22:04	ZZZZZZ	2		
22:09	ZZZZZZ	2		
22:14	ZZZZZZ	2		
22:19	ZZZZZZ	2		
22:24	MA53430-CCV10	1		
22:29	MA53430-CCB11	1		
22:34	ZZZZZZ	1		
22:39	ZZZZZZ	5		
22:44	ZZZZZZ	5		
22:50	ZZZZZZ	10		
22:55	ZZZZZZ	1		
23:00	ZZZZZZ	1		
23:05	ZZZZZZ	1		
23:10	ZZZZZZ	1		
23:15	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
23:21	MP36376-B1	1		
23:25	MA53430-CCV11	1		
23:30	MA53430-CCB12	1		
23:35	ZZZZZZ	1		
23:40	ZZZZZZ	1		
23:45	MP36779-S1	2		
23:50	MP36779-S2	2		
23:55	JD56619-14	2		(sample used for QC only; not part of login JD56547)
00:00	MP36779-SD1	10		
00:05	ZZZZZZ	2		
00:10	ZZZZZZ	2		
00:15	ZZZZZZ	2		
00:20	MA53430-CCV12	1		
00:25	MA53430-CCB13	1		
00:30	MP36767-MB1	1		
00:35	MP36767-B1	1		
00:40	MP36767-S1	1		
00:45	MP36767-S2	1		
00:49	JD56548-14F	1		(sample used for QC only; not part of login JD56547)
00:54	MP36767-SD1	5		
01:00	ZZZZZZ	1		
01:05	ZZZZZZ	1		
01:10	ZZZZZZ	1		
01:15	ZZZZZZ	1		
01:20	MA53430-CCV13	1		
01:25	MA53430-CCB14	1		
01:30	ZZZZZZ	1		
01:35	ZZZZZZ	1		
01:40	ZZZZZZ	1		
01:46	ZZZZZZ	1		
01:51	ZZZZZZ	1		
01:56	ZZZZZZ	1		
02:01	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
02:06	ZZZZZZ	1		
02:11	ZZZZZZ	1		
02:16	MA53430-CCV14	1		
02:21	MA53430-CCB15	1		
02:26	ZZZZZZ	1		
02:31	ZZZZZZ	1		
02:37	MP36376-MB1	1		
02:42	MP36790-MB1	1		
02:47	MP36790-LB1	1		
02:52	MP36790-B1	1		
02:57	MP36790-LS1	1		
03:02	MP36790-S1	1		
03:07	MP36790-S2	1		
03:12	MA53430-CCV15	1		
03:17	MA53430-CCB16	1		
03:22	JD56483-1A	1		(sample used for QC only; not part of login JD56547)
03:28	MP36790-SD1	5		
03:33	ZZZZZZ	1		
03:38	JD56547-1	1		
03:43	JD56547-2	1		
03:49	JD56547-3	1		
03:54	JD56547-4	1		
---------->	Last reportable sample/prep for job JD56547			
03:59	ZZZZZZ	1		
04:04	ZZZZZZ	1		
04:10	MA53430-CCV16	1		
04:15	MA53430-CCB17	1		
---------->	Last reportable CCB for job JD56547			
04:20	ZZZZZZ	1		
04:25	ZZZZZZ	1		
04:30	ZZZZZZ	1		
04:36	ZZZZZZ	1		
04:41	ZZZZZZ	1		
04:47	ZZZZZZ	1		
04:52	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
04:57	ZZZZZZ	1		
05:02	ZZZZZZ	1		
05:07	ZZZZZZ	1		
05:13	MA53430-CCV17	1		
05:17	MA53430-CCB18	1		
05:23	MP36805-MB1	1		
05:28	MP36805-B1	1		
05:33	MP36805-S1	1		
05:37	MP36805-S2	1		
05:42	JD56676-1	1		(sample used for QC only; not part of login JD56547)
05:47	MP36805-SD1	5		
05:53	ZZZZZZ	1		
05:58	ZZZZZZ	1		
06:03	ZZZZZZ	1		
06:08	MA53430-CCV18	1		
06:13	MA53430-CCB19	1		
06:18	ZZZZZZ	1		
06:23	ZZZZZZ	1		
06:28	ZZZZZZ	1		
06:33	ZZZZZZ	1		
06:39	ZZZZZZ	1		
06:44	MP36785-B1	1		
06:48	MP36785-MB1	1		
06:54	MP36785-S1	1		
06:59	MP36785-S2	1		
07:04	MA53430-CCV19	1		
07:09	MA53430-CCB20	1		
07:14	JD56632-1	1		(sample used for QC only; not part of login JD56547)
07:18	MP36785-SD1	5		
07:24	ZZZZZZ	1		
07:29	ZZZZZZ	1		
07:34	ZZZZZZ	1		
07:39	ZZZZZZ	1		

SGS Instrument Runlog
Inorganics Analyses

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution Factor	PS Recov	Comments
07:45	ZZZZZZ	1		
07:50	ZZZZZZ	1		
07:55	ZZZZZZ	2		
08:00	MA53430-CCV20	1		
08:05	MA53430-CCB21	1		
08:10	MP36785-S1	5		
08:15	MP36785-S2	5		
08:20	JD56632-1	5		(sample used for QC only; not part of login JD56547)
08:25	MP36785-SD1	25		
08:30	ZZZZZZ	5		
08:35	MP36766-S1	2		
08:40	MP36766-S2	2		
08:45	ZZZZZZ	5		
08:50	ZZZZZZ	1		
08:55	MA53430-CCV21	1		
09:00	MA53430-CCB22	1		
09:05	MP36807-MB1	1		
09:10	MP36807-B1	1		
09:15	MP36807-S1	1		
09:20	MP36807-S2	1		
09:25	JD56528-1	1		(sample used for QC only; not part of login JD56547)
09:30	MP36807-SD1	5		
09:35	ZZZZZZ	5		
09:40	ZZZZZZ	1		
09:45	ZZZZZZ	5		
09:50	MA53430-CCV22	1		
09:55	MA53430-CCB23	1		

Refer to raw data for calibration curve and standards.

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V
12:11	MA53430-ICV1	1											
12:18	MA53430-ICV2	1	X	X	X	X	X	X	X	X	X	X	X
12:27	MA53430-ICB1	1	X	X	X	X	X	X	X	X	X	X	X
12:33	MA53430-ICCV1	1	X	X	X	X	X	X	X	X	X	X	X
12:44	MA53430-CCB1	1	X	X	X	X	X	X	X	X	X	X	X
12:49	MA53430-CRI1	1	X	X	X	X	X	X	X	X	X	X	X
12:54	MA53430-CRID1	1	X	X	X	X	X	X	X	X	X	X	X
12:59	MA53430-ICSA1	1	X	X	X	X	X	X	X	X	X	X	X
13:05	MA53430-ICSAB1	1	X	X	X	X	X	X	X	X	X	X	X
13:09	MA53430-HSTD1	1	X	X	X	X	X	X	X	X	X	X	X
13:14	MA53430-HSTD2	1	X	X	X	X	X	X	X	X	X	X	X
13:20	ZZZZZZ	1											
13:25	ZZZZZZ	1											
13:30	ZZZZZZ	1											
13:35	ZZZZZZ	1											
13:40	MA53430-CCV1	1	X	X	X	X	X	X	X	X	X	X	X
13:45	MA53430-CCB2	1	X	X	X	X	X	X	X	X	X	X	X
13:50	MP36771-MB1	1											
13:55	MP36771-B1	1											
14:00	MP36771-S1	1											
14:05	MP36771-S2	1											
14:10	JD56522-1	1											
14:15	MP36771-SD1	5											
14:20	MP36771-PS1	1			X								
14:25	MA53430-CCV2	1	X	X	X	X	X	X	X	X	X	X	X
14:30	MA53430-CCB3	1	X	X	X	X	X	X	X	X	X	X	X
14:35	ZZZZZZ	1											
14:40	ZZZZZZ	1											
14:45	ZZZZZZ	1											
14:50	ZZZZZZ	1											
14:55	ZZZZZZ	1											
15:00	ZZZZZZ	1											
15:05	ZZZZZZ	1											
		Element:	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	
15:10	ZZZZZZ	1												
15:15	ZZZZZZ	1												
15:20	MA53430-CCV3	1	X	X	X	X	X	X	X	X	X	X	X	
15:25	MA53430-CCB4	1	X	X	X	X	X	X	X	X	X	X	X	
15:30	ZZZZZZ	1												
15:35	ZZZZZZ	1												
15:40	ZZZZZZ	1												
15:45	ZZZZZZ	1												
15:50	ZZZZZZ	1												
15:56	ZZZZZZ	1												
16:01	ZZZZZZ	1												
16:06	ZZZZZZ	1												
16:11	ZZZZZZ	1												
16:16	ZZZZZZ	1												
16:21	MA53430-CCV4	1	X	X	X	X	X	X	X	X	X	X	X	
16:26	MA53430-CCB5	1	X	X	X	X	X	X	X	X	X	X	X	
16:31	MP36771-MB1	1	X	X	X		X	X	X	X	X	X	X	
16:36	MP36771-B1	1	X	X	X		X	X	X	X	X	X	X	
16:41	MP36771-S1	1			X					X			X	
16:46	MP36771-S2	1			X					X			X	
16:51	JD56522-1	1			X									(a)
16:56	MP36771-SD1	5			X					X			X	
17:01	MP36771-S1	2	X	X			X	X	X		X	X		
17:06	MP36771-S2	2	X	X			X	X	X		X	X		
17:11	JD56522-1	2		X			X	X	X		X	X		(a)
17:16	MP36771-SD1	10	X	X			X	X	X		X	X		
17:21	MA53430-CCV5	1	X	X	X	X	X	X	X	X	X	X	X	
17:25	MA53430-CCB6	1	X	X	X	X	X	X	X	X	X	X	X	
17:31	MP36766-MB1	1	X	X	X		X	X	X	X	X	X		
17:36	MP36766-B1	1	X	X	X		X	X	X	X	X	X		
17:41	MP36766-B2	1	X	X	X		X	X	X	X	X	X		
17:45	MP36766-S1	1	X	X	X		X	X	X	X	X	X		
17:50	MP36766-S2	1	X	X	X		X	X	X	X	X	X		
		Element:	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	
17:55	JD56542-1F	1	X	X	X		X	X	X	X	X			(a)
18:00	MP36766-SD1	5	X	X	X		X	X	X	X	X			
18:05	ZZZZZZ	1												
18:11	ZZZZZZ	1												
18:16	ZZZZZZ	1												
18:21	MA53430-CCV6	1	X	X	X	X	X	X	X	X	X	X	X	
18:26	MA53430-CCB7	1	X	X	X	X	X	X	X	X	X	X	X	
18:31	ZZZZZZ	1												
18:36	ZZZZZZ	1												
18:41	ZZZZZZ	1												
18:46	ZZZZZZ	1												
18:51	ZZZZZZ	1												
18:56	ZZZZZZ	1												
19:01	ZZZZZZ	1												
19:06	ZZZZZZ	1												
19:12	ZZZZZZ	1												
19:17	ZZZZZZ	1												
19:22	MA53430-CCV7	1	X	X	X	X	X	X	X	X	X	X	X	
19:27	MA53430-CCB8	1	X	X	X	X	X	X	X	X	X	X	X	
19:32	ZZZZZZ	1												
19:37	ZZZZZZ	1												
19:42	ZZZZZZ	1												
19:47	ZZZZZZ	1												
19:53	ZZZZZZ	1												
19:58	ZZZZZZ	1												
20:03	ZZZZZZ	1												
20:08	ZZZZZZ	10												
20:13	ZZZZZZ	10												
20:18	ZZZZZZ	10												
20:23	MA53430-CCV8	1	X	X	X	X	X	X	X	X	X	X	X	
20:28	MA53430-CCB9	1	X	X	X	X	X	X	X	X	X	X	X	
20:33	ZZZZZZ	1												
20:39	ZZZZZZ	2												
		Element:	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V
20:44	ZZZZZZ	2											
20:49	ZZZZZZ	5											
20:54	ZZZZZZ	2											
20:59	ZZZZZZ	2											
21:04	ZZZZZZ	2											
21:09	ZZZZZZ	1											
21:14	ZZZZZZ	5											
21:19	ZZZZZZ	2											
21:24	MA53430-CCV9	1	X	X	X	X	X	X	X	X	X	X	X
21:28	MA53430-CCB10	1	X	X	X	X	X	X	X	X	X	X	X
21:34	ZZZZZZ	1											
21:39	ZZZZZZ	2											
21:44	ZZZZZZ	2											
21:49	ZZZZZZ	5											
21:54	ZZZZZZ	5											
21:59	ZZZZZZ	1											
22:04	ZZZZZZ	2											
22:09	ZZZZZZ	2											
22:14	ZZZZZZ	2											
22:19	ZZZZZZ	2											
22:24	MA53430-CCV10	1	X	X	X	X	X	X	X	X	X	X	X
22:29	MA53430-CCB11	1	X	X	X	X	X	X	X	X	X	X	X
22:34	ZZZZZZ	1											
22:39	ZZZZZZ	5											
22:44	ZZZZZZ	5											
22:50	ZZZZZZ	10											
22:55	ZZZZZZ	1											
23:00	ZZZZZZ	1											
23:05	ZZZZZZ	1											
23:10	ZZZZZZ	1											
23:15	ZZZZZZ	1											
23:21	MP36376-B1	1				X	X						
23:25	MA53430-CCV11	1	X	X	X	X	X	X	X	X	X	X	X
		Element:	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	
23:30	MA53430-CCB12	1	X	X	X	X	X	X	X	X	X	X	X	
23:35	ZZZZZZ	1												
23:40	ZZZZZZ	1												
23:45	MP36779-S1	2		X			X	X	X		X	X		
23:50	MP36779-S2	2		X			X	X	X		X	X		
23:55	JD56619-14	2		X			X	X	X		X	X		(a)
00:00	MP36779-SD1	10		X			X	X	X		X	X		
00:05	ZZZZZZ	2												
00:10	ZZZZZZ	2												
00:15	ZZZZZZ	2												
00:20	MA53430-CCV12	1	X	X	X	X	X	X	X	X	X	X	X	
00:25	MA53430-CCB13	1	X	X	X	X	X	X	X	X	X	X	X	
00:30	MP36767-MB1	1												
00:35	MP36767-B1	1												
00:40	MP36767-S1	1												
00:45	MP36767-S2	1												
00:49	JD56548-14F	1												(a)
00:54	MP36767-SD1	5												
01:00	ZZZZZZ	1												
01:05	ZZZZZZ	1												
01:10	ZZZZZZ	1												
01:15	ZZZZZZ	1												
01:20	MA53430-CCV13	1	X	X	X	X	X	X	X	X	X	X	X	
01:25	MA53430-CCB14	1	X	X	X	X	X	X	X	X	X	X	X	
01:30	ZZZZZZ	1												
01:35	ZZZZZZ	1												
01:40	ZZZZZZ	1												
01:46	ZZZZZZ	1												
01:51	ZZZZZZ	1												
01:56	ZZZZZZ	1												
02:01	ZZZZZZ	1												
02:06	ZZZZZZ	1												
02:11	ZZZZZZ	1												
		Element:	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V	
02:16	MA53430-CCV14	1	X	X	X	X	X	X	X	X	X	X	X	
02:21	MA53430-CCB15	1	X	X	X	X	X	X	X	X	X	X	X	
02:26	ZZZZZZ	1												
02:31	ZZZZZZ	1												
02:37	MP36376-MB1	1				X	X							
02:42	MP36790-MB1	1	X	X	X	X	X	X	X	X	X	X	X	
02:47	MP36790-LB1	1												
02:52	MP36790-B1	1	X	X	X	X	X	X	X	X	X	X	X	
02:57	MP36790-LS1	1	X	X	X	X	X	X	X	X	X	X	X	
03:02	MP36790-S1	1	X	X	X	X	X	X	X	X	X	X	X	
03:07	MP36790-S2	1	X	X	X	X	X	X	X	X	X	X	X	
03:12	MA53430-CCV15	1	X	X	X	X	X	X	X	X	X	X	X	
03:17	MA53430-CCB16	1	X	X	X	X	X	X	X	X	X	X	X	
03:22	JD56483-1A	1		X	X	X	X	X	X	X	X	X		(a)
03:28	MP36790-SD1	5	X	X	X	X	X	X	X	X	X	X	X	
03:33	ZZZZZZ	1												
03:38	JD56547-1	1	X	X	X	X	X	X	X	X	X	X	X	
03:43	JD56547-2	1	X	X	X	X	X	X	X	X	X	X	X	
03:49	JD56547-3	1	X	X	X	X	X	X	X	X	X	X	X	
03:54	JD56547-4	1	X	X	X	X	X	X	X	X	X	X	X	
03:59	ZZZZZZ	1												
04:04	ZZZZZZ	1												
04:10	MA53430-CCV16	1	X	X	X	X	X	X	X	X	X	X	X	
04:15	MA53430-CCB17	1	X	X	X	X	X	X	X	X	X	X	X	
04:20	ZZZZZZ	1												
04:25	ZZZZZZ	1												
04:30	ZZZZZZ	1												
04:36	ZZZZZZ	1												
04:41	ZZZZZZ	1												
04:47	ZZZZZZ	1												
04:52	ZZZZZZ	1												
04:57	ZZZZZZ	1												
05:02	ZZZZZZ	1												
		Element:	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V	

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Element: Dilution	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	
05:07	ZZZZZZ	1												
05:13	MA53430-CCV17	1	X	X	X	X	X	X	X	X	X	X	X	
05:17	MA53430-CCB18	1	X	X	X	X	X	X	X	X	X	X	X	
05:23	MP36805-MB1	1		X		X		X	X					
05:28	MP36805-B1	1		X		X		X	X					
05:33	MP36805-S1	1		X		X		X	X					
05:37	MP36805-S2	1		X		X		X	X					
05:42	JD56676-1	1		X		X		X	X					(a)
05:47	MP36805-SD1	5		X		X		X	X					
05:53	ZZZZZZ	1												
05:58	ZZZZZZ	1												
06:03	ZZZZZZ	1												
06:08	MA53430-CCV18	1	X	X	X	X	X	X	X	X	X	X	X	
06:13	MA53430-CCB19	1	X	X	X	X	X	X	X	X	X	X	X	
06:18	ZZZZZZ	1												
06:23	ZZZZZZ	1												
06:28	ZZZZZZ	1												
06:33	ZZZZZZ	1												
06:39	ZZZZZZ	1												
06:44	MP36785-B1	1		X		X	X	X	X	X	X	X	X	
06:48	MP36785-MB1	1		X		X	X	X	X	X	X	X	X	
06:54	MP36785-S1	1				X	X	X		X	X	X	X	
06:59	MP36785-S2	1				X	X	X		X	X	X	X	
07:04	MA53430-CCV19	1	X	X	X	X	X	X	X	X	X	X	X	
07:09	MA53430-CCB20	1	X	X	X	X	X	X	X	X	X	X	X	
07:14	JD56632-1	1				X	X	X		X	X	X	X	(a)
07:18	MP36785-SD1	5				X	X	X		X	X	X	X	
07:24	ZZZZZZ	1												
07:29	ZZZZZZ	1												
07:34	ZZZZZZ	1												
07:39	ZZZZZZ	1												
07:45	ZZZZZZ	1												
07:50	ZZZZZZ	1												
		Element:	Sb	As	Ba	Be	Cd	Cr	Pb	Ni	Se	Ag	V	

REPORTED ELEMENTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Dilution	Element:	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V	
07:55	ZZZZZZ	2													
08:00	MA53430-CCV20	1		X	X	X	X	X	X	X	X	X	X	X	
08:05	MA53430-CCB21	1		X	X	X	X	X	X	X	X	X	X	X	
08:10	MP36785-S1	5			X					X					
08:15	MP36785-S2	5			X					X					
08:20	JD56632-1	5			X					X					(a)
08:25	MP36785-SD1	25			X					X					
08:30	ZZZZZZ	5													
08:35	MP36766-S1	2													
08:40	MP36766-S2	2													
08:45	ZZZZZZ	5													
08:50	ZZZZZZ	1													
08:55	MA53430-CCV21	1		X	X	X	X	X	X	X	X	X	X	X	
09:00	MA53430-CCB22	1		X	X	X	X	X	X	X	X	X	X	X	
09:05	MP36807-MB1	1													
09:10	MP36807-B1	1													
09:15	MP36807-S1	1													
09:20	MP36807-S2	1													
09:25	JD56528-1	1													(a)
09:30	MP36807-SD1	5													
09:35	ZZZZZZ	5													
09:40	ZZZZZZ	1													
09:45	ZZZZZZ	5													
09:50	MA53430-CCV22	1		X	X	X	X	X	X	X	X	X	X	X	
09:55	MA53430-CCB23	1		X	X	X	X	X	X	X	X	X	X	X	

(a) Sample used for QC only; not part of login JD56547.

	Element:	S b	A s	B a	B e	C d	C r	P b	N i	S e	A g	V

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:01	MA53430-STD1	2069 R	55329 R	4948 R	5737 R
12:06	MA53430-STD2	1954	52041	4895	4896
12:11	MA53430-ICV1	No results reported for the elements associated with this internal standard.			
12:18	MA53430-ICV2	2026	53732	4981	5152
12:27	MA53430-ICB1	2074	55828	4976	5739
12:33	MA53430-ICCV1	2032	52741	4943	5178
12:44	MA53430-CCB1	2081	55952	5005	5760
12:49	MA53430-CRI1	2076	55398	4995	5660
12:54	MA53430-CRID1	2057	54657	4887	5673
12:59	MA53430-ICSA1	1873	49604	4803	4513
13:05	MA53430-ICSAB1	1872	49399	4802	4519
13:09	MA53430-HSTD1	2038	54981	5126	5546
13:14	MA53430-HSTD2	1884	50484	4771	4533
13:20	ZZZZZZ	2055	55035	4978	5680
13:25	ZZZZZZ	2060	55610	4850	5720
13:30	ZZZZZZ	1972	52856	4829	5262
13:35	ZZZZZZ	2077	56044	5067	5735
13:40	MA53430-CCV1	2017	53737	4968	5123
13:45	MA53430-CCB2	2079	55454	4912	5738
13:50	MP36771-MB1	No results reported for the elements associated with this internal standard.			
13:55	MP36771-B1	No results reported for the elements associated with this internal standard.			
14:00	MP36771-S1	No results reported for the elements associated with this internal standard.			
14:05	MP36771-S2	No results reported for the elements associated with this internal standard.			
14:10	JD56522-1	No results reported for the elements associated with this internal standard.			
14:15	MP36771-SD1	No results reported for the elements associated with this internal standard.			
14:20	MP36771-PS1	2071	54849	5200	4971
14:25	MA53430-CCV2	2029	54363	5069	5152
14:30	MA53430-CCB3	2089	54940	4951	5770
14:35	ZZZZZZ	2058	54936	5098	5059
14:40	ZZZZZZ	2088	55875	5182	5159
14:45	ZZZZZZ	2107	56426	5213	5229
14:50	ZZZZZZ	2085	55914	5208	5039
14:55	ZZZZZZ	2086	55827	5141	5345

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:00	ZZZZZZ	2042	54841	5167	4971
15:05	ZZZZZZ	2091	56058	5068	5469
15:10	ZZZZZZ	2069	55570	4913	5714
15:15	ZZZZZZ	2068	56206	5052	5681
15:20	MA53430-CCV3	2045	54546	5081	5183
15:25	MA53430-CCB4	2095	56056	4973	5771
15:30	ZZZZZZ	2068	55713	4925	5653
15:35	ZZZZZZ	2058	55160	4958	5622
15:40	ZZZZZZ	2070	55579	4968	5671
15:45	ZZZZZZ	2101	56381	5105	5783
15:50	ZZZZZZ	2028	54297	4876	5502
15:56	ZZZZZZ	2098	56015	4879	5774
16:01	ZZZZZZ	2085	56069	4911	5805
16:06	ZZZZZZ	2060	55183	4891	5649
16:11	ZZZZZZ	2080	56305	5081	5761
16:16	ZZZZZZ	2065	55434	4924	5727
16:21	MA53430-CCV4	2036	54554	5050	5167
16:26	MA53430-CCB5	2093	56364	5123	5784
16:31	MP36771-MB1	2072	56392	5070	5733
16:36	MP36771-B1	2054	54695	5025	5311
16:41	MP36771-S1	2137	56877	5377	4982
16:46	MP36771-S2	2139	56691	5448	5030
16:51	JD56522-1	2126	56175	5283	5079
16:56	MP36771-SD1	2115	55696	4978	5467
17:01	MP36771-S1	2120	56060	5205	5154
17:06	MP36771-S2	2116	55852	5184	5167
17:11	JD56522-1	2114	57242	5148	5261
17:16	MP36771-SD1	2142	55823	4970	5620
17:21	MA53430-CCV5	2025	53827	4983	5119
17:25	MA53430-CCB6	2100	56227	5017	5781
17:31	MP36766-MB1	2102	55673	5036	5803
17:36	MP36766-B1	2071	54956	4991	5333
17:41	MP36766-B2	2068	54792	5025	5323

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
17:45	MP36766-S1	2020	53939	5013	5089
17:50	MP36766-S2	2010	54125	5041	5068
17:55	JD56542-1F	2028	54415	5002	5282
18:00	MP36766-SD1	2075	55342	4903	5595
18:05	ZZZZZZ	1906	51724	4923	4732
18:11	ZZZZZZ	1981	52999	4945	5043
18:16	ZZZZZZ	2013	54878	5064	5334
18:21	MA53430-CCV6	2035	53924	4962	5136
18:26	MA53430-CCB7	2098	55662	4862	5770
18:31	ZZZZZZ	2028	54292	5052	5284
18:36	ZZZZZZ	2031	54624	4954	5410
18:41	ZZZZZZ	2063	55225	4995	5541
18:46	ZZZZZZ	2014	53758	4958	5295
18:51	ZZZZZZ	2039	54996	4925	5466
18:56	ZZZZZZ	2069	55625	4965	5554
19:01	ZZZZZZ	2021	54312	4868	5249
19:06	ZZZZZZ	2063	55294	4948	5534
19:12	ZZZZZZ	2068	55553	5042	5593
19:17	ZZZZZZ	2093	56334	4996	5787
19:22	MA53430-CCV7	2050	54413	5031	5197
19:27	MA53430-CCB8	2098	56473	4923	5787
19:32	ZZZZZZ	1884	51347	4913	4781
19:37	ZZZZZZ	1888	51106	4953	4733
19:42	ZZZZZZ	2023	54280	4990	5291
19:47	ZZZZZZ	2020	54308	4991	5277
19:53	ZZZZZZ	2007	53847	4984	5250
19:58	ZZZZZZ	1953	52397	4868	4997
20:03	ZZZZZZ	2084	56072	4984	5761
20:08	ZZZZZZ	2037	54200	4978	5415
20:13	ZZZZZZ	2047	54783	4994	5461
20:18	ZZZZZZ	2075	55608	4989	5708
20:23	MA53430-CCV8	2038	54519	5063	5172
20:28	MA53430-CCB9	2078	55741	4945	5745

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
20:33	ZZZZZZ	2070	56054	5101	5749
20:39	ZZZZZZ	2072	56017	5078	5641
20:44	ZZZZZZ	2100	56296	5118	5625
20:49	ZZZZZZ	2085	56037	5097	5576
20:54	ZZZZZZ	2082	55277	5115	5487
20:59	ZZZZZZ	2091	56313	5202	5476
21:04	ZZZZZZ	2083	55371	5079	5396
21:09	ZZZZZZ	2067	55934	5298	5170
21:14	ZZZZZZ	2067	55328	5052	5439
21:19	ZZZZZZ	2120	56543	5198	5452
21:24	MA53430-CCV9	2051	54224	5054	5202
21:28	MA53430-CCB10	2100	56799	5012	5797
21:34	ZZZZZZ	2083	56445	5081	5785
21:39	ZZZZZZ	2117	55817	5096	5496
21:44	ZZZZZZ	2109	56118	5173	5474
21:49	ZZZZZZ	2117	56002	5008	5570
21:54	ZZZZZZ	2091	55266	5021	5401
21:59	ZZZZZZ	2061	54809	5219	5136
22:04	ZZZZZZ	2132	56496	5155	5421
22:09	ZZZZZZ	2127	56934	5218	5418
22:14	ZZZZZZ	2112	56875	5106	5402
22:19	ZZZZZZ	2074	55288	5089	5251
22:24	MA53430-CCV10	2074	54823	5045	5255
22:29	MA53430-CCB11	2092	55911	4943	5789
22:34	ZZZZZZ	2114	56799	5046	5846
22:39	ZZZZZZ	1935	52126	4974	4830
22:44	ZZZZZZ	1965	52565	4991	4909
22:50	ZZZZZZ	2001	53351	4919	5112
22:55	ZZZZZZ	2061	56134	5066	5626
23:00	ZZZZZZ	2085	56511	5058	5753
23:05	ZZZZZZ	2078	54207	4935	5804
23:10	ZZZZZZ	2024	54659	4956	5549
23:15	ZZZZZZ	2019	53834	4914	5652

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
23:21	MP36376-B1	2028	54484	5041	5270
23:25	MA53430-CCV11	2033	54058	4966	5161
23:30	MA53430-CCB12	2097	56217	4967	5784
23:35	ZZZZZZ	2094	56670	5145	5808
23:40	ZZZZZZ	2031	55131	5079	5271
23:45	MP36779-S1	2068	55427	5140	5173
23:50	MP36779-S2	2051	55404	5195	5124
23:55	JD56619-14	2063	55393	5130	5235
00:00	MP36779-SD1	2099	55912	5122	5585
00:05	ZZZZZZ	2054	55271	5112	5146
00:10	ZZZZZZ	2063	55323	5076	5230
00:15	ZZZZZZ	2036	54652	5215	5126
00:20	MA53430-CCV12	2042	54500	5045	5182
00:25	MA53430-CCB13	2101	56420	4983	5795
00:30	MP36767-MB1	2097	56564	5043	5802
00:35	MP36767-B1	2057	54908	5036	5330
00:40	MP36767-S1	2030	53990	5055	5135
00:45	MP36767-S2	2042	54550	5068	5162
00:49	JD56548-14F	2042	54754	4987	5363
00:54	MP36767-SD1	2084	55735	4996	5667
01:00	ZZZZZZ	2089	56307	5073	5681
01:05	ZZZZZZ	2079	55781	4995	5558
01:10	ZZZZZZ	2010	53612	4989	5132
01:15	ZZZZZZ	2092	56145	5002	5675
01:20	MA53430-CCV13	2048	54273	4974	5182
01:25	MA53430-CCB14	2113	56196	4989	5825
01:30	ZZZZZZ	2028	54648	4990	5396
01:35	ZZZZZZ	2011	53506	5013	5111
01:40	ZZZZZZ	2009	52437	4999	5058
01:46	ZZZZZZ	2035	54543	4991	5343
01:51	ZZZZZZ	2091	56024	4963	5683
01:56	ZZZZZZ	2067	999999 !	5022	5548
02:01	ZZZZZZ	2011	53455	4949	5170

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
02:06	ZZZZZZ	2072	55829	4961	5657
02:11	ZZZZZZ	2027	54281	4941	5388
02:16	MA53430-CCV14	2056	54454	4989	5206
02:21	MA53430-CCB15	2109	56604	5011	5810
02:26	ZZZZZZ	2021	53564	4992	5144
02:31	ZZZZZZ	2014	53114	4955	5068
02:37	MP36376-MB1	2104	56224	4933	5801
02:42	MP36790-MB1	2105	56802	5036	5814
02:47	MP36790-LB1	1841	48335	4933	4417
02:52	MP36790-B1	2068	55018	5038	5344
02:57	MP36790-LS1	1899	49572	4983	4404
03:02	MP36790-S1	1807	48236	4864	4178
03:07	MP36790-S2	1801	48376	4865	4177
03:12	MA53430-CCV15	2056	54233	4974	5209
03:17	MA53430-CCB16	2108	56159	4966	5812
03:22	JD56483-1A	1778	47317	4835	4172
03:28	MP36790-SD1	1955	52038	4884	4866
03:33	ZZZZZZ	1774	47350	4816	4186
03:38	JD56547-1	1814	47904	4815	4299
03:43	JD56547-2	1724	46672	4750	4125
03:49	JD56547-3	1773	47258	4789	4208
03:54	JD56547-4	1776	47236	4780	4201
03:59	ZZZZZZ	1799	47621	4805	4250
04:04	ZZZZZZ	1835	48631	4846	4328
04:10	MA53430-CCV16	2071	54601	5042	5238
04:15	MA53430-CCB17	2112	56478	4968	5815
04:20	ZZZZZZ	1770	46913	4809	4174
04:25	ZZZZZZ	1762	47073	4775	4190
04:30	ZZZZZZ	1794	47548	4832	4247
04:36	ZZZZZZ	1756	46844	4726	4165
04:41	ZZZZZZ	2114	56131	4983	5788
04:47	ZZZZZZ	2088	55746	4946	5748
04:52	ZZZZZZ	2111	55630	5006	5824

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
04:57	ZZZZZZ	2093	55723	4937	5772
05:02	ZZZZZZ	2209	54949	5205	5180
05:07	ZZZZZZ	1935	52116	4858	4947
05:13	MA53430-CCV17	2074	54857	5047	5238
05:17	MA53430-CCB18	2120	56407	5028	5835
05:23	MP36805-MB1	2119	56868	5089	5842
05:28	MP36805-B1	2077	55300	5061	5360
05:33	MP36805-S1	2071	54918	5051	5332
05:37	MP36805-S2	2052	54523	5065	5277
05:42	JD56676-1	2128	56763	5070	5742
05:47	MP36805-SD1	2115	56437	4977	5790
05:53	ZZZZZZ	2111	56857	5080	5832
05:58	ZZZZZZ	2116	56841	5043	5695
06:03	ZZZZZZ	2123	56904	5162	5642
06:08	MA53430-CCV18	2064	54393	4976	5224
06:13	MA53430-CCB19	2122	56640	4971	5831
06:18	ZZZZZZ	2121	57385	5078	5853
06:23	ZZZZZZ	2114	56444	5024	5684
06:28	ZZZZZZ	No results reported for the elements associated with this internal standard.			
06:33	ZZZZZZ	2097	56736	5013	5748
06:39	ZZZZZZ	2140	57296	5147	5635
06:44	MP36785-B1	2071	54418	4956	5372
06:48	MP36785-MB1	2053	54643	4857	5734
06:54	MP36785-S1	1692	44891	4586	4024
06:59	MP36785-S2	1691	45018	4625	4018
07:04	MA53430-CCV19	2071	55109	5142	5246
07:09	MA53430-CCB20	2122	56955	5077	5847
07:14	JD56632-1	1726	44932	4596	4090
07:18	MP36785-SD1	1900	50440	4873	4778
07:24	ZZZZZZ	1725	46056	4638	4121
07:29	ZZZZZZ	1941	52185	4969	5022
07:34	ZZZZZZ	1812	46883	4798	4226
07:39	ZZZZZZ	No results reported for the elements associated with this internal standard.			

INTERNAL STANDARD SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
Analyst: ND Run ID: MA53430
Parameters: Sb,As,Ba,Be,Cd,Cr,Pb,Ni,Se,Ag,V

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
07:45	ZZZZZZ	2121	57687	5275	5670
07:50	ZZZZZZ	2134	56972	5019	5884
07:55	ZZZZZZ	2157	56977	5146	5537
08:00	MA53430-CCV20	2085	55353	5140	5283
08:05	MA53430-CCB21	2138	56756	5040	5892
08:10	MP36785-S1	1935	51064	4829	4823
08:15	MP36785-S2	1923	51192	4855	4775
08:20	JD56632-1	1918	50990	4852	4806
08:25	MP36785-SD1	2055	54558	5000	5398
08:30	ZZZZZZ	1937	51421	4854	4865
08:35	MP36766-S1	2079	55817	5139	5364
08:40	MP36766-S2	2096	55551	5103	5389
08:45	ZZZZZZ	2077	55190	5025	5462
08:50	ZZZZZZ	2131	56785	5003	5868
08:55	MA53430-CCV21	2091	55251	5062	5283
09:00	MA53430-CCB22	2141	56779	5023	5894
09:05	MP36807-MB1	2092	55270	4962	5848
09:10	MP36807-B1	2031	52746	4958	5288
09:15	MP36807-S1	1994	52533	4902	5102
09:20	MP36807-S2	2002	52804	4894	5122
09:25	JD56528-1	2008	53322	4893	5376
09:30	MP36807-SD1	2093	56193	5025	5732
09:35	ZZZZZZ	2136	56689	5144	5620
09:40	ZZZZZZ	1682	43990	4622	3947 !a
09:45	ZZZZZZ	1916	50279	4869	4752
09:50	MA53430-CCV22	2077	54906	5096	5263
09:55	MA53430-CCB23	2127	56616	5037	5858

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	70-130 %
Istd#2	Yttrium (3600)	70-130 %
Istd#3	Yttrium (3710)	70-130 %
Istd#4	Indium	70-130 %

(a) No samples reported for the elements associated with this internal standard.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time: / Sample ID:			12:27 ICB1		12:44 CCB1		13:45 CCB2		14:30 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	16	anr							
Antimony	6.0	2.5	0.00	<6.0	0.300	<6.0	0.100	<6.0	-0.200	<6.0
Arsenic	3.0	2	0.600	<3.0	1.10	<3.0	2.10	<3.0	0.500	<3.0
Barium	200	.4	0.100	<200	-0.200	<200	2.70	<200	0.200	<200
Beryllium	1.0	.1	0.00	<1.0	-0.100	<1.0	2.20	* (a)	0.100	<1.0
Bismuth	20	3.6								
Boron	100	1.9								
Cadmium	3.0	.4	0.00	<3.0	0.00	<3.0	0.800	<3.0	0.100	<3.0
Calcium	5000	5.6	anr							
Cerium	100									
Chromium	10	.5	-0.400	<10	-0.300	<10	1.00	<10	-0.300	<10
Cobalt	50	.5	anr							
Copper	10	1	anr							
Iron	100	11	anr							
Lead	3.0	1.2	1.40	<3.0	0.900	<3.0	1.00	<3.0	1.50	<3.0
Lithium	50	2.3								
Magnesium	5000	65	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	0.100	<10	-0.200	<10	0.800	<10	0.00	<10
Phosphorus	50	4.1	anr							
Potassium	10000	55	anr							
Selenium	10	3.5	-0.800	<10	1.60	<10	-0.900	<10	2.00	<10
Silicon	200	1.6								
Silver	10	1.1	0.500	<10	0.100	<10	-0.400	<10	-0.600	<10
Sodium	10000	11	anr							
Strontium	10	.1								
Sulfur	50	4.4								
Thallium	10	2.5	anr							
Tin	10	1								
Titanium	10	.4								
Tungsten	50	2.8								
Vanadium	50	.6	0.00	<50	0.100	<50	1.20	<50	0.400	<50

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time:			12:27		12:44		13:45		14:30	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.1	anr							
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time: / Sample ID:			15:25 CCB4		16:26 CCB5		17:25 CCB6		18:26 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	16	anr							
Antimony	6.0	2.5	0.900	<6.0	0.100	<6.0	1.00	<6.0	0.900	<6.0
Arsenic	3.0	2	1.20	<3.0	1.80	<3.0	2.80	<3.0	0.400	<3.0
Barium	200	.4	0.200	<200	0.00	<200	2.50	<200	0.500	<200
Beryllium	1.0	.1	0.100	<1.0	0.100	<1.0	2.50	* (a)	0.300	<1.0
Bismuth	20	3.6								
Boron	100	1.9								
Cadmium	3.0	.4	0.400	<3.0	0.200	<3.0	1.40	<3.0	0.200	<3.0
Calcium	5000	5.6	anr							
Cerium	100									
Chromium	10	.5	-0.300	<10	0.300	<10	1.40	<10	0.300	<10
Cobalt	50	.5	anr							
Copper	10	1	anr							
Iron	100	11	anr							
Lead	3.0	1.2	0.800	<3.0	1.70	<3.0	2.60	<3.0	1.80	<3.0
Lithium	50	2.3								
Magnesium	5000	65	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	0.600	<10	0.00	<10	1.30	<10	0.100	<10
Phosphorus	50	4.1	anr							
Potassium	10000	55	anr							
Selenium	10	3.5	1.30	<10	3.40	<10	3.50	<10	0.500	<10
Silicon	200	1.6								
Silver	10	1.1	-0.400	<10	0.00	<10	0.100	<10	-1.20	<10
Sodium	10000	11	anr							
Strontium	10	.1								
Sulfur	50	4.4								
Thallium	10	2.5	anr							
Tin	10	1								
Titanium	10	.4								
Tungsten	50	2.8								
Vanadium	50	.6	0.500	<50	0.300	<50	1.80	<50	0.500	<50

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time: / Sample ID:			15:25 CCB4		16:26 CCB5		17:25 CCB6		18:26 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.1	anr							
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time: / Sample ID:			19:27 CCB8		20:28 CCB9		21:28 CCB10		22:29 CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	16	anr							
Antimony	6.0	2.5	0.00	<6.0	-0.700	<6.0	0.200	<6.0	0.700	<6.0
Arsenic	3.0	2	0.800	<3.0	1.10	<3.0	-0.400	<3.0	-0.100	<3.0
Barium	200	.4	0.500	<200	0.00	<200	0.00	<200	0.00	<200
Beryllium	1.0	.1	0.300	<1.0	-0.100	<1.0	0.00	<1.0	0.00	<1.0
Bismuth	20	3.6								
Boron	100	1.9								
Cadmium	3.0	.4	0.400	<3.0	0.300	<3.0	0.00	<3.0	0.200	<3.0
Calcium	5000	5.6	anr							
Cerium	100									
Chromium	10	.5	-0.100	<10	-0.300	<10	-0.300	<10	-0.300	<10
Cobalt	50	.5	anr							
Copper	10	1	anr							
Iron	100	11	anr							
Lead	3.0	1.2	1.50	<3.0	1.70	<3.0	1.00	<3.0	1.90	<3.0
Lithium	50	2.3								
Magnesium	5000	65	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	0.600	<10	0.00	<10	0.400	<10	0.300	<10
Phosphorus	50	4.1	anr							
Potassium	10000	55	anr							
Selenium	10	3.5	-0.700	<10	2.60	<10	1.00	<10	0.100	<10
Silicon	200	1.6								
Silver	10	1.1	0.00	<10	0.200	<10	0.100	<10	-0.300	<10
Sodium	10000	11	anr							
Strontium	10	.1								
Sulfur	50	4.4								
Thallium	10	2.5	anr							
Tin	10	1								
Titanium	10	.4								
Tungsten	50	2.8								
Vanadium	50	.6	0.400	<50	0.300	<50	0.600	<50	0.400	<50

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time: / Sample ID:			19:27 CCB8		20:28 CCB9		21:28 CCB10		22:29 CCB11	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.1	anr							
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time: / Sample ID:			23:30 CCB12		00:25 CCB13		01:25 CCB14		02:21 CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	16	anr							
Antimony	6.0	2.5	0.200	<6.0	-0.700	<6.0	0.200	<6.0	-0.400	<6.0
Arsenic	3.0	2	0.600	<3.0	0.400	<3.0	-0.200	<3.0	1.30	<3.0
Barium	200	.4	-0.100	<200	-0.100	<200	0.00	<200	0.00	<200
Beryllium	1.0	.1	0.00	<1.0	0.00	<1.0	0.00	<1.0	0.00	<1.0
Bismuth	20	3.6								
Boron	100	1.9								
Cadmium	3.0	.4	0.200	<3.0	-0.100	<3.0	0.100	<3.0	0.100	<3.0
Calcium	5000	5.6	anr							
Cerium	100									
Chromium	10	.5	0.00	<10	-0.500	<10	-0.200	<10	-0.200	<10
Cobalt	50	.5	anr							
Copper	10	1	anr							
Iron	100	11	anr							
Lead	3.0	1.2	1.20	<3.0	0.600	<3.0	0.700	<3.0	0.200	<3.0
Lithium	50	2.3								
Magnesium	5000	65	anr							
Manganese	15	.2	anr							
Molybdenum	20	.4								
Nickel	10	.3	0.00	<10	0.00	<10	0.00	<10	0.100	<10
Phosphorus	50	4.1	anr							
Potassium	10000	55	anr							
Selenium	10	3.5	-0.600	<10	0.100	<10	0.800	<10	0.600	<10
Silicon	200	1.6								
Silver	10	1.1	-0.200	<10	0.100	<10	-0.200	<10	-0.100	<10
Sodium	10000	11	anr							
Strontium	10	.1								
Sulfur	50	4.4								
Thallium	10	2.5	anr							
Tin	10	1								
Titanium	10	.4								
Tungsten	50	2.8								
Vanadium	50	.6	0.200	<50	0.200	<50	0.100	<50	0.300	<50

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time:			23:30		00:25		01:25		02:21	
Sample ID:			CCB12		CCB13		CCB14		CCB15	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Zinc	20	.1	anr							
Zirconium	10	.4								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time:			03:17		04:15	
Sample ID:			CCB16		CCB17	
Metal	RL	IDL	raw	final	raw	final
Aluminum	200	16	anr			
Antimony	6.0	2.5	0.800	<6.0	0.00	<6.0
Arsenic	3.0	2	0.500	<3.0	0.100	<3.0
Barium	200	.4	0.100	<200	-0.100	<200
Beryllium	1.0	.1	-0.100	<1.0	0.00	<1.0
Bismuth	20	3.6				
Boron	100	1.9				
Cadmium	3.0	.4	0.100	<3.0	0.200	<3.0
Calcium	5000	5.6	anr			
Cerium	100					
Chromium	10	.5	-0.200	<10	-0.100	<10
Cobalt	50	.5	anr			
Copper	10	1	anr			
Iron	100	11	anr			
Lead	3.0	1.2	1.70	<3.0	1.00	<3.0
Lithium	50	2.3				
Magnesium	5000	65	anr			
Manganese	15	.2	anr			
Molybdenum	20	.4				
Nickel	10	.3	0.00	<10	0.300	<10
Phosphorus	50	4.1	anr			
Potassium	10000	55	anr			
Selenium	10	3.5	1.60	<10	0.200	<10
Silicon	200	1.6				
Silver	10	1.1	-0.500	<10	0.00	<10
Sodium	10000	11	anr			
Strontium	10	.1				
Sulfur	50	4.4				
Thallium	10	2.5	anr			
Tin	10	1				
Titanium	10	.4				
Tungsten	50	2.8				
Vanadium	50	.6	0.200	<50	0.00	<50

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: result < RL Run ID: MA53430 Units: ug/l

Time:			03:17		04:15	
Sample ID:			CCB16		CCB17	
Metal	RL	IDL	raw	final	raw	final
Zinc	20	.1	anr			
Zirconium	10	.4				

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA53430 Units: ug/l

Time:		12:33	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	2000	1960	98.0
Arsenic	2000	1950	97.5
Barium	2000	2010	100.5
Beryllium	2000	2030	101.5
Bismuth			
Boron			
Cadmium	2000	1990	99.5
Calcium	anr		
Cerium			
Chromium	2000	2040	102.0
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	2000	1990	99.5
Lithium			
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	2000	1980	99.0
Phosphorus	anr		
Potassium	anr		
Selenium	2000	1950	97.5
Silicon			
Silver	250	253	101.2
Sodium	anr		
Strontium			
Sulfur			
Thallium	anr		
Tin			
Titanium			
Tungsten			
Vanadium	2000	2030	101.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial Continuing Calibration Check

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: to % Recovery Run ID: MA53430 Units: ug/l

Time:		12:33	
Sample ID:	ICCV	ICCV1	
Metal	True	Results	% Rec
Zinc	anr		
Zirconium			

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		12:18			13:40			14:25	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1970	98.5	2000	1970	98.5	2000	1960	98.0
Arsenic	2000	1960	98.0	2000	1960	98.0	2000	1950	97.5
Barium	2000	1990	99.5	2000	1970	98.5	2000	1990	99.5
Beryllium	2000	2000	100.0	2000	2020	101.0	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	2000	100.0	2000	1970	98.5	2000	1980	99.0
Calcium	anr								
Cerium									
Chromium	2000	1990	99.5	2000	1980	99.0	2000	1980	99.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2000	100.0	2000	1990	99.5	2000	1980	99.0
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	2000	1990	99.5	2000	1970	98.5	2000	1980	99.0
Phosphorus	anr								
Potassium	anr								
Selenium	2000	1950	97.5	2000	1940	97.0	2000	1920	96.0
Silicon									
Silver	250	246	98.4	250	245	98.0	250	246	98.4
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	1980	99.0	2000	1960	98.0	2000	1970	98.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		12:18			13:40			14:25	
Sample ID:	ICV	ICV2		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zinc	anr								
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		15:20			16:21			17:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1940	97.0	2000	1950	97.5	2000	1940	97.0
Arsenic	2000	1920	96.0	2000	1930	96.5	2000	1930	96.5
Barium	2000	1930	96.5	2000	1930	96.5	2000	1920	96.0
Beryllium	2000	1970	98.5	2000	1980	99.0	2000	1980	99.0
Bismuth									
Boron									
Cadmium	2000	1920	96.0	2000	1930	96.5	2000	1930	96.5
Calcium	anr								
Cerium									
Chromium	2000	1920	96.0	2000	1930	96.5	2000	1960	98.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1940	97.0	2000	1950	97.5	2000	1970	98.5
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	2000	1910	95.5	2000	1910	95.5	2000	1930	96.5
Phosphorus	anr								
Potassium	anr								
Selenium	2000	1910	95.5	2000	1920	96.0	2000	1910	95.5
Silicon									
Silver	250	245	98.0	250	247	98.8	250	246	98.4
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	1900	95.0	2000	1900	95.0	2000	1930	96.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		15:20			16:21			17:21	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zinc	anr								
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		18:21			19:22			20:23	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1940	97.0	2000	1920	96.0	2000	1950	97.5
Arsenic	2000	1930	96.5	2000	1910	95.5	2000	1940	97.0
Barium	2000	1950	97.5	2000	1960	98.0	2000	1980	99.0
Beryllium	2000	2010	100.5	2000	1990	99.5	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	1920	96.0	2000	1960	98.0	2000	2010	100.5
Calcium	anr								
Cerium									
Chromium	2000	1970	98.5	2000	1960	98.0	2000	1980	99.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1970	98.5	2000	1970	98.5	2000	2000	100.0
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	2000	1930	96.5	2000	1960	98.0	2000	2000	100.0
Phosphorus	anr								
Potassium	anr								
Selenium	2000	1910	95.5	2000	1890	94.5	2000	1930	96.5
Silicon									
Silver	250	245	98.0	250	250	100.0	250	255	102.0
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	1930	96.5	2000	1950	97.5	2000	1980	99.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		18:21			19:22			20:23	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zinc	anr								
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		21:24			22:24			23:25	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1940	97.0	2000	1930	96.5	2000	1960	98.0
Arsenic	2000	1930	96.5	2000	1910	95.5	2000	1960	98.0
Barium	2000	1950	97.5	2000	1970	98.5	2000	1970	98.5
Beryllium	2000	1980	99.0	2000	2000	100.0	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	1950	97.5	2000	1930	96.5	2000	1980	99.0
Calcium	anr								
Cerium									
Chromium	2000	1960	98.0	2000	1950	97.5	2000	1970	98.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1960	98.0	2000	1950	97.5	2000	1990	99.5
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	2000	1940	97.0	2000	1930	96.5	2000	1970	98.5
Phosphorus	anr								
Potassium	anr								
Selenium	2000	1920	96.0	2000	1930	96.5	2000	1950	97.5
Silicon									
Silver	250	250	100.0	250	250	100.0	250	250	100.0
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	1950	97.5	2000	1940	97.0	2000	1960	98.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		21:24			22:24			23:25	
Sample ID:	CCV	CCV9		CCV	CCV10		CCV	CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zinc	anr								
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		00:20			01:20			02:16	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	2000	1950	97.5	2000	1970	98.5	2000	1940	97.0
Arsenic	2000	1940	97.0	2000	1950	97.5	2000	1940	97.0
Barium	2000	1960	98.0	2000	1960	98.0	2000	1960	98.0
Beryllium	2000	1990	99.5	2000	2000	100.0	2000	2000	100.0
Bismuth									
Boron									
Cadmium	2000	1960	98.0	2000	1960	98.0	2000	1970	98.5
Calcium	anr								
Cerium									
Chromium	2000	1960	98.0	2000	1970	98.5	2000	1970	98.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1980	99.0	2000	1990	99.5	2000	1990	99.5
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	2000	1960	98.0	2000	1970	98.5	2000	1970	98.5
Phosphorus	anr								
Potassium	anr								
Selenium	2000	1940	97.0	2000	1960	98.0	2000	1940	97.0
Silicon									
Silver	250	250	100.0	250	250	100.0	250	251	100.4
Sodium	anr								
Strontium									
Sulfur									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	2000	1950	97.5	2000	1950	97.5	2000	1960	98.0

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		00:20			01:20			02:16	
Sample ID:	CCV	CCV12		CCV	CCV13		CCV	CCV14	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Zinc	anr								
Zirconium									

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		03:12			04:10	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum	anr					
Antimony	2000	1960	98.0	2000	1930	96.5
Arsenic	2000	1950	97.5	2000	1930	96.5
Barium	2000	1960	98.0	2000	1940	97.0
Beryllium	2000	1990	99.5	2000	1990	99.5
Bismuth						
Boron						
Cadmium	2000	1970	98.5	2000	1950	97.5
Calcium	anr					
Cerium						
Chromium	2000	1970	98.5	2000	1980	99.0
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	2000	1990	99.5	2000	1970	98.5
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	2000	1980	99.0	2000	1960	98.0
Phosphorus	anr					
Potassium	anr					
Selenium	2000	1960	98.0	2000	1920	96.0
Silicon						
Silver	250	252	100.8	250	250	100.0
Sodium	anr					
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	2000	1960	98.0	2000	1950	97.5

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 95 to 105 % Recovery Run ID: MA53430 Units: ug/l

Time:		03:12			04:10	
Sample ID:	CCV	CCV15		CCV	CCV16	
Metal	True	Results	% Rec	True	Results	% Rec
Zinc	anr					
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA53430 Units: ug/l

Time:		13:09			13:14	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Aluminum						
Antimony	8000	7910	98.9			
Arsenic	8000	7780	97.3			
Barium	8000	7750	96.9			
Beryllium	8000	7940	99.3			
Bismuth						
Boron						
Cadmium	8000	7450	93.1			
Calcium						
Cerium						
Chromium	8000	8150	101.9			
Cobalt	anr					
Copper	anr					
Iron						
Lead	8000	7800	97.5			
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	8000	7690	96.1			
Phosphorus	anr					
Potassium						
Selenium	8000	7890	98.6			
Silicon						
Silver	625	597	95.5			
Sodium						
Strontium						
Sulfur						
Thallium	anr					
Tin						
Titanium						
Tungsten						
Vanadium	8000	7900	98.8			

HIGH STANDARD CHECK SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 90 to 110 % Recovery Run ID: MA53430 Units: ug/l

Time:		13:09			13:14	
Sample ID:	HSTD	HSTD1		HSTD	HSTD2	
Metal	True	Results	% Rec	True	Results	% Rec
Zinc	anr					
Zirconium						

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA53430 Units: ug/l

Time:				12:49		12:54	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Aluminum	200	500	100	anr			
Antimony	6.0	20	3.0	5.20	86.7		
Arsenic	8.0	20	3.0	8.00	100.0	3.30	110.0
Barium	200		4.0	196	98.0		
Beryllium	2.0		1.0	2.10	105.0	1.00	100.0
Bismuth	20						
Boron	100		10				
Cadmium	3.0		1.0	3.20	106.7	1.10	110.0
Calcium	5000	2000	1000	anr			
Cerium							
Chromium	10		2.0	9.00	90.0		
Cobalt	50		3.0	anr			
Copper	10		2.0	anr			
Iron	100	500		anr			
Lead	3.0	20	2.5	2.70	90.0		
Lithium	50						
Magnesium	5000	2000	100	anr			
Manganese	15		3.0	anr			
Molybdenum	20						
Nickel	10		4.0	9.40	94.0	3.90	97.5
Phosphorus	50			anr			
Potassium	5000		2000	anr			
Selenium	10	20	5.0	10.0	100.0	4.50	90.0
Silicon	200						
Silver	5.0		2.0	5.70	114.0		
Sodium	5000		1000	anr			
Strontium	10						
Sulfur	50						
Thallium	10		2.0	anr			
Tin	10						
Titanium	10						
Tungsten	50						
Vanadium	50		2.0	47.7	95.4	2.10	105.0

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: CRI 80-120% CRIA 80-120% Run ID: MA53430 Units: ug/l

Time:				12:49		12:54	
Sample ID:	CRI	CRIA	CRID	CRI1		CRID1	
Metal	True	True	True	Results	% Rec	Results	% Rec
Zinc	20		10	anr			
Zirconium	10						

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA53430 Units: ug/l

Time:			12:59		13:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	500000	500000	516000	103.2	514000	102.8
Antimony		1000	2.50		925	92.5
Arsenic		1000	0.500		910	91.0
Barium		500	-10.8		477	95.4
Beryllium		500	-0.500		484	96.8
Bismuth		500	-1.20		474	94.8
Boron		500	0.00		480	96.0
Cadmium		1000	0.800		997	99.7
Calcium	400000	400000	398000	99.5	399000	99.8
Cerium			152*		643*	
Chromium		500	2.70		456	91.2
Cobalt		500	1.60		463	92.6
Copper		500	2.20		497	99.4
Iron	200000	200000	198000	99.0	201000	100.5
Lead		1000	2.40		912	91.2
Lithium		500	-5.30		423	84.6
Magnesium	500000	500000	505000	101.0	513000	102.6
Manganese		500	-9.40		473	94.6
Molybdenum		500	-2.40		453	90.6
Nickel		1000	5.50		897	89.7
Phosphorus		500	9.90		448	89.6
Potassium			100		121	
Selenium		1000	0.300		871	87.1
Silicon		500	-10.4		471	94.2
Silver		1000	1.10		1070	107.0
Sodium			64.0		21.2	
Strontium		500	-1.40		477	95.4
Sulfur		500	-2.30		449	89.8
Thallium		1000	-1.00		970	97.0
Tin		500	-2.30		447	89.4
Titanium		500	-0.800		470	94.0
Tungsten		500	0.300		451	90.2
Vanadium		500	15.8		487	97.4

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

File ID: SE120722M1.ICP Date Analyzed: 12/07/22 Methods: EPA 200.7, SW846 6010D
QC Limits: 80 to 120 % Recovery Run ID: MA53430 Units: ug/l

Time:			12:59		13:05	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Zinc		1000	0.00		900	90.0
Zirconium		500	2.90		506	101.2

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/07/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.20	.016	.046		
Antimony	0.10	.0025	.0047	0.0	<0.10
Arsenic	0.10	.002	.0028	0.0	<0.10
Barium	0.20	.0004	.013	0.00010	<0.20
Beryllium	0.0020	.0001	.0005	-0.00010	<0.0020
Bismuth	0.020	.0036	.004		
Boron	0.10	.0019	.063		
Cadmium	0.0040	.0004	.001	0.00030	<0.0040
Calcium	5.0	.0056	.099		
Chromium	0.010	.0005	.002	-0.00010	<0.010
Cobalt	0.050	.0005	.0026		
Copper	0.010	.001	.0059		
Iron	0.10	.011	.032		
Lead	0.10	.0012	.0018	0.0011	<0.10
Lithium	0.050	.0023	.0073		
Magnesium	5.0	.065	.14		
Manganese	0.015	.0002	.0014		
Molybdenum	0.020	.0004	.0036		
Nickel	0.010	.0003	.0017	0.0	<0.010
Phosphorus	0.050	.0041	.018		
Potassium	10	.055	.2		
Selenium	0.10	.0035	.0049	0.0020	<0.10
Silicon	0.20	.0016	.1		
Silver	0.010	.0011	.0019	-0.00010	<0.010
Sodium	10	.011	.57		
Strontium	0.010	.0001	.001		
Sulfur	0.050	.0044	.045		
Thallium	0.10	.0025	.0018		
Tin	0.010	.001	.0037		
Titanium	0.010	.0004	.0025		
Tungsten	0.050	.0028	.04		
Vanadium	0.050	.0006	.0018	0.00040	<0.050
Zinc	0.020	.0001	.0069		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	RL	IDL	MDL	MB raw	final
Zirconium	0.010	.0004	.0041		

Associated samples MP36790: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/07/22

Metal	JD56483-1A Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony	0.0053	2.0	2.0	99.7	75-125
Arsenic	0.0053	2.1	2.0	104.7	75-125
Barium	0.54	2.5	2.0	98.0	75-125
Beryllium	0.00080	2.0	2.0	100.0	75-125
Bismuth					
Boron					
Cadmium	0.0093	2.1	2.0	104.5	75-125
Chromium	0.0	1.9	2.0	95.0	75-125
Cobalt					
Copper	anr				
Iron					
Lead	0.014	2.0	2.0	99.3	75-125
Lithium					
Magnesium					
Molybdenum					
Nickel	0.030	2.0	2.0	98.5	75-125
Phosphorus					
Potassium					
Selenium	0.015	2.1	2.0	104.3	75-125
Silicon					
Silver	0.0026	0.28	0.25	111.0	75-125
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium	0.0044	1.9	2.0	94.8	75-125
Zinc	anr				
Zirconium					

Associated samples MP36790: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

	JD56483-1A	Spikelot		QC
Metal	Original MS	MPSPK2	% Rec	Limits

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	JD56483-1A Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0053	1.9	2.0	94.7	5.1	20
Arsenic	0.0053	2.0	2.0	99.7	4.9	20
Barium	0.54	2.5	2.0	98.0	0.0	20
Beryllium	0.00080	1.9	2.0	95.0	5.1	20
Bismuth						
Boron						
Cadmium	0.0093	2.1	2.0	104.5	0.0	20
Chromium	0.0	1.9	2.0	95.0	0.0	20
Cobalt						
Copper	anr					
Iron						
Lead	0.014	1.9	2.0	94.3	5.1	20
Lithium						
Magnesium						
Molybdenum						
Nickel	0.030	2.0	2.0	98.5	0.0	20
Phosphorus						
Potassium						
Selenium	0.015	2.1	2.0	104.3	0.0	20
Silicon						
Silver	0.0026	0.27	0.25	107.0	3.6	20
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium	0.0044	1.9	2.0	94.8	0.0	20
Zinc	anr					
Zirconium						

Associated samples MP36790: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	JD56483-1A Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:			12/07/22				12/07/22	
Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum								
Antimony	1.9	2.0	95.0	80-120	1.8	2.0	90.0	80-120
Arsenic	1.9	2.0	95.0	80-120	2.0	2.0	100.0	80-120
Barium	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Beryllium	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Bismuth								
Boron								
Cadmium	2.0	2.0	100.0	80-120	2.0	2.0	100.0	80-120
Calcium								
Chromium	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Cobalt								
Copper	anr							
Iron								
Lead	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Lithium								
Magnesium								
Manganese								
Molybdenum								
Nickel	2.0	2.0	100.0	80-120	2.0	2.0	100.0	80-120
Phosphorus								
Potassium								
Selenium	1.9	2.0	95.0	80-120	2.1	2.0	105.0	80-120
Silicon								
Silver	0.25	0.25	100.0	80-120	0.26	0.25	104.0	80-120
Sodium								
Strontium								
Sulfur								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Zinc	anr							

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22 12/07/22

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium								

Associated samples MP36790: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: ug/l

Prep Date: 12/07/22

Metal	JD56483-1A Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	5.30	0.00	100.0(a)	0-10
Arsenic	5.30	0.00	100.0(a)	0-10
Barium	543	556	2.5	0-10
Beryllium	0.800	0.500	37.5 (a)	0-10
Bismuth				
Boron				
Cadmium	9.30	8.90	4.3	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	anr			
Iron				
Lead	13.8	13.4	2.9	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	29.9	31.9	6.7	0-10
Phosphorus				
Potassium				
Selenium	15.0	0.00	100.0(a)	0-10
Silicon				
Silver	2.60	0.00	100.0(a)	0-10
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium	4.40	76.2	1631.8(a	0-10
Zinc	anr			
Zirconium				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36790 Methods: SW846 6010D
Matrix Type: LEACHATE Units: ug/l

Prep Date: 12/07/22

	JD56483-1A		QC
Metal	Original SDL 1:5	%DIF	Limits

Associated samples MP36790: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36802 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00020	.000024	.000095	0.000010	<0.00020

Associated samples MP36802: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36802 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	JD56483-1A Original MS		Spikelot HGPW3	% Rec	QC Limits
Mercury	0.000046	0.0020	0.0020	97.7	75-125

Associated samples MP36802: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36802 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	JD56483-1A Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.000046	0.0020	0.0020	97.7	0.0	20

Associated samples MP36802: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56547
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36802 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/07/22

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0020	0.0020	100.0	80-120

Associated samples MP36802: JD56547-1, JD56547-2, JD56547-3, JD56547-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Instrument Detection Limits

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Instrument ID: LEEMANHG8 **Effective Date:** 01/12/21

Analyte	IDL ug/l
Mercury	.0237

The above applies to the following instrument runs:
MA53423

Instrument Detection Limits

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Instrument ID: SSTRACE5 **Effective Date:** 02/11/21

Analyte	IDL ug/l
Aluminum	15.9
Antimony	2.5
Arsenic	2
Barium	.4
Beryllium	.1
Bismuth	3.6
Boron	1.9
Cadmium	.4
Calcium	5.6
Chromium	.5
Cobalt	.5
Copper	1
Iron	11.1
Lead	1.2
Lithium	2.3
Magnesium	64.9
Manganese	.2
Molybdenum	.4
Nickel	.3
Phosphorus	4.1
Potassium	55.1
Selenium	3.5
Silicon	1.6
Silver	1.1
Sodium	11.1
Sulfur	4.4
Strontium	.1
Thallium	2.5
Tin	1
Titanium	.4
Tungsten	2.8
Vanadium	.6
Zinc	.1
Zirconium	.4

The above applies to the following instrument runs:
MA53430

Instrument Linear Ranges

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Instrument ID: LEEMANHG8 **Effective Date:** 03/10/17

Analyte	Linear Range ug/l
Mercury	5

The above applies to the following instrument runs:
MA53423

Instrument Linear Ranges

Job Number: JD56547
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Instrument ID: SSTRACE5 **Effective Date:** 08/22/19

Analyte	Linear Range ug/l
Aluminum	300000
Antimony	8000
Arsenic	8000
Barium	8000
Beryllium	8000
Bismuth	8000
Boron	8000
Cadmium	8000
Calcium	200000
Cerium	8000
Chromium	8000
Cobalt	8000
Copper	8000
Iron	200000
Lead	8000
Lithium	8000
Magnesium	300000
Manganese	8000
Molybdenum	8000
Nickel	8000
Palladium	8000
Phosphorus	8000
Potassium	200000
Selenium	8000
Silicon	25000
Silver	625
Sodium	200000
Sulfur	100000
Strontium	8000
Thallium	8000
Tin	8000
Titanium	8000
Tungsten	8000
Vanadium	8000
Zinc	8000
Zirconium	8000

The above applies to the following instrument runs:
MA53430

Metals Analysis

Raw Data

MA53423

Method: SGS Operator: Admin Date of Analysis: 07 Dec 2022 13:35:41

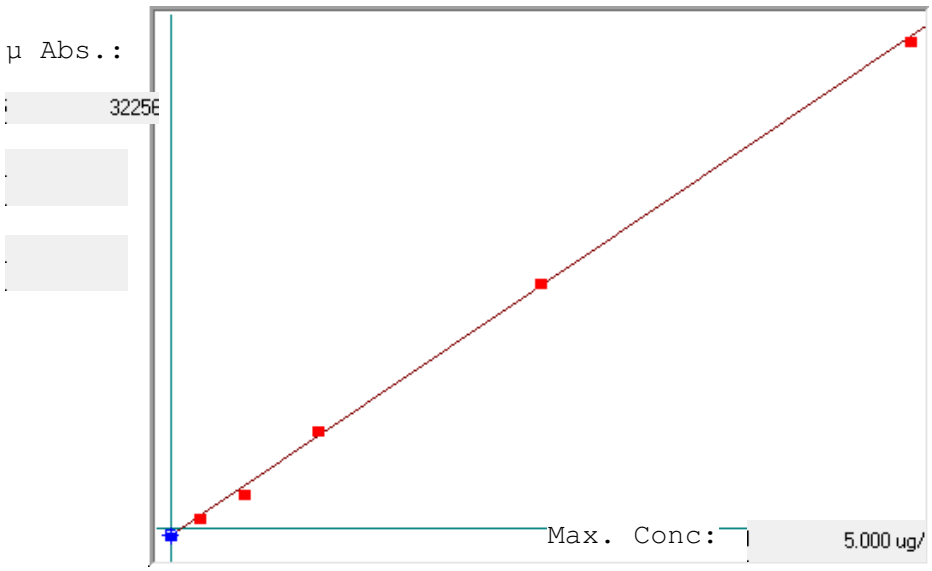
Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
STDA - 1	07 Dec 2022 13:52:48	S	ug/l	-	-486	1.000	1.000
STDB - 1	07 Dec 2022 13:54:15	S	ug/l	-	736	1.000	1.000
STDC - 1	07 Dec 2022 13:55:40	S	ug/l	-	2304	1.000	1.000
STDD - 1	07 Dec 2022 13:57:05	S	ug/l	-	6558	1.000	1.000
STDE - 1	07 Dec 2022 13:58:38	S	ug/l	-	16268	1.000	1.000
STDF - 1	07 Dec 2022 14:00:22	S	ug/l	-	32256	1.000	1.000
SAMPLECONF - 1	07 Dec 2022 14:03:50	U	ug/l	-0.0711	-971	1.000	1.000
ICV - 1	07 Dec 2022 14:05:11	C	ug/l	3.2154	20695	1.000	1.000
ICB - 1	07 Dec 2022 14:06:33	C	ug/l	-0.0529	-851	1.000	1.000
CCV - 1	07 Dec 2022 14:08:19	C	ug/l	2.5284	16166	1.000	1.000
CCB - 1	07 Dec 2022 14:09:42	C	ug/l	-0.0541	-859	1.000	1.000
CRI - 1	07 Dec 2022 14:11:26	C	ug/l	0.1862	725	1.000	1.000
MP36800-MB1 - 1	07 Dec 2022 14:15:04	U	ug/l	-0.0263	-676	1.000	1.000
MP36800-B1 - 1	07 Dec 2022 14:16:25	U	ug/l	2.0917	13287	1.000	1.000
MP36800-S1 - 1	07 Dec 2022 14:17:47	U	ug/l	32.5375	214001	1.000	1.000
MP36800-S2 - 1	07 Dec 2022 14:19:27	U	ug/l	31.3199	205974	1.000	1.000
JD56464-16 - 1	07 Dec 2022 14:21:31	U	ug/l	29.9129	196698	1.000	1.000
JD56464-21 - 1	07 Dec 2022 14:23:45	U	ug/l	0.3500	1805	1.000	1.000
JD56464-22 - 1	07 Dec 2022 14:25:50	U	ug/l	0.8756	5270	1.000	1.000
JD56437-3 - 1	07 Dec 2022 14:27:29	U	ug/l	-0.0547	-863	1.000	1.000
CCV - 1	07 Dec 2022 14:29:15	C	ug/l	2.5043	16007	1.000	1.000
CCB - 1	07 Dec 2022 14:30:43	C	ug/l	-0.0489	-825	1.000	1.000
MP36800-S1 - 1	07 Dec 2022 14:33:34	U	ug/l	39.8074	12619	1.000	20.000
MP36800-S2 - 1	07 Dec 2022 14:34:55	U	ug/l	39.0611	12373	1.000	20.000
JD56464-16 - 1	07 Dec 2022 14:36:33	U	ug/l	37.8688	11980	1.000	20.000
CCV - 1	07 Dec 2022 14:38:09	C	ug/l	2.4608	15720	1.000	1.000
CCB - 1	07 Dec 2022 14:39:46	C	ug/l	-0.0149	-601	1.000	1.000
CRI - 1	07 Dec 2022 14:41:30	C	ug/l	0.1980	803	1.000	1.000
CCV - 1	07 Dec 2022 14:44:39	C	ug/l	2.5759	16479	1.000	1.000
CCB - 1	07 Dec 2022 14:46:12	C	ug/l	-0.0380	-753	1.000	1.000
JD56554-14 - 1	07 Dec 2022 14:48:01	U	ug/l	0.0048	-471	1.000	1.000
JD56617-1 - 1	07 Dec 2022 14:49:24	U	ug/l	0.0230	-351	1.000	1.000
JD56617-2 - 1	07 Dec 2022 14:50:49	U	ug/l	0.0139	-411	1.000	1.000
JD56617-3 - 1	07 Dec 2022 14:52:14	U	ug/l	-0.0122	-583	1.000	1.000
JD56617-4 - 1	07 Dec 2022 14:53:37	U	ug/l	-0.0001	-503	1.000	1.000
JD56617-5 - 1	07 Dec 2022 14:55:01	U	ug/l	-0.0222	-649	1.000	1.000
JD56618-2 - 1	07 Dec 2022 14:56:26	U	ug/l	0.1921	764	1.000	1.000
JD56618-3 - 1	07 Dec 2022 14:57:52	U	ug/l	0.0013	-494	1.000	1.000
CCV - 1	07 Dec 2022 14:59:19	C	ug/l	2.4932	15934	1.000	1.000
CCB - 1	07 Dec 2022 15:00:43	C	ug/l	-0.0242	-662	1.000	1.000
MP36801-MB1 - 1	07 Dec 2022 15:02:26	U	ug/l	-0.0019	-515	1.000	1.000
MP36801-B1 - 1	07 Dec 2022 15:03:49	U	ug/l	1.9899	12616	1.000	1.000
MP36801-S1 - 1	07 Dec 2022 15:05:12	U	ug/l	1.9823	12566	1.000	1.000
MP36801-S2 - 1	07 Dec 2022 15:06:56	U	ug/l	1.9754	12520	1.000	1.000
JD56551-1A - 1	07 Dec 2022 15:08:42	U	ug/l	-0.0648	-930	1.000	1.000
CCV - 1	07 Dec 2022 15:10:23	C	ug/l	2.4130	15405	1.000	1.000
CCB - 1	07 Dec 2022 15:11:47	C	ug/l	-0.0353	-735	1.000	1.000
MP36802-MB1 - 1	07 Dec 2022 15:13:29	U	ug/l	0.0104	-434	1.000	1.000
MP36802-B1 - 1	07 Dec 2022 15:14:52	U	ug/l	2.0083	12737	1.000	1.000
MP36802-S1 - 1	07 Dec 2022 15:16:18	U	ug/l	1.9854	12586	1.000	1.000
MP36802-S2 - 1	07 Dec 2022 15:17:59	U	ug/l	2.0124	12764	1.000	1.000
JD56483-1A - 1	07 Dec 2022 15:19:43	U	ug/l	0.0462	-198	1.000	1.000
JD56441-1 - 1	07 Dec 2022 15:21:29	U	ug/l	0.0118	-425	1.000	1.000
JD56547-1 - 1	07 Dec 2022 15:22:52	U	ug/l	0.0187	-379	1.000	1.000
JD56547-2 - 1	07 Dec 2022 15:24:15	U	ug/l	0.0057	-465	1.000	1.000
CCV - 1	07 Dec 2022 15:25:39	C	ug/l	2.4284	15507	1.000	1.000
CCB - 1	07 Dec 2022 15:27:03	C	ug/l	-0.0272	-682	1.000	1.000
JD56547-3 - 1	07 Dec 2022 15:28:44	U	ug/l	0.0391	-245	1.000	1.000

MA53423

Method: SGS Operator: Admin Date of Analysis: 07 Dec 2022 13:35:41

Sample ID	Date	Type	Units	Conc.	µ Abs.	Wt.	Vol.
JD56547-4 - 1	07 Dec 2022 15:30:09	U	ug/l	-0.0099	-568	1.000	1.000
JD56572-1 - 1	07 Dec 2022 15:31:33	U	ug/l	0.0125	-420	1.000	1.000
JD56572-2 - 1	07 Dec 2022 15:32:58	U	ug/l	0.0177	-386	1.000	1.000
JD56572-3 - 1	07 Dec 2022 15:34:22	U	ug/l	-0.0024	-518	1.000	1.000
JD56572-4 - 1	07 Dec 2022 15:35:46	U	ug/l	0.0125	-420	1.000	1.000
JD56572-5 - 1	07 Dec 2022 15:37:14	U	ug/l	0.0303	-303	1.000	1.000
JD56572-6 - 1	07 Dec 2022 15:38:38	U	ug/l	0.0171	-390	1.000	1.000
CCV - 1	07 Dec 2022 15:40:03	C	ug/l	2.4127	15403	1.000	1.000
CCB - 1	07 Dec 2022 15:41:30	C	ug/l	0.0298	-306	1.000	1.000

Linear



A= 0.0000e+000
B= 1.5169e-004
C= 7.6221e-002
Rho= 0.9996312
Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
STDA	0.000	0.003	0.003	-486	0.000	-486				
STDB	0.200	0.188	-0.012	736	0.0 %	736				
STDC	0.500	0.426	-0.074	2304	0.0 %	2304				
STDD	1.000	1.071	0.071	6558	0.0 %	6558				
STDE	2.500	2.544	0.044	16268	0.0 %	16268				
STDF	5.000	4.969	-0.031	32256	0.0 %	32256				

Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 12/7/2022 12:01:12 Type: Cal
Method: SGS 070219(v18) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0016**	**.0010**	**-.0006**	**.0003**	**.0165**	**.0001**	**-.0014**	**.0020**	**.0003**
Stddev	.0000	.0003	.0002	.0001	.0008	.0002	.0005	.0003	.0001
%RSD	2.302	27.72	33.26	22.40	4.588	363.8	33.22	14.20	30.65
#1	-.0016	.0007	-.0005	.0003	.0166	.0001	-.0015	.0018	.0002
#2	-.0016	.0012	-.0009	.0004	.0157	-.0001	-.0009	.0023	.0002
#3	-.0016	.0013	-.0005	.0003	.0173	.0002	-.0019	.0018	.0004

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0004**	**-.0002**	**.0000**	**.0016**	**.0004**	**.0057**	**-.0032**	**.0001**	**.0001**
Stddev	.0001	.0000	.0000	.0000	.0002	.0010	.0012	.0003	.0000
%RSD	17.33	20.39	179.6	.3011	50.81	18.26	36.15	415.8	48.48
#1	-.0005	-.0002	-.0000	.0016	.0007	.0060	-.0043	.0002	.0000
#2	-.0004	-.0001	.0001	.0016	.0003	.0045	-.0020	-.0002	.0001
#3	-.0004	-.0002	.0000	.0016	.0003	.0065	-.0032	.0002	.0001

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0003**	**-.0144**	**.0001**	**-.0009**	**-.0003**	**-.0012**	**.0009**	**.0004**	**.0052**
Stddev	.0000	.0023	.0001	.0001	.0003	.0002	.0001	.0003	.0002
%RSD	6.273	15.84	134.7	11.07	98.00	16.42	5.449	61.62	4.801
#1	-.0003	-.0159	.0000	-.0008	.0000	-.0010	.0010	.0002	.0049
#2	-.0003	-.0118	.0000	-.0009	-.0004	-.0013	.0009	.0004	.0052
#3	-.0003	-.0155	.0001	-.0010	-.0004	-.0014	.0009	.0007	.0054

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0000**	**.0004**	**-.0000**	**-.0001**	**-.0001**	**.0008**	**.0007**	**-.0002**
Stddev	.0002	.0002	.0000	.0000	.0001	.0006	.0000	.0000
%RSD	472.7	44.75	1772.	72.62	82.37	75.35	7.401	6.811
#1	.0002	.0004	.0000	-.0001	-.0001	.0001	.0007	-.0002
#2	.0002	.0006	-.0000	-.0001	-.0000	.0012	.0006	-.0002
#3	-.0002	.0002	-.0000	-.0000	-.0001	.0011	.0006	-.0002

◀ Zoom In ▶ Zoom Out

Sample Name: STDA Acquired: 12/7/2022 12:01:12 Type: Cal
Method: SGS 070219(v18) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5736.5**	**55329.**	**4948.0**	**2068.7**
Stddev	7.8	88.	24.8	.9
%RSD	.13549	.15838	.50096	.04222
#1	5731.3	55384.	4944.0	2069.6
#2	5745.4	55228.	4974.5	2068.3
#3	5732.7	55375.	4925.5	2068.0

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 12/7/2022 12:06:20 Type: Cal
Method: SGS 070219(v18) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0460**	**3.316**	**.6833**	**1.091**	**13.42**	**9.876**	**1.427**	**3.376**	**3.918**
Stddev	.0001	.007	.0024	.002	.05	.038	.001	.007	.011
%RSD	.2996	.2150	.3450	.1890	.3910	.3807	.0694	.2142	.2816
#1	.0461	3.312	.6806	1.090	13.44	9.845	1.428	3.373	3.928
#2	.0461	3.324	.6846	1.091	13.46	9.918	1.426	3.384	3.920
#3	.0459	3.312	.6847	1.094	13.36	9.864	1.427	3.370	3.906

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.1162**	**2.251**	**.3297**	**.9046**	**5.002**	**5.067**	**5.129**	**.4229**	**2.901**
Stddev	.0002	.001	.0009	.0006	.021	.017	.019	.0022	.005
%RSD	.1321	.0581	.2579	.0664	.4142	.3387	.3731	.5264	.1608
#1	.1160	2.249	.3307	.9045	4.984	5.062	5.127	.4210	2.907
#2	.1163	2.251	.3294	.9040	5.024	5.086	5.149	.4254	2.900
#3	.1163	2.252	.3291	.9052	4.998	5.053	5.111	.4223	2.897

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.988**	**12.02**	**1.281**	**.3531**	**.7091**	**.1968**	**1.040**	**.4262**	**2.965**
Stddev	.006	.03	.002	.0015	.0008	.0005	.002	.0015	.004
%RSD	.1511	.2511	.1198	.4231	.1185	.2541	.1963	.3441	.1194
#1	3.981	12.00	1.281	.3549	.7095	.1962	1.040	.4246	2.961
#2	3.992	12.06	1.283	.3524	.7097	.1972	1.038	.4275	2.968
#3	3.990	12.01	1.280	.3522	.7082	.1969	1.042	.4265	2.964

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.027**	**19.89**	**.4766**	**.1822**	**.4955**	**1.866**	**4.456**	**1.405**
Stddev	.002	.07	.0005	.0035	.0006	.002	.007	.000
%RSD	.1828	.3575	.1020	1.913	.1282	.1277	.1598	.0311
#1	1.024	19.90	.4771	.1782	.4963	1.865	4.450	1.405
#2	1.028	19.95	.4762	.1839	.4952	1.869	4.464	1.404
#3	1.028	19.81	.4767	.1845	.4952	1.864	4.456	1.405

◀ Zoom In ▶ Zoom Out

Sample Name: STDB Acquired: 12/7/2022 12:06:20 Type: Cal
Method: SGS 070219(v18) Mode: IR Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4895.8**	**52041.**	**4895.2**	**1953.6**
Stddev	6.3	77.	62.7	2.7
%RSD	.12839	.14744	1.2805	.13572
#1	4900.6	51968.	4967.6	1954.2
#2	4888.7	52034.	4858.7	1950.7
#3	4898.1	52121.	4859.4	1955.9

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 12/7/2022 12:11:04 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2577**	**40.88**	**1.990**	**2.030**	**2.022**	**2.050**	**2.016**	**41.31**	**2.039**
Stddev	.0017	.11	.007	.006	.004	.005	.003	.13	.007
%RSD	.6490	.2767	.3411	.2896	.1888	.2465	.1234	.3222	.3569
#1	.2558	40.75	1.993	2.029	2.018	2.044	2.018	41.24	2.042
#2	.2589	40.95	1.994	2.036	2.021	2.052	2.017	41.46	2.045
#3	.2584	40.94	1.982	2.024	2.026	2.054	2.013	41.23	2.031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.022**	**2.015**	**2.014**	**1.982**	**41.87**	**40.96**	**1.937**	**41.57**	**2.048**
Stddev	.004	.004	.011	.005	.08	.08	.005	.08	.008
%RSD	.2181	.2126	.5527	.2785	.1945	.1964	.2788	.1943	.3873
#1	2.027	2.015	2.010	1.983	41.78	40.93	1.932	41.49	2.043
#2	2.023	2.019	2.027	1.987	41.92	40.89	1.943	41.57	2.057
#3	2.018	2.010	2.006	1.976	41.92	41.04	1.937	41.65	2.043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.034**	**41.24**	**2.029**	**1.978**	**2.041**	**1.959**	**2.003**	**2.014**	**5.243**
Stddev	.010	.16	.007	.009	.010	.005	.014	.022	.018
%RSD	.4818	.3832	.3604	.4393	.4928	.2458	.7168	1.078	.3492
#1	2.040	41.06	2.032	1.987	2.046	1.961	2.019	2.037	5.222
#2	2.039	41.37	2.035	1.976	2.047	1.963	1.999	2.013	5.257
#3	2.023	41.28	2.021	1.970	2.029	1.954	1.990	1.994	5.249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 12/7/2022 12:11:04 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.046**	**2.023**	**2.001**	F **2.116**	**2.010**	**2.015**	**2.043**	**1.994**
Stddev	.021	.004	.007	.032	.005	.009	.011	.004
%RSD	1.052	.2006	.3755	1.518	.2417	.4232	.5580	.2280
#1	2.070	2.018	2.002	2.147	2.011	2.017	2.049	1.995
#2	2.041	2.024	2.008	2.118	2.015	2.022	2.049	1.998
#3	2.028	2.026	1.993	2.083	2.005	2.005	2.029	1.989
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000				
Range				5.000%				

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5088.5**	**53140.**	**4864.7**	**2002.0**
Stddev	12.3	244.	24.1	6.7
%RSD	.24251	.45912	.49470	.33574
#1	5079.9	53365.	4869.5	1997.2
#2	5083.0	52880.	4885.9	1999.1
#3	5102.7	53174.	4838.6	2009.7

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 12/7/2022 12:18:51 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2464**	**39.83**	**1.964**	**1.972**	**1.985**	**2.004**	**1.963**	**40.29**	**1.997**
Stddev	.0009	.35	.002	.005	.022	.020	.003	.24	.001
%RSD	.3572	.8761	.1228	.2657	1.125	.9766	.1275	.6043	.0308
#1	.2474	40.08	1.961	1.974	2.000	2.016	1.965	40.47	1.997
#2	.2461	39.96	1.966	1.975	1.996	2.015	1.962	40.40	1.997
#3	.2458	39.43	1.964	1.966	1.960	1.981	1.960	40.02	1.998
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.980**	**1.973**	**1.986**	**1.950**	**40.72**	**39.78**	F **1.881**	**40.38**	**2.022**
Stddev	.007	.002	.006	.002	.31	.37	.021	.14	.005
%RSD	.3588	.0847	.3244	.0872	.7664	.9402	1.144	.3488	.2325
#1	1.981	1.975	1.990	1.952	40.90	40.08	1.896	40.41	2.027
#2	1.987	1.972	1.989	1.950	40.91	39.90	1.890	40.50	2.022
#3	1.973	1.972	1.979	1.949	40.36	39.36	1.856	40.23	2.018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value							2.000		
Range							-5.000%		

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.014**	**40.16**	**1.991**	F **1.892**	**1.999**	**1.985**	**1.971**	**1.947**	**4.758**
Stddev	.002	.38	.001	.002	.002	.005	.002	.009	.005
%RSD	.1187	.9373	.0590	.0887	.1085	.2557	.0880	.4554	.1070
#1	2.014	40.44	1.991	1.892	2.001	1.984	1.973	1.948	4.754
#2	2.017	40.30	1.989	1.893	1.997	1.990	1.969	1.955	4.757
#3	2.012	39.73	1.992	1.890	1.999	1.980	1.972	1.937	4.764
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000					
Range				-5.000%					

Zoom In Zoom Out

Sample Name: icv 1 Acquired: 12/7/2022 12:18:51 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.018**	**1.990**	**1.994**	**2.084**	**1.984**	**1.999**	**2.002**	**1.984**
Stddev	.003	.020	.008	.007	.006	.002	.004	.006
%RSD	.1532	.9927	.4043	.3372	.3062	.0815	.1728	.2890
#1	2.020	2.002	2.001	2.078	1.987	1.998	1.998	1.989
#2	2.020	2.000	1.994	2.092	1.988	1.999	2.005	1.986
#3	2.015	1.967	1.985	2.083	1.977	2.001	2.002	1.978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5151.9	53732.	4981.3	2026.1
Stddev	7.8	254.	25.4	2.5
%RSD	.15045	.47329	.50971	.12561
#1	5145.1	53478.	4973.4	2026.0
#2	5150.3	53987.	4960.9	2023.6
#3	5160.4	53731.	5009.7	2028.7

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 12/7/2022 12:27:29 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0069**	**.0006**	**.0036**	**.0001**	**-.0000**	**.0006**	**-.0042**	**-.0000**
Stddev	.0001	.0127	.0006	.0006	.0002	.0001	.0001	.0029	.0002
%RSD	21.41	184.2	96.61	15.38	158.5	286.1	23.68	70.04	546.3
#1	.0005	-.0102	-.0000	.0032	.0001	-.0001	.0004	-.0041	.0001
#2	.0004	-.0176	.0012	.0042	.0003	-.0001	.0007	-.0013	.0001
#3	.0006	.0071	.0007	.0034	-.0001	.0001	.0006	-.0071	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0001**	**-.0004**	**-.0005**	**.0006**	**-.0052**	**-.0005**	**-.0286**	**-.0000**
Stddev	.0009	.0002	.0001	.0002	.0018	.0150	.0004	.0239	.0000
%RSD	64.48	164.7	20.25	43.61	285.1	285.6	73.51	83.58	105.1
#1	.0004	.0003	-.0003	-.0006	-.0005	.0028	-.0001	-.0405	-.0000
#2	.0020	.0000	-.0005	-.0003	.0028	.0040	-.0008	-.0011	-.0001
#3	.0018	.0000	-.0004	-.0007	-.0003	-.0225	-.0006	-.0443	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0044**	**.0001**	**.0002**	**.0014**	**-.0034**	**-.0000**	**-.0008**	**-.0052**
Stddev	.0002	.0011	.0002	.0014	.0006	.0013	.0012	.0013	.0004
%RSD	79.36	25.25	276.6	839.3	42.02	37.57	3411.	158.3	8.193
#1	.0004	-.0045	-.0001	-.0005	.0008	-.0036	.0013	.0005	-.0051
#2	.0002	-.0032	.0002	-.0008	.0013	-.0020	-.0010	-.0010	-.0057
#3	.0001	-.0054	.0001	.0018	.0020	-.0045	-.0004	-.0020	-.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icb 7 Acquired: 12/7/2022 12:27:29 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0001**	**-.0000**	**-.0019**	**.0000**	**.0001**	**-.0005**	**-.0000**
Stddev	.0002	.0000	.0003	.0015	.0002	.0003	.0000	.0002
%RSD	27.00	91.78	609.8	81.26	493.0	387.6	8.533	824.2
#1	.0010	.0000	.0002	-.0034	.0001	.0002	-.0004	.0001
#2	.0006	.0001	.0000	-.0004	.0002	.0003	-.0005	-.0003
#3	.0009	.0000	-.0004	-.0018	-.0002	-.0003	-.0005	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5739.1**	**55828.**	**4976.4**	**2074.3**
Stddev	5.7	250.	20.4	6.8
%RSD	.09887	.44756	.40932	.32945
#1	5736.2	55677.	4957.0	2066.8
#2	5735.5	55691.	4974.6	2075.9
#3	5745.7	56117.	4997.6	2080.2

Zoom In Zoom Out

Sample Name: iccv 1 Acquired: 12/7/2022 12:33:09 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2532**	**40.16**	**1.953**	**1.963**	**2.006**	**2.025**	**1.955**	**40.71**	**1.991**
Stddev	.0048	.21	.006	.004	.007	.008	.004	.20	.006
%RSD	1.886	.5162	.2862	.2292	.3493	.3957	.1876	.4911	.3176
#1	.2505	40.39	1.945	1.959	2.012	2.034	1.950	40.99	1.984
#2	.2484	40.20	1.956	1.965	2.008	2.027	1.957	40.71	1.996
#3	.2591	40.18	1.956	1.960	2.008	2.023	1.958	40.60	1.988
#4	.2548	39.88	1.956	1.969	1.996	2.014	1.956	40.53	1.996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.029**	**1.966**	**2.036**	**1.997**	**41.13**	**40.15**	**1.901**	**40.52**	**2.070**
Stddev	.040	.003	.043	.040	.15	.22	.005	.15	.043
%RSD	1.969	.1425	2.102	1.991	.3664	.5397	.2801	.3750	2.057
#1	2.011	1.962	2.003	1.978	41.33	40.33	1.908	40.64	2.037
#2	2.003	1.966	2.007	1.961	41.13	40.08	1.901	40.62	2.043
#3	2.089	1.967	2.096	2.052	41.11	40.31	1.900	40.49	2.130
#4	2.014	1.969	2.037	1.996	40.97	39.87	1.895	40.31	2.072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: iccv 1 Acquired: 12/7/2022 12:33:09 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.005**	**40.59**	**1.984**	F **1.851**	**1.991**	**1.967**	**1.962**	**1.946**	F **4.745**
Stddev	.005	.14	.005	.006	.003	.006	.010	.011	.010
%RSD	.2292	.3425	.2302	.3160	.1231	.2834	.5008	.5484	.2106
#1	1.999	40.76	1.980	1.843	1.989	1.964	1.948	1.932	4.733
#2	2.011	40.62	1.983	1.854	1.990	1.963	1.970	1.954	4.748
#3	2.005	40.57	1.981	1.855	1.993	1.975	1.965	1.945	4.744
#4	2.005	40.42	1.990	1.854	1.994	1.966	1.966	1.954	4.757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value				2.000					5.000
Range				-5.000%					-5.000%

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.012**	**2.009**	**2.039**	**2.052**	**2.033**	**1.988**	**1.998**	**2.032**
Stddev	.007	.007	.040	.015	.042	.009	.004	.044
%RSD	.3622	.3400	1.957	.7324	2.040	.4461	.1897	2.145
#1	2.002	2.016	2.011	2.040	2.003	1.979	1.993	2.004
#2	2.011	2.012	2.011	2.073	2.004	1.992	2.002	2.000
#3	2.017	2.008	2.096	2.054	2.091	1.982	1.998	2.094
#4	2.017	2.000	2.037	2.042	2.034	1.998	1.999	2.031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Zoom In Zoom Out

Sample Name: iccv 1 Acquired: 12/7/2022 12:33:09 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5178.0**	**52741.**	**4943.4**	**2032.4**
Stddev	5.0	1035.	34.0	3.5
%RSD	.09658	1.9627	.68816	.17383
#1	5182.7	53706.	4914.8	2036.9
#2	5177.5	53337.	4950.5	2029.2
#3	5180.5	51365.	4919.7	2033.5
#4	5171.2	52556.	4988.6	2030.0

Zoom In Zoom Out

Sample Name: ccb 7 Acquired: 12/7/2022 12:44:15 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0069**	**.0011**	**.0052**	**-.0002**	**-.0001**	**.0005**	**-.0044**	**.0000**
Stddev	.0008	.0114	.0007	.0003	.0002	.0001	.0006	.0013	.0001
%RSD	1023.	166.0	58.28	5.623	104.5	106.6	132.8	29.12	840.6
#1	.0006	.0063	.0005	.0055	.0000	-.0002	.0011	-.0032	-.0000
#2	.0004	-.0138	.0018	.0050	-.0002	-.0001	.0005	-.0058	.0002
#3	-.0008	-.0131	.0011	.0051	-.0004	.0000	-.0002	-.0043	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**-.0000**	**-.0003**	**-.0003**	**-.0012**	**.0090**	**.0008**	**-.0310**	**-.0000**
Stddev	.0046	.0001	.0002	.0001	.0040	.0117	.0008	.0127	.0001
%RSD	376.6	1232.	74.24	24.83	320.8	130.1	106.4	41.01	170.4
#1	.0043	.0001	-.0002	-.0003	-.0050	.0093	.0002	-.0164	-.0000
#2	-.0040	.0000	-.0001	-.0003	-.0017	.0205	.0017	-.0390	.0000
#3	.0033	-.0001	-.0006	-.0004	.0030	-.0028	.0004	-.0377	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0087**	**-.0002**	**.0009**	**.0009**	**-.0015**	**.0003**	**.0016**	**-.0060**
Stddev	.0002	.0057	.0002	.0006	.0005	.0008	.0006	.0005	.0005
%RSD	222.0	65.30	102.5	70.33	54.02	57.35	191.8	34.36	8.546
#1	.0003	.0022	-.0001	.0010	.0014	-.0024	.0010	.0014	-.0059
#2	-.0000	.0125	-.0004	.0015	.0007	-.0007	-.0003	.0022	-.0056
#3	-.0000	.0115	-.0001	.0002	.0005	-.0013	.0004	.0012	-.0066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb 7 Acquired: 12/7/2022 12:44:15 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**-.0000**	**-.0002**	**-.0004**	**.0001**	**-.0005**	**-.0005**	**.0001**
Stddev	.0004	.0001	.0000	.0008	.0003	.0022	.0002	.0001
%RSD	35.79	1562.	12.27	179.2	240.9	453.6	40.76	125.6
#1	.0010	.0001	-.0002	-.0014	-.0002	.0008	-.0003	.0001
#2	.0007	-.0001	-.0002	.0001	.0002	.0008	-.0007	.0002
#3	.0015	.0000	-.0002	-.0001	.0004	-.0030	-.0004	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5760.1**	**55952.**	**5005.4**	**2080.7**
Stddev	5.3	82.	16.5	2.4
%RSD	.09244	.14714	.33043	.11647
#1	5761.2	56019.	5021.2	2078.0
#2	5754.3	55860.	5006.7	2082.8
#3	5764.8	55976.	4988.2	2081.3

Zoom In Zoom Out

Sample Name: cri Acquired: 12/7/2022 12:49:36 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057**	**.2007**	**.0080**	**.0992**	**.1956**	**.0021**	**.0193**	**5.058**	**.0032**
Stddev	.0005	.0033	.0005	.0006	.0037	.0001	.0004	.102	.0003
%RSD	8.326	1.653	6.190	.6018	1.886	3.596	2.286	2.017	9.197
#1	.0054	.1980	.0085	.0985	.1936	.0021	.0195	4.988	.0035
#2	.0062	.2044	.0075	.0997	.1999	.0021	.0188	5.175	.0029
#3	.0054	.1997	.0079	.0993	.1934	.0022	.0196	5.010	.0032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0017**	**.0467**	**.0090**	**.0092**	**.1048**	**4.910**	**.0502**	**5.038**	**.0150**
Stddev	.0016	.0003	.0001	.0003	.0043	.097	.0014	.201	.0002
%RSD	92.10	.6224	1.445	3.413	4.095	1.968	2.704	3.983	1.207
#1	-.0018	.0469	.0089	.0091	.1002	4.842	.0495	4.877	.0151
#2	-.0001	.0468	.0092	.0089	.1087	5.021	.0517	5.263	.0151
#3	-.0033	.0464	.0090	.0095	.1053	4.868	.0493	4.974	.0148
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0200**	**4.927**	**.0094**	**.0439**	**.0027**	**.0465**	**.0052**	**.0100**	**.1747**
Stddev	.0002	.098	.0002	.0019	.0007	.0010	.0014	.0020	.0019
%RSD	1.096	1.988	2.026	4.228	26.81	2.048	26.17	19.59	1.103
#1	.0201	4.870	.0095	.0459	.0034	.0454	.0064	.0118	.1742
#2	.0202	5.041	.0092	.0435	.0020	.0467	.0037	.0103	.1730
#3	.0198	4.872	.0096	.0423	.0028	.0472	.0055	.0079	.1768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: cri Acquired: 12/7/2022 12:49:36 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0109**	**.0097**	**.0093**	**.0082**	**.0477**	**.0479**	**.0192**	**.0096**
Stddev	.0007	.0003	.0002	.0007	.0002	.0008	.0002	.0001
%RSD	6.678	2.623	2.674	9.025	.3961	1.615	1.050	1.509
#1	.0114	.0094	.0095	.0080	.0477	.0484	.0193	.0095
#2	.0113	.0099	.0090	.0076	.0479	.0470	.0190	.0097
#3	.0101	.0096	.0093	.0090	.0476	.0483	.0194	.0095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5659.8**	**55398.**	**4994.6**	**2075.8**
Stddev	9.0	403.	120.9	3.7
%RSD	.15840	.72792	2.4206	.17929
#1	5651.4	55511.	5098.1	2072.4
#2	5669.2	54950.	4861.7	2079.8
#3	5658.9	55733.	5023.9	2075.3

Zoom In Zoom Out

Sample Name: crid Acquired: 12/7/2022 12:54:45 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0004**	**.1010**	**.0033**	F **.0037**	F **.0084**	**.0010**	F **-.0004**	**1.021**
Stddev	.0003	.0078	.0005	.0007	.0003	.0001	.0009	.018
%RSD	66.71	7.708	15.73	18.02	3.656	10.99	215.4	1.751
#1	.0001	.1037	.0036	.0045	.0082	.0010	.0004	1.008
#2	.0005	.0922	.0037	.0035	.0082	.0010	-.0002	1.014
#3	.0006	.1071	.0027	.0032	.0087	.0008	-.0015	1.041
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Pass
Value	.0020			.0100	.0040		.0040	
Range	-30.00%			-30.00%	30.00%		-30.00%	

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0039**	**.0028**	F **.0012**	F **-.0003**	**-.0015**	**2.004**	F **.0007**
Stddev	.0003	.0034	.0001	.0001	.0003	.0016	.052	.0020
%RSD	23.35	87.32	3.731	12.50	93.44	108.4	2.596	264.8
#1	.0014	.0079	.0028	.0011	-.0003	-.0014	1.951	.0023
#2	.0011	.0016	.0029	.0011	-.0000	.0001	2.006	.0014
#3	.0009	.0023	.0027	.0014	-.0006	-.0031	2.055	-.0015
Check ?	Chk Pass	None	Chk Pass	Chk Fail	Chk Fail	None	Chk Pass	Chk Fail
Value				.0020	.0020			.0040
Range				-30.00%	-30.00%			-30.00%

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0918**	**.0031**	**.0003**	**.9768**	**.0039**	F **.0006**	F **.0008**	F **.0008**
Stddev	.0267	.0000	.0003	.0203	.0000	.0008	.0013	.0019
%RSD	29.02	1.321	107.4	2.081	.8317	136.3	168.2	257.0
#1	.1054	.0031	.0003	.9539	.0039	.0008	-.0003	-.0015
#2	.0611	.0031	.0005	.9837	.0040	-.0003	.0005	.0020
#3	.1089	.0030	-.0000	.9928	.0039	.0012	.0022	.0018
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value						.0040	.0025	.0040
Range						-30.00%	-30.00%	-30.00%

Zoom In Zoom Out

Sample Name: crid Acquired: 12/7/2022 12:54:45 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0001**	**.0045**	**-.0004**	**-.0001**	**.0001**	**-.0002**	F **.0011**	**.0021**
Stddev	.0011	.0033	.0009	.0004	.0000	.0002	.0016	.0001
%RSD	934.0	73.93	255.4	260.3	40.22	80.58	144.0	4.882
#1	.0003	.0059	.0006	-.0004	.0001	-.0001	-.0007	.0021
#2	-.0014	.0007	-.0013	.0003	.0001	-.0004	.0019	.0021
#3	.0007	.0068	-.0004	-.0003	.0000	-.0001	.0021	.0023
Check ?	Chk Fail	Chk Pass	None	None	None	None	Chk Fail	Chk Pass
Value	.0030						.0020	
Range	-30.00%						-20.00%	

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	F **-.0005**	**.0104**	F **-.0000**
Stddev	.0001	.0002	.0001
%RSD	18.86	1.820	981.7
#1	-.0004	.0106	.0001
#2	-.0005	.0103	-.0001
#3	-.0005	.0102	-.0001
Check ?	Chk Fail	Chk Pass	Chk Fail
Value	.0040		.0040
Range	-30.00%		-30.00%

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5673.1**	**54657.**	**4887.4**	**2057.0**
Stddev	5.4	549.	84.9	4.6
%RSD	.09549	1.0046	1.7369	.22512
#1	5669.9	54060.	4980.7	2054.6
#2	5669.9	54770.	4867.0	2054.0
#3	5679.3	55140.	4814.6	2062.3

Zoom In Zoom Out

Sample Name: icsa Acquired: 12/7/2022 12:59:58 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**516.1**	**.0005**	**.0000**	**-.0108**	**-.0005**	**-.0012**	**397.7**	**.0008**
Stddev	.0001	1.6	.0011	.0012	.0001	.0001	.0004	1.3	.0001
%RSD	14.00	.3046	215.4	2614.	.9485	16.70	35.52	.3238	12.50
#1	.0012	517.1	.0016	.0012	-.0108	-.0004	-.0010	398.7	.0008
#2	.0009	514.3	.0004	.0002	-.0109	-.0006	-.0017	396.3	.0007
#3	.0011	516.9	-.0005	-.0012	-.0107	-.0006	-.0009	398.2	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1521**	**.0016**	**.0027**	**.0022**	**197.8**	**.1003**	**-.0053**	**505.1**	**-.0094**
Stddev	.0010	.0005	.0002	.0002	.9	.0262	.0005	2.2	.0001
%RSD	.6331	29.97	7.081	10.64	.4672	26.08	10.11	.4343	1.425
#1	.1524	.0011	.0027	.0021	198.3	.1305	-.0059	506.4	-.0095
#2	.1529	.0017	.0029	.0025	196.7	.0862	-.0053	502.6	-.0094
#3	.1510	.0020	.0025	.0021	198.4	.0842	-.0048	506.3	-.0093
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0024**	**.0640**	**.0055**	**.0099**	**.0024**	**-.0023**	**.0025**	**.0003**	**-.0104**
Stddev	.0005	.0141	.0000	.0018	.0014	.0031	.0038	.0024	.0024
%RSD	21.16	22.01	.8876	17.77	59.76	132.2	154.8	743.1	23.43
#1	-.0029	.0478	.0056	.0115	.0026	-.0048	.0047	-.0024	-.0124
#2	-.0019	.0714	.0055	.0102	.0037	-.0032	.0047	.0020	-.0110
#3	-.0024	.0729	.0055	.0080	.0009	.0011	-.0020	.0014	-.0077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: icsa Acquired: 12/7/2022 12:59:58 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0023**	**-.0014**	**-.0008**	**-.0010**	**.0158**	**.0003**	**-.0000**	**.0029**
Stddev	.0006	.0000	.0003	.0071	.0007	.0021	.0003	.0002
%RSD	26.39	1.148	37.98	698.7	4.424	687.3	2357.	6.246
#1	-.0026	-.0014	-.0008	-.0026	.0153	-.0015	-.0003	.0031
#2	-.0016	-.0014	-.0011	-.0072	.0156	.0026	.0002	.0027
#3	-.0027	-.0014	-.0005	.0068	.0166	-.0002	.0000	.0030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4513.2**	**49604.**	**4802.5**	**1873.4**
Stddev	7.2	123.	39.0	2.3
%RSD	.15853	.24813	.81304	.12442
#1	4521.4	49733.	4797.6	1875.8
#2	4508.3	49487.	4843.8	1871.1
#3	4509.9	49593.	4766.2	1873.2

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 12/7/2022 13:05:05 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.067**	**513.9**	**.9103**	**.4795**	**.4766**	**.4843**	**.4737**	**398.5**	**.9967**
Stddev	.006	9.3	.0042	.0025	.0090	.0080	.0005	6.2	.0028
%RSD	.5367	1.809	.4625	.5233	1.885	1.656	.0977	1.546	.2833
#1	1.064	511.0	.9150	.4786	.4735	.4810	.4736	395.9	.9999
#2	1.074	524.3	.9091	.4776	.4867	.4934	.4734	405.5	.9956
#3	1.063	506.5	.9068	.4824	.4695	.4785	.4742	394.0	.9946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6426**	**.4629**	**.4562**	**.4970**	**201.3**	**.1209**	**.4231**	**513.3**	**.4726**
Stddev	.0026	.0001	.0023	.0010	3.6	.0134	.0075	8.7	.0008
%RSD	.4077	.0273	.4974	.2012	1.768	11.07	1.764	1.698	.1722
#1	.6434	.4630	.4536	.4972	199.8	.1193	.4230	509.0	.4720
#2	.6446	.4628	.4578	.4978	205.4	.1350	.4306	523.3	.4735
#3	.6396	.4628	.4572	.4958	198.7	.1084	.4157	507.5	.4722
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4527**	**.0212**	**.8969**	**.4482**	**.9121**	**.4488**	**.9253**	**.8713**	**.4707**
Stddev	.0013	.0095	.0011	.0006	.0052	.0103	.0075	.0058	.0063
%RSD	.2784	44.77	.1184	.1266	.5703	2.290	.8108	.6631	1.337
#1	.4518	.0314	.8966	.4488	.9072	.4535	.9190	.8661	.4696
#2	.4522	.0126	.8980	.4476	.9116	.4559	.9232	.8775	.4650
#3	.4542	.0196	.8960	.4482	.9176	.4370	.9336	.8703	.4775
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ICSAB Acquired: 12/7/2022 13:05:05 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4469**	**.4769**	**.4699**	**.9703**	**.4872**	**.4507**	**.8999**	**.5063**
Stddev	.0034	.0096	.0013	.0118	.0011	.0034	.0022	.0018
%RSD	.7550	2.004	.2753	1.215	.2162	.7521	.2399	.3553
#1	.4432	.4739	.4688	.9661	.4861	.4470	.9022	.5053
#2	.4477	.4876	.4713	.9613	.4882	.4512	.8980	.5084
#3	.4498	.4692	.4697	.9837	.4872	.4537	.8995	.5052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4518.9**	**49399.**	**4802.2**	**1872.4**
Stddev	4.1	36.	72.7	2.1
%RSD	.09035	.07253	1.5136	.11456
#1	4516.5	49432.	4860.3	1871.9
#2	4523.6	49403.	4720.7	1874.7
#3	4516.6	49361.	4825.4	1870.5

Zoom In Zoom Out

Sample Name: hstd Acquired: 12/7/2022 13:09:52 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5974**	**-.0128**	**7.783**	**7.935**	**7.750**	**7.938**	**8.158**	**-.1486**	**7.447**
Stddev	.0019	.0200	.275	.272	.009	.007	.283	.0059	.264
%RSD	.3128	156.4	3.531	3.430	.1134	.0940	3.475	3.981	3.541
#1	.5995	.0082	7.535	7.681	7.760	7.946	7.900	-.1468	7.207
#2	.5968	-.0317	8.079	8.222	7.744	7.932	8.462	-.1551	7.729
#3	.5959	-.0149	7.735	7.902	7.747	7.936	8.112	-.1437	7.404
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.879**	**7.780**	**8.152**	**7.966**	**.0288**	**.2129**	**7.485**	**-.2020**	**7.786**
Stddev	.010	.269	.026	.020	.0027	.0003	.006	.0211	.014
%RSD	.1642	3.451	.3228	.2500	9.442	.1177	.0851	10.47	.1848
#1	5.881	7.542	8.182	7.984	.0268	.2127	7.488	-.2256	7.778
#2	5.887	8.071	8.134	7.970	.0319	.2132	7.478	-.1955	7.778
#3	5.868	7.728	8.139	7.944	.0277	.2128	7.489	-.1849	7.803
Check ?	None	Chk Pass	Chk Pass	Chk Pass	None	None	Chk Pass	None	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.980**	**.0856**	**7.689**	**7.339**	**7.800**	**93.06**	**7.914**	**7.885**	**25.27**
Stddev	.274	.0067	.259	.237	.271	3.17	.274	.274	.86
%RSD	3.435	7.880	3.368	3.227	3.467	3.401	3.465	3.468	3.414
#1	7.728	.0843	7.460	7.120	7.556	90.19	7.659	7.642	24.47
#2	8.272	.0796	7.970	7.590	8.091	96.46	8.204	8.181	26.19
#3	7.939	.0929	7.635	7.306	7.754	92.54	7.880	7.831	25.14
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: hstd Acquired: 12/7/2022 13:09:52 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.171**	**7.665**	**7.836**	**8.280**	**7.900**	**8.053**	**8.192**	**7.669**
Stddev	.289	.068	.013	.277	.014	.280	.301	.012
%RSD	3.539	.8906	.1702	3.351	.1779	3.473	3.676	.1523
#1	7.905	7.660	7.851	8.055	7.916	7.807	7.914	7.683
#2	8.479	7.600	7.826	8.590	7.895	8.357	8.512	7.662
#3	8.130	7.736	7.831	8.194	7.889	7.994	8.149	7.664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5546.2**	**54981.**	**5125.8**	**2037.9**
Stddev	161.8	184.	17.8	62.5
%RSD	2.9181	.33539	.34734	3.0677
#1	5693.4	54931.	5138.8	2096.4
#2	5372.9	55185.	5105.5	1972.0
#3	5572.4	54826.	5133.1	2045.3

Zoom In Zoom Out

Sample Name: hstd Acquired: 12/7/2022 13:14:57 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0191**	**307.2**	**.0018**	**.0070**	**-.0060**	**.0102**	**-.0027**	**206.6**	**.0008**
Stddev	.0018	.2	.0006	.0008	.0001	.0000	.0010	.7	.0002
%RSD	9.590	.0498	34.82	11.49	1.673	.1041	36.08	.3621	21.44
#1	.0212	307.2	.0011	.0079	-.0061	.0102	-.0019	205.7	.0007
#2	.0180	307.3	.0019	.0065	-.0059	.0102	-.0038	206.9	.0008
#3	.0180	307.0	.0024	.0065	-.0059	.0102	-.0025	207.0	.0011
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass	None
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1364**	**.0018**	**.0036**	**.0035**	**205.6**	**209.4**	**.0002**	**303.8**	**-.0089**
Stddev	.0025	.0004	.0004	.0001	.3	.5	.0007	1.7	.0001
%RSD	1.843	19.55	10.13	2.388	.1633	.2535	366.3	.5726	1.421
#1	.1338	.0019	.0035	.0036	205.2	209.1	.0009	301.8	-.0087
#2	.1365	.0021	.0040	.0035	205.9	210.0	-.0006	304.4	-.0089
#3	.1388	.0014	.0034	.0034	205.7	209.0	.0003	305.2	-.0089
Check ?	None	None	None	None	Chk Pass	Chk Pass	None	Chk Pass	None
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**209.2**	**.0057**	**.0066**	**.0038**	**.0389**	**.0001**	**.0166**	**.0029**
Stddev	.0003	.3	.0004	.0017	.0011	.0057	.0012	.0014	.0027
%RSD	33.42	.1620	7.805	25.78	28.69	14.66	1652.	8.244	91.76
#1	.0007	209.6	.0062	.0047	.0036	.0365	-.0013	.0151	.0028
#2	.0013	209.1	.0056	.0072	.0029	.0348	.0012	.0176	.0057
#3	.0007	208.9	.0053	.0079	.0050	.0454	.0003	.0172	.0003
Check ?	None	Chk Pass	None	None	None	None	None	None	None
Value									
Range									

Zoom In Zoom Out

Sample Name: hstd Acquired: 12/7/2022 13:14:57 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**-.0009**	**-.0002**	**.0037**	**.0164**	**.0008**	**.0037**	**.0030**
Stddev	.0007	.0001	.0007	.0004	.0008	.0009	.0006	.0003
%RSD	57.04	8.779	342.4	9.918	5.003	109.9	15.36	11.71
#1	-.0016	-.0009	.0003	.0034	.0155	.0019	.0043	.0027
#2	-.0004	-.0008	.0000	.0036	.0166	.0003	.0033	.0028
#3	-.0016	-.0010	-.0009	.0041	.0171	.0003	.0034	.0034
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4532.7**	**50484.**	**4771.0**	**1883.7**
Stddev	2.4	957.	32.4	3.4
%RSD	.05203	1.8950	.67815	.17825
#1	4533.8	51586.	4808.3	1884.3
#2	4534.3	49862.	4750.8	1886.7
#3	4530.0	50004.	4753.9	1880.1

Zoom In Zoom Out

Sample Name: feconf Acquired: 12/7/2022 13:20:06 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.0338**	**.0027**	**.0039**	**.0000**	**-.0002**	**-.0023**	**-.0437**
Stddev	.0006	.0085	.0007	.0004	.0002	.0000	.0009	.0047
%RSD	19.02	25.29	26.32	10.36	624.7	21.11	37.18	10.65
#1	.0033	.0344	.0030	.0043	-.0001	-.0002	-.0031	-.0473
#2	.0033	.0249	.0032	.0035	.0003	-.0001	-.0014	-.0453
#3	.0023	.0420	.0019	.0039	-.0001	-.0002	-.0024	-.0384

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.1279**	**.0014**	**.0049**	**.0035**	F **208.4**	**.0512**	**-.0002**
Stddev	.0003	.0015	.0002	.0004	.0006	1.4	.0324	.0010
%RSD	18.86	1.169	12.87	7.920	16.56	.6642	63.38	447.6
#1	.0014	.1274	.0015	.0053	.0041	209.9	.0719	.0009
#2	.0014	.1296	.0012	.0047	.0029	207.3	.0679	-.0009
#3	.0019	.1267	.0016	.0046	.0035	208.0	.0138	-.0007

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0874**	W **-.0086**	**.0014**	**.0243**	**.0040**	**.0036**	**.0007**	**.0251**
Stddev	.0303	.0001	.0003	.0085	.0003	.0007	.0003	.0042
%RSD	34.70	1.099	23.31	34.88	8.413	18.63	46.26	16.60
#1	-.0593	-.0087	.0018	.0153	.0044	.0034	.0003	.0298
#2	-.1195	-.0086	.0013	.0321	.0039	.0043	.0009	.0233
#3	-.0833	-.0085	.0011	.0254	.0037	.0030	.0009	.0221

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0001**	**-.0053**	**.0014**	**-.0006**	**.0002**	**.0016**	**.0175**
Stddev	.0009	.0026	.0024	.0013	.0000	.0001	.0005	.0003
%RSD	1086.	2440.	46.36	87.49	7.505	39.81	31.53	1.654
#1	-.0007	.0028	-.0078	.0028	-.0006	.0002	.0015	.0172
#2	-.0001	.0000	-.0051	.0004	-.0006	.0003	.0021	.0177
#3	.0011	-.0025	-.0029	.0011	-.0005	.0001	.0011	.0177

Zoom In Zoom Out

Sample Name: feconf Acquired: 12/7/2022 13:20:06 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0027**	**.0022**	**.0029**
Stddev	.0018	.0001	.0000
%RSD	67.14	5.310	1.546
#1	.0038	.0022	.0028
#2	.0006	.0023	.0029
#3	.0038	.0020	.0029

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5679.6**	**55035.**	**4978.3**	**2054.5**
Stddev	11.3	86.	48.2	3.7
%RSD	.19844	.15627	.96830	.17790
#1	5680.5	54952.	4922.7	2056.5
#2	5667.9	55124.	5004.0	2050.3
#3	5690.4	55028.	5008.2	2056.7

Zoom In Zoom Out

Sample Name: crconf Acquired: 12/7/2022 13:25:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0046**	**.0007**	**.0054**	**.0002**	**-.0001**	**-.0017**	**-.0432**
Stddev	.0002	.0054	.0012	.0010	.0002	.0001	.0011	.0041
%RSD	1063.	117.9	168.4	19.09	112.7	66.12	63.61	9.503
#1	.0003	.0101	.0005	.0052	-.0000	-.0001	-.0029	-.0480
#2	-.0002	.0041	-.0004	.0066	.0003	-.0001	-.0009	-.0408
#3	-.0000	-.0006	.0020	.0046	.0002	-.0002	-.0012	-.0409

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0380**	**-.0025**	F **10.18**	**-.0005**	**-.0060**	**.0293**	**-.0009**
Stddev	.0001	.0023	.0004	.13	.0001	.0024	.0087	.0009
%RSD	7.711	6.110	13.90	1.229	17.10	40.36	29.69	99.19
#1	.0008	.0406	-.0028	10.23	-.0004	-.0085	.0284	-.0019
#2	.0008	.0374	-.0027	10.04	-.0005	-.0060	.0384	-.0008
#3	.0007	.0361	-.0021	10.27	-.0006	-.0036	.0211	-.0001

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0302**	**-.0002**	**.0008**	**.0029**	**.0002**	**.0016**	**.0010**	**-.0006**
Stddev	.0208	.0000	.0002	.0057	.0001	.0009	.0007	.0010
%RSD	68.79	9.874	22.41	195.2	56.83	56.51	69.02	165.6
#1	-.0088	-.0001	.0009	.0018	.0002	.0021	.0003	.0005
#2	-.0503	-.0001	.0008	-.0021	.0001	.0021	.0010	-.0014
#3	-.0315	-.0002	.0006	.0091	.0004	.0005	.0017	-.0009

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0015**	**-.0012**	**.0001**	**.0000**	W **-.0027**	**.0015**	**.0206**
Stddev	.0021	.0023	.0010	.0006	.0000	.0001	.0013	.0003
%RSD	1085.	154.2	82.93	518.7	57.59	2.924	85.02	1.625
#1	.0004	-.0008	-.0013	.0004	.0001	-.0026	.0029	.0202
#2	.0021	.0016	-.0001	-.0006	.0000	-.0028	.0003	.0206
#3	-.0020	.0037	-.0021	.0006	.0000	-.0026	.0013	.0209

Zoom In Zoom Out

Sample Name: crconf Acquired: 12/7/2022 13:25:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0037**	W **-.0061**	**.0019**
Stddev	.0008	.0002	.0001
%RSD	21.17	3.714	4.394
#1	.0041	-.0060	.0019
#2	.0028	-.0063	.0020
#3	.0043	-.0059	.0019

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5720.0**	**55610.**	**4850.4**	**2059.9**
Stddev	12.7	576.	145.2	6.6
%RSD	.22176	1.0353	2.9943	.32262
#1	5727.3	55398.	4977.1	2064.0
#2	5727.4	56262.	4691.9	2063.5
#3	5705.4	55170.	4882.4	2052.3

Zoom In Zoom Out

Sample Name: jd56521-2 1 Acquired: 12/7/2022 13:30:29 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.4687**	**.0023**	**.0636**	**.0464**	**.0000**	**.0005**	**23.93**	**.0015**
Stddev	.0002	.0006	.0016	.0004	.0002	.0001	.0002	.17	.0001
%RSD	215.2	.1274	68.61	.5515	.4601	462.6	35.46	.7200	8.942
#1	.0002	.4682	.0021	.0640	.0462	-.0001	.0008	24.12	.0013
#2	.0000	.4694	.0040	.0633	.0466	.0001	.0004	23.91	.0015
#3	-.0000	.4685	.0008	.0636	.0464	.0001	.0004	23.78	.0015

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0008**	**.0104**	**.0325**	**2.090**	**2.389**	**.0004**	**6.716**	**.0384**
Stddev	.0040	.0003	.0002	.0001	.015	.011	.0017	.066	.0001
%RSD	297.0	35.93	2.398	.2576	.7173	.4731	406.3	.9747	.1476
#1	.0043	.0011	.0106	.0325	2.107	2.401	.0023	6.780	.0383
#2	.0030	.0005	.0105	.0325	2.085	2.378	-.0001	6.720	.0384
#3	-.0032	.0008	.0101	.0324	2.079	2.387	-.0009	6.649	.0383

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057**	**53.19**	**.0039**	**.6666**	**.0053**	**5.650**	**.0784**	**.0030**	**3.213**
Stddev	.0002	.19	.0002	.0047	.0003	.018	.0006	.0017	.003
%RSD	3.287	.3484	5.124	.7042	5.764	.3279	.7549	56.43	.0875
#1	.0056	53.35	.0041	.6715	.0056	5.671	.0778	.0014	3.216
#2	.0059	53.23	.0038	.6663	.0050	5.634	.0789	.0048	3.210
#3	.0056	52.99	.0038	.6621	.0053	5.645	.0787	.0028	3.213

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0813**	**.0196**	**.0020**	**.0020**	**.0028**	**.2063**	**.0009**
Stddev	.0004	.0003	.0004	.0017	.0002	.0007	.0011	.0002
%RSD	332.6	.3455	2.193	86.32	8.461	24.44	.5179	16.56
#1	-.0006	.0816	.0198	.0010	.0021	.0034	.2075	.0011
#2	.0002	.0810	.0191	.0010	.0019	.0031	.2054	.0010
#3	.0001	.0812	.0198	.0040	.0018	.0021	.2061	.0008

Zoom In Zoom Out

Sample Name: jd56521-2 1 Acquired: 12/7/2022 13:30:29 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5262.1**	**52856.**	**4828.9**	**1971.8**
Stddev	7.7	42.	30.8	6.3
%RSD	.14565	.07935	.63710	.32202
#1	5253.5	52904.	4845.0	1964.5
#2	5264.4	52833.	4793.4	1975.1
#3	5268.3	52830.	4848.2	1975.8

Zoom In Zoom Out

Sample Name: asconf Acquired: 12/7/2022 13:35:34 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0206**	**4.919**	**.0037**	**-.0003**	**-.0000**	**-.0003**	**.0058**	**.0008**
Stddev	.0005	.0083	.038	.0001	.0003	.0001	.0003	.0049	.0002
%RSD	258.3	40.02	.7794	1.364	80.04	3329.	97.55	83.65	26.14
#1	.0003	.0291	4.963	.0038	-.0003	.0001	-.0001	.0112	.0010
#2	-.0002	.0202	4.904	.0037	-.0001	-.0000	-.0007	.0046	.0007
#3	-.0007	.0126	4.891	.0037	-.0006	-.0000	-.0002	.0017	.0006

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0503**	**-.0009**	**-.0004**	**.0003**	**.0042**	**.0117**	**.0012**	**-.0232**	**.0000**
Stddev	.0023	.0000	.0002	.0001	.0025	.0511	.0021	.0229	.0000
%RSD	4.671	.2399	48.18	31.76	60.15	436.9	170.3	98.72	296.4
#1	.0518	-.0009	-.0005	.0003	.0042	.0507	-.0006	-.0496	-.0000
#2	.0476	-.0009	-.0002	.0002	.0016	-.0462	.0036	-.0122	.0000
#3	.0514	-.0009	-.0005	.0003	.0066	.0306	.0008	-.0079	.0000

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0416**	**.0002**	**.0013**	**.0006**	**.0043**	**.0055**	**-.0010**	**-.0048**
Stddev	.0002	.0074	.0004	.0019	.0008	.0024	.0005	.0015	.0007
%RSD	1422.	17.86	191.0	140.3	132.0	57.41	9.896	154.0	15.30
#1	-.0002	.0447	.0006	.0035	-.0003	.0045	.0058	.0005	-.0050
#2	.0002	.0470	.0001	.0006	.0009	.0017	.0059	-.0010	-.0040
#3	.0001	.0331	-.0001	-.0001	.0013	.0066	.0049	-.0025	-.0054

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**-.0005**	**-.0000**	**.0002**	**-.0000**	**.0005**	**-.0001**
Stddev	.0007	.0002	.0003	.0010	.0002	.0012	.0001	.0001
%RSD	377.4	1953.	49.20	2218.	100.6	2390.	17.39	127.9
#1	.0010	-.0001	-.0003	-.0006	.0001	-.0014	.0006	-.0002
#2	-.0001	.0002	-.0005	.0011	.0001	.0008	.0006	-.0001
#3	-.0003	-.0001	-.0008	-.0006	.0004	.0004	.0004	-.0000

Zoom In Zoom Out

Sample Name: asconf Acquired: 12/7/2022 13:35:34 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5734.7**	**56044.**	**5066.9**	**2077.2**
Stddev	23.2	80.	41.3	8.8
%RSD	.40469	.14363	.81562	.42495
#1	5709.5	56029.	5101.3	2067.2
#2	5739.5	56131.	5021.0	2080.4
#3	5755.1	55972.	5078.3	2083.9

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 13:40:45 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2449**	**39.79**	**1.957**	**1.964**	**1.974**	**2.015**	**1.965**	**39.93**	**1.969**
Stddev	.0003	.06	.025	.022	.002	.006	.022	.04	.029
%RSD	.1379	.1491	1.260	1.138	.1129	.2988	1.107	.0932	1.459
#1	.2446	39.73	1.985	1.990	1.972	2.008	1.990	39.90	2.002
#2	.2453	39.78	1.938	1.951	1.974	2.017	1.954	39.93	1.953
#3	.2448	39.85	1.948	1.951	1.976	2.019	1.951	39.97	1.951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.973**	**1.973**	**1.979**	**1.938**	**40.79**	**39.42**	**1.894**	**39.90**	**2.004**
Stddev	.001	.021	.004	.002	.06	.02	.005	.06	.005
%RSD	.0538	1.077	.1841	.0940	.1559	.0453	.2911	.1491	.2398
#1	1.973	1.997	1.977	1.938	40.72	39.40	1.888	39.84	2.004
#2	1.972	1.959	1.983	1.936	40.79	39.44	1.896	39.90	2.009
#3	1.974	1.963	1.977	1.940	40.85	39.42	1.898	39.96	1.999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.997**	**40.27**	**1.969**	**1.818**	**1.990**	**1.961**	**1.970**	**1.936**	**4.765**
Stddev	.025	.07	.024	.019	.021	.014	.019	.024	.098
%RSD	1.248	.1640	1.204	1.048	1.047	.7054	.9524	1.217	2.064
#1	2.026	40.20	1.996	1.840	2.014	1.977	1.992	1.962	4.879
#2	1.982	40.28	1.950	1.812	1.974	1.952	1.960	1.916	4.709
#3	1.984	40.33	1.962	1.803	1.982	1.954	1.958	1.931	4.708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 13:40:45 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.011**	**1.977**	**1.960**	**2.045**	**1.963**	**1.976**	**1.991**	**1.969**
Stddev	.022	.003	.004	.037	.002	.026	.028	.001
%RSD	1.110	.1494	.1776	1.791	.1075	1.296	1.381	.0612
#1	2.036	1.974	1.956	2.075	1.964	2.006	2.022	1.967
#2	1.995	1.978	1.962	2.004	1.964	1.961	1.972	1.969
#3	2.001	1.979	1.961	2.056	1.961	1.962	1.978	1.970
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5122.9**	**53737.**	**4967.7**	**2017.1**
Stddev	35.9	217.	11.3	17.9
%RSD	.70171	.40387	.22779	.88844
#1	5081.5	53749.	4972.4	1996.5
#2	5145.8	53514.	4975.8	2025.6
#3	5141.4	53947.	4954.7	2029.1

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 13:45:33 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	F **.0555**	**.0021**	**.0054**	**.0027**	F **.0022**	**.0004**	**.0497**	F **.0008**
Stddev	.0003	.0080	.0015	.0007	.0001	.0001	.0009	.0069	.0002
%RSD	73.58	14.42	69.86	12.89	1.897	5.864	248.4	13.94	29.23
#1	-.0003	.0614	.0037	.0061	.0027	.0024	.0014	.0438	.0010
#2	-.0001	.0464	.0017	.0047	.0027	.0022	-.0000	.0573	.0007
#3	-.0007	.0587	.0009	.0055	.0026	.0022	-.0003	.0479	.0006
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit		.0200				.0002			.0007
Low Limit		-.0200				-.0002			-.0007

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0008**	**.0010**	**.0008**	F **.0520**	**.0735**	**.0031**	**.0612**	**.0014**
Stddev	.0017	.0003	.0008	.0004	.0052	.0109	.0025	.0108	.0004
%RSD	377.3	35.82	81.71	46.82	9.981	14.87	81.47	17.66	24.57
#1	.0017	.0010	.0013	.0012	.0553	.0858	.0028	.0611	.0018
#2	-.0015	.0007	.0015	.0005	.0460	.0695	.0007	.0505	.0014
#3	.0012	.0005	.0001	.0007	.0548	.0651	.0057	.0721	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.0100				
Low Limit					-.0100				

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0553**	**.0008**	**.0017**	**.0010**	**-.0003**	**.0001**	**-.0009**	**-.0046**
Stddev	.0002	.0085	.0005	.0009	.0015	.0030	.0011	.0010	.0012
%RSD	22.67	15.38	65.22	53.29	142.4	1054.	719.7	108.7	25.86
#1	.0012	.0650	.0012	.0021	-.0006	.0019	-.0003	.0002	-.0035
#2	.0008	.0516	.0009	.0007	.0014	.0009	.0014	-.0013	-.0046
#3	.0011	.0492	.0002	.0023	.0023	-.0037	-.0006	-.0015	-.0058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 13:45:33 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	F **.0024**	**.0016**	**.0006**	**.0012**	**.0005**	**.0004**	F **.0013**
Stddev	.0007	.0002	.0004	.0007	.0004	.0009	.0004	.0002
%RSD	80.21	6.449	26.72	116.8	32.71	168.3	115.6	13.68
#1	.0015	.0026	.0019	.0006	.0017	.0008	.0009	.0015
#2	.0012	.0023	.0011	-.0001	.0009	.0012	.0002	.0013
#3	.0001	.0024	.0016	.0014	.0011	-.0005	.0001	.0011
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit		.0010						.0013
Low Limit		-.0010						-.0013

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5738.1**	**55454.**	**4912.1**	**2079.4**
Stddev	32.4	64.	15.9	12.8
%RSD	.56482	.11625	.32321	.61598
#1	5708.5	55477.	4894.6	2066.6
#2	5733.1	55381.	4916.2	2079.4
#3	5772.7	55504.	4925.6	2092.3

Zoom In Zoom Out

Sample Name: mp36771-mb1 7 Acquired: 12/7/2022 13:50:44 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0104**	**.0007**	**.0041**	**.0002**	**-.0001**	**-.0001**	**.0910**	**.0003**
Stddev	.0005	.0074	.0003	.0001	.0002	.0000	.0013	.0028	.0003
%RSD	211.2	71.48	47.26	3.478	154.4	38.03	1791.	3.062	100.7
#1	-.0003	.0020	.0006	.0041	-.0001	-.0001	-.0012	.0916	.0001
#2	.0004	.0131	.0010	.0040	.0004	-.0002	.0013	.0935	.0006
#3	.0007	.0160	.0003	.0043	.0002	-.0001	-.0004	.0880	.0002

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**-.0001**	**.0008**	**.0037**	**.0345**	**.0239**	**.0004**	**.0061**	**.0007**
Stddev	.0019	.0003	.0002	.0002	.0021	.0152	.0007	.0117	.0000
%RSD	81.27	417.9	24.75	5.651	6.225	63.39	165.5	193.3	5.143
#1	.0015	-.0004	.0009	.0036	.0320	.0414	.0006	-.0013	.0007
#2	.0046	.0002	.0006	.0039	.0357	.0148	.0009	-.0001	.0007
#3	.0011	-.0000	.0009	.0035	.0358	.0156	-.0003	.0196	.0008

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0942**	**.0008**	**.0209**	**.0011**	**.0059**	**.0014**	**.0012**	**-.0000**
Stddev	.0002	.0047	.0002	.0012	.0009	.0033	.0014	.0015	.0005
%RSD	47.02	4.944	25.00	5.737	81.72	54.74	101.9	127.5	1281.
#1	.0006	.0912	.0008	.0222	.0021	.0080	.0021	.0012	-.0003
#2	.0002	.0919	.0006	.0199	.0003	.0022	-.0002	-.0003	-.0003
#3	.0006	.0996	.0010	.0205	.0009	.0076	.0023	.0026	.0005

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0216**	**.0005**	**.0001**	**.0000**	**.0002**	**-.0008**	**.0046**	**.0002**
Stddev	.0010	.0001	.0005	.0006	.0002	.0011	.0002	.0002
%RSD	4.522	11.09	344.0	2957.	81.26	129.0	3.551	66.57
#1	.0207	.0005	-.0004	.0001	.0001	.0001	.0045	.0001
#2	.0214	.0005	.0006	.0006	.0005	-.0007	.0046	.0003
#3	.0226	.0006	.0002	-.0006	.0002	-.0020	.0048	.0003

Zoom In Zoom Out

Sample Name: mp36771-mb1 7 Acquired: 12/7/2022 13:50:44 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5703.0	56577.	5089.5	2055.0
Stddev	68.6	95.	141.4	29.0
%RSD	1.2027	.16836	2.7788	1.4117
#1	5749.4	56468.	5172.3	2077.1
#2	5735.5	56643.	4926.2	2065.7
#3	5624.3	56621.	5169.9	2022.1

Zoom In Zoom Out

Sample Name: mp36771-b1 Acquired: 12/7/2022 13:55:53 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2366	24.63	1.831	1.864	1.927	1.971	F -.0291	24.74
Stddev	.0013	.04	.000	.003	.005	.004	.0005	.07
%RSD	.5671	.1824	.0060	.1515	.2513	.1954	1.831	.2757
#1	.2378	24.67	1.831	1.867	1.923	1.968	-.0296	24.81
#2	.2352	24.64	1.831	1.861	1.932	1.975	-.0286	24.73
#3	.2370	24.58	1.831	1.864	1.925	1.970	-.0290	24.68

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.909	.1863	1.898	1.919	1.893	25.50	24.41	-.0007
Stddev	.004	.0027	.004	.002	.006	.01	.03	.0014
%RSD	.2243	1.426	.1863	.0757	.3399	.0418	.1073	207.3
#1	1.914	.1888	1.902	1.919	1.899	25.51	24.44	-.0005
#2	1.905	.1866	1.896	1.920	1.893	25.49	24.41	-.0022
#3	1.907	.1835	1.895	1.917	1.886	25.50	24.38	.0006

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.57	1.953	1.870	24.82	1.894	1.783	1.918	W -.0283
Stddev	.12	.002	.007	.01	.002	.004	.001	.0033
%RSD	.4896	.1097	.3650	.0560	.1029	.2505	.0694	11.57
#1	24.58	1.951	1.878	24.83	1.895	1.787	1.919	-.0320
#2	24.44	1.955	1.866	24.81	1.894	1.778	1.916	-.0257
#3	24.68	1.955	1.867	24.81	1.891	1.784	1.918	-.0273

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.840	1.843	.1506	1.907	1.929	1.847	1.943	1.902
Stddev	.003	.007	.0010	.004	.002	.002	.041	.001
%RSD	.1420	.3978	.6966	.2024	.1033	.1297	2.112	.0439
#1	1.843	1.849	.1513	1.912	1.927	1.848	1.990	1.902
#2	1.839	1.835	.1494	1.905	1.931	1.844	1.922	1.902
#3	1.839	1.844	.1510	1.905	1.928	1.849	1.917	1.901

Zoom In Zoom Out

Sample Name: mp36771-b1 Acquired: 12/7/2022 13:55:53 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	1.465	1.939	1.850
Stddev	.003	.007	.001
%RSD	.2157	.3666	.0775
#1	1.464	1.948	1.852
#2	1.463	1.936	1.851
#3	1.469	1.935	1.849

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5254.6	54359.	4995.5	2027.1
Stddev	4.4	141.	12.3	2.4
%RSD	.08314	.26022	.24628	.11851
#1	5249.6	54444.	5009.5	2024.3
#2	5257.0	54438.	4986.5	2028.8
#3	5257.3	54196.	4990.4	2028.1

Zoom In Zoom Out

Sample Name: mp36771-s1 Acquired: 12/7/2022 14:00:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2389	275.4	1.701	1.649	3.402	1.835	-.0002	96.58	1.769
Stddev	.0020	1.8	.004	.004	.021	.009	.0009	.65	.006
%RSD	.8226	.6353	.2428	.2312	.6238	.5014	526.7	.6770	.3216
#1	.2412	274.8	1.706	1.652	3.397	1.833	-.0006	96.77	1.776
#2	.2376	277.3	1.698	1.649	3.425	1.845	.0009	97.11	1.766
#3	.2380	274.0	1.699	1.645	3.383	1.827	-.0008	95.85	1.765

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9984	1.952	2.201	3.362	F 273.2	71.84	.1549	96.60	5.361
Stddev	.0002	.006	.004	.006	1.4	.42	.0005	.44	.038
%RSD	.0180	.3096	.1714	.1803	.5180	.5819	.3517	.4525	.7038
#1	.9984	1.958	2.200	3.360	273.2	71.71	.1545	96.68	5.334
#2	.9986	1.946	2.198	3.357	274.5	72.30	.1555	96.98	5.344
#3	.9982	1.953	2.205	3.368	271.7	71.49	.1548	96.12	5.404

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.628	25.85	2.141	4.573	5.888	2.015	.6749	1.671	3.261
Stddev	.006	.15	.006	.023	.021	.017	.0041	.008	.015
%RSD	.3585	.5969	.2621	.5098	.3513	.8290	.6045	.4930	.4485
#1	1.635	25.83	2.147	4.579	5.894	2.029	.6765	1.677	3.275
#2	1.628	26.01	2.135	4.593	5.864	2.019	.6779	1.675	3.263
#3	1.623	25.70	2.142	4.547	5.904	1.996	.6702	1.662	3.246

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.625	2.164	F 11.12	1.782	2.137	1.051	3.344	1.702
Stddev	.009	.013	.02	.031	.003	.005	.010	.001
%RSD	.5218	.6156	.2028	1.718	.1344	.5056	.2955	.0776
#1	1.630	2.162	11.10	1.811	2.137	1.054	3.353	1.702
#2	1.630	2.178	11.11	1.785	2.135	1.054	3.333	1.701
#3	1.615	2.152	11.14	1.750	2.140	1.045	3.346	1.703

Zoom In Zoom Out

Sample Name: mp36771-s1 Acquired: 12/7/2022 14:00:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4952.0**	**56380.**	**5364.5**	**2119.7**
Stddev	9.7	137.	24.7	2.3
%RSD	.19558	.24216	.46042	.11047
#1	4948.9	56505.	5366.1	2118.7
#2	4962.9	56400.	5339.0	2122.3
#3	4944.3	56234.	5388.3	2118.0

Zoom In Zoom Out

Sample Name: mp36771-s2 Acquired: 12/7/2022 14:05:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2369**	**280.3**	**1.700**	**1.657**	**3.147**	**1.828**	**-.0018**	**71.95**	**1.766**
Stddev	.0018	.4	.003	.006	.003	.001	.0010	.11	.004
%RSD	.7485	.1329	.1640	.3673	.0828	.0506	56.22	.1537	.2359
#1	.2360	280.0	1.697	1.652	3.146	1.828	-.0028	71.83	1.762
#2	.2390	280.2	1.702	1.655	3.150	1.828	-.0009	72.05	1.770
#3	.2358	280.7	1.701	1.664	3.145	1.827	-.0015	71.97	1.766

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9363**	**1.929**	**2.125**	**3.570**	F **240.3**	**64.56**	**.1407**	**83.09**	**4.866**
Stddev	.0080	.003	.006	.006	.2	.09	.0007	.04	.056
%RSD	.8596	.1540	.2774	.1741	.0982	.1404	.5168	.0481	1.159
#1	.9456	1.926	2.125	3.565	240.3	64.45	.1399	83.14	4.928
#2	.9321	1.929	2.131	3.568	240.5	64.62	.1414	83.06	4.818
#3	.9312	1.932	2.120	3.577	240.1	64.60	.1408	83.08	4.852

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.632**	**25.39**	**2.105**	**3.906**	**3.347**	**1.888**	**.6581**	**1.682**	**3.278**
Stddev	.003	.06	.003	.014	.005	.011	.0015	.008	.008
%RSD	.1528	.2210	.1432	.3587	.1548	.5589	.2322	.4754	.2533
#1	1.633	25.33	2.101	3.890	3.346	1.876	.6564	1.686	3.288
#2	1.629	25.38	2.107	3.916	3.343	1.893	.6594	1.673	3.272
#3	1.634	25.44	2.106	3.911	3.353	1.894	.6585	1.688	3.276

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.879**	**2.002**	F **10.10**	**1.802**	**2.071**	**1.012**	**3.415**	**1.703**
Stddev	.003	.002	.03	.037	.003	.003	.006	.002
%RSD	.1312	.1143	.3230	2.055	.1636	.3382	.1709	.1414
#1	1.880	2.000	10.14	1.823	2.075	1.010	3.411	1.705
#2	1.876	2.004	10.10	1.760	2.070	1.010	3.422	1.702
#3	1.881	2.003	10.07	1.825	2.068	1.016	3.413	1.701

Zoom In Zoom Out

Sample Name: mp36771-s2 Acquired: 12/7/2022 14:05:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4987.4**	**56160.**	**5323.8**	**2118.5**
Stddev	7.9	268.	44.3	2.2
%RSD	.15897	.47806	.83230	.10184
#1	4986.5	55895.	5288.4	2120.4
#2	4995.7	56153.	5309.6	2119.0
#3	4979.9	56432.	5373.5	2116.1

Zoom In Zoom Out

Sample Name: jd56522-1 Acquired: 12/7/2022 14:10:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089**	**206.6**	**.0410**	**.0328**	**1.395**	**.0139**	**.0178**	**55.65**	**.0077**
Stddev	.0012	2.8	.0015	.0009	.021	.0002	.0008	.66	.0004
%RSD	12.94	1.366	3.768	2.700	1.478	1.484	4.682	1.186	5.076
#1	.0084	204.9	.0406	.0323	1.382	.0140	.0187	55.25	.0073
#2	.0103	209.8	.0428	.0339	1.418	.0140	.0174	56.41	.0080
#3	.0082	204.9	.0397	.0323	1.383	.0136	.0171	55.28	.0077

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8096**	**.1228**	**.3818**	**1.396**	F **264.2**	**43.66**	**.1376**	**71.90**	**3.655**
Stddev	.0041	.0002	.0005	.004	3.6	.57	.0035	.96	.005
%RSD	.5089	.1873	.1207	.3138	1.364	1.314	2.566	1.333	.1371
#1	.8063	.1230	.3822	1.398	262.0	43.31	.1373	71.22	3.660
#2	.8143	.1227	.3819	1.399	268.3	44.32	.1413	73.00	3.650
#3	.8084	.1226	.3813	1.391	262.2	43.34	.1343	71.50	3.655

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088**	**2.050**	**.3114**	**2.592**	**1.822**	**1.869**	**.0279**	**.0075**	**2.006**
Stddev	.0002	.019	.0008	.005	.003	.008	.0003	.0035	.014
%RSD	2.364	.9327	.2565	.1842	.1690	.4290	.9975	46.32	.6769
#1	.0088	2.042	.3107	2.595	1.818	1.870	.0281	.0058	2.022
#2	.0090	2.072	.3122	2.586	1.825	1.876	.0276	.0116	1.997
#3	.0086	2.037	.3111	2.594	1.822	1.860	.0281	.0053	2.001

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1766**	**.1956**	F **9.050**	**.0069**	**.4013**	**.0191**	**1.805**	**.0381**
Stddev	.0010	.0028	.016	.0024	.0022	.0011	.003	.0002
%RSD	.5918	1.415	.1774	35.02	.5602	5.997	.1902	.6108
#1	.1778	.1943	9.067	.0084	.4027	.0197	1.809	.0382
#2	.1762	.1988	9.049	.0041	.4026	.0198	1.804	.0378
#3	.1758	.1937	9.035	.0081	.3988	.0178	1.803	.0382

Zoom In Zoom Out

Sample Name: jd56522-1 Acquired: 12/7/2022 14:10:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5079.9**	**56543.**	**5347.8**	**2117.3**
Stddev	1.3	100.	64.3	.7
%RSD	.02498	.17750	1.2023	.03327
#1	5079.3	56573.	5406.2	2117.5
#2	5081.4	56625.	5278.9	2117.9
#3	5079.1	56431.	5358.3	2116.5

Zoom In Zoom Out

Sample Name: mp36771-sd1 Acquired: 12/7/2022 14:15:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0128**	**210.2**	**.0464**	**.0538**	**1.466**	**.0146**	**.0137**	**58.21**	**.0089**
Stddev	.0006	.2	.0083	.0035	.002	.0001	.0013	.25	.0012
%RSD	4.577	.0973	17.88	6.538	.1638	.7865	9.658	.4227	13.57
#1	.0129	210.4	.0369	.0532	1.468	.0146	.0131	58.49	.0089
#2	.0133	210.1	.0524	.0576	1.464	.0145	.0152	58.07	.0101
#3	.0122	210.1	.0498	.0507	1.468	.0147	.0128	58.07	.0077

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8614**	**.1258**	**.4031**	**1.381**	**289.2**	**44.85**	**.1388**	**75.73**	**3.969**
Stddev	.0059	.0006	.0006	.009	.5	.07	.0016	.06	.023
%RSD	.6826	.4971	.1608	.6787	.1832	.1455	1.153	.0842	.5753
#1	.8677	.1259	.4029	1.385	289.2	44.80	.1405	75.70	3.978
#2	.8561	.1251	.4038	1.370	288.7	44.83	.1374	75.80	3.943
#3	.8604	.1263	.4026	1.388	289.7	44.93	.1385	75.69	3.987

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0091**	**2.131**	**.3219**	**2.828**	**1.920**	**1.961**	**.0291**	**.0241**	**2.072**
Stddev	.0028	.054	.0023	.006	.005	.008	.0022	.0131	.015
%RSD	30.83	2.549	.7206	.2215	.2659	.4302	7.737	54.52	.7305
#1	.0064	2.073	.3239	2.834	1.925	1.952	.0317	.0362	2.073
#2	.0089	2.181	.3194	2.827	1.915	1.969	.0279	.0101	2.086
#3	.0120	2.138	.3225	2.822	1.921	1.962	.0277	.0260	2.056

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1953**	**.2048**	**9.554**	**.0161**	**.4360**	**.0210**	**1.995**	**.0395**
Stddev	.0050	.0004	.043	.0018	.0030	.0039	.010	.0006
%RSD	2.578	.1788	.4447	10.92	.6904	18.55	.4915	1.554
#1	.1999	.2048	9.555	.0181	.4387	.0190	2.006	.0402
#2	.1960	.2044	9.511	.0153	.4328	.0255	1.988	.0394
#3	.1899	.2051	9.596	.0148	.4367	.0186	1.991	.0389

Zoom In Zoom Out

Sample Name: mp36771-sd1 Acquired: 12/7/2022 14:15:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5432.7**	**55569.**	**5031.8**	**2097.5**
Stddev	15.6	243.	29.0	13.5
%RSD	.28775	.43707	.57608	.64412
#1	5421.2	55363.	5026.1	2085.0
#2	5450.5	55837.	5063.2	2095.6
#3	5426.4	55507.	5006.1	2111.8

Zoom In Zoom Out

Sample Name: mp36771-ps1 Acquired: 12/7/2022 14:20:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2513**	**225.5**	**1.898**	**1.869**	**3.252**	**1.938**	W **-.0177**	**78.68**
Stddev	.0009	2.0	.004	.005	.024	.018	.0017	.68
%RSD	.3429	.8658	.2138	.2586	.7223	.9378	9.660	.8596
#1	.2515	226.2	1.903	1.873	3.260	1.946	-.0192	78.95
#2	.2521	227.0	1.895	1.864	3.271	1.952	-.0181	79.18
#3	.2504	223.3	1.897	1.870	3.226	1.918	-.0158	77.91

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.916**	**.9623**	**2.037**	**2.235**	**3.318**	F **278.3**	**68.11**	**.1318**
Stddev	.004	.0036	.005	.010	.011	2.5	.49	.0025
%RSD	.2169	.3742	.2392	.4666	.3158	.9141	.7200	1.908
#1	1.921	.9602	2.043	2.238	3.330	279.4	68.21	.1313
#2	1.912	.9665	2.035	2.244	3.309	280.1	68.54	.1345
#3	1.916	.9604	2.034	2.223	3.317	275.4	67.58	.1295

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.76**	**5.337**	**1.860**	**27.65**	**2.205**	**4.387**	**3.639**	**1.781**
Stddev	.85	.031	.008	.22	.002	.020	.013	.007
%RSD	.9007	.5848	.4405	.7965	.1023	.4600	.3649	.3702
#1	95.09	5.373	1.868	27.73	2.207	4.408	3.654	1.788
#2	95.41	5.321	1.852	27.82	2.205	4.384	3.631	1.775
#3	93.80	5.318	1.859	27.40	2.203	4.368	3.631	1.781

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.904**	**1.845**	**2.051**	**1.991**	**2.090**	F **10.69**	**1.808**	**2.227**
Stddev	.004	.007	.004	.010	.015	.02	.028	.004
%RSD	.2040	.4070	.2184	.5193	.7156	.1522	1.540	.2002
#1	1.909	1.854	2.050	2.002	2.097	10.71	1.837	2.229
#2	1.902	1.840	2.047	1.990	2.101	10.68	1.805	2.229
#3	1.903	1.842	2.055	1.981	2.073	10.68	1.782	2.222

Zoom In Zoom Out

Sample Name: mp36771-ps1 Acquired: 12/7/2022 14:20:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.812**	**3.557**	**1.936**
Stddev	.007	.017	.005
%RSD	.4021	.4678	.2366
#1	1.817	3.574	1.942
#2	1.804	3.556	1.933
#3	1.815	3.540	1.934

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4971.0**	**54849.**	**5200.3**	**2071.2**
Stddev	13.6	153.	46.9	6.1
%RSD	.27294	.27955	.90128	.29409
#1	4956.6	54691.	5182.3	2064.5
#2	4983.6	54858.	5165.1	2076.5
#3	4972.8	54998.	5253.5	2072.5

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 14:25:21 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2461**	**39.79**	**1.949**	**1.964**	**1.986**	**2.004**	**1.959**	**40.02**	**1.981**
Stddev	.0027	.04	.002	.003	.001	.003	.003	.06	.002
%RSD	1.104	.1127	.1242	.1692	.0521	.1615	.1596	.1599	.1180
#1	.2460	39.76	1.948	1.962	1.987	2.004	1.959	40.04	1.978
#2	.2489	39.85	1.947	1.968	1.985	2.000	1.956	39.95	1.981
#3	.2434	39.77	1.952	1.963	1.986	2.007	1.962	40.07	1.983
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.981**	**1.971**	**1.979**	**1.947**	**40.57**	**39.59**	**1.892**	**39.80**	**2.000**
Stddev	.021	.001	.024	.022	.05	.08	.007	.09	.025
%RSD	1.039	.0728	1.200	1.145	.1292	.2110	.3832	.2183	1.223
#1	1.972	1.973	1.977	1.943	40.57	39.54	1.884	39.77	1.997
#2	2.005	1.972	2.003	1.972	40.52	39.54	1.895	39.90	2.026
#3	1.967	1.970	1.956	1.928	40.62	39.68	1.898	39.74	1.977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.986**	**40.26**	**1.977**	**1.835**	**1.984**	**1.941**	**1.961**	**1.923**	**4.733**
Stddev	.004	.07	.001	.004	.004	.007	.001	.007	.003
%RSD	.2187	.1745	.0527	.1975	.2073	.3500	.0654	.3650	.0610
#1	1.989	40.20	1.977	1.839	1.981	1.947	1.963	1.926	4.730
#2	1.989	40.24	1.978	1.834	1.988	1.943	1.961	1.929	4.735
#3	1.981	40.34	1.976	1.832	1.981	1.933	1.960	1.915	4.734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 14:25:21 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.985**	**1.989**	**1.973**	**1.892**	**1.970**	**1.985**	**1.974**	**1.974**
Stddev	.006	.002	.023	.051	.025	.004	.005	.025
%RSD	.3041	.0835	1.186	2.709	1.244	.2134	.2365	1.272
#1	1.990	1.987	1.969	1.937	1.970	1.983	1.979	1.973
#2	1.987	1.990	1.998	1.903	1.995	1.990	1.974	2.000
#3	1.979	1.989	1.952	1.837	1.946	1.982	1.970	1.950
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5151.7**	**54363.**	**5068.8**	**2028.9**
Stddev	7.1	508.	34.0	2.3
%RSD	.13834	.93390	.67104	.11385
#1	5153.9	54506.	5039.3	2030.9
#2	5143.7	53799.	5106.0	2026.3
#3	5157.5	54784.	5061.1	2029.3

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 14:30:08 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0002**	**.0005**	**.0066**	**.0002**	**.0001**	**.0001**	**.0021**	**.0001**
Stddev	.0002	.0093	.0013	.0007	.0002	.0001	.0001	.0053	.0002
%RSD	41.55	4032.	263.3	10.48	92.43	104.2	112.8	255.2	130.7
#1	-.0003	-.0016	-.0010	.0071	.0003	.0002	-.0000	-.0021	-.0000
#2	-.0007	-.0080	.0009	.0068	-.0000	.0000	.0002	.0080	.0001
#3	-.0007	.0103	.0015	.0058	.0003	.0000	.0001	.0004	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**-.0003**	**-.0001**	**.0063**	**.0130**	**.0008**	**-.0210**	**.0002**
Stddev	.0013	.0002	.0005	.0004	.0010	.0434	.0007	.0254	.0000
%RSD	547.8	277.0	166.6	513.7	15.94	334.4	78.77	121.2	15.96
#1	-.0013	.0001	-.0007	.0003	.0061	.0315	.0008	.0066	.0002
#2	.0008	-.0001	.0003	.0001	.0054	.0441	.0002	-.0436	.0002
#3	.0012	.0002	-.0005	-.0006	.0073	-.0366	.0015	-.0260	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**-.0012**	**-.0000**	**.0017**	**.0015**	**.0032**	**-.0002**	**.0020**	**-.0052**
Stddev	.0003	.0088	.0004	.0009	.0008	.0016	.0013	.0019	.0003
%RSD	34.02	733.6	1651.	54.65	54.58	50.02	669.4	97.86	5.023
#1	.0008	-.0060	.0001	.0027	.0007	.0045	.0006	.0009	-.0055
#2	.0007	.0090	.0003	.0012	.0023	.0014	.0005	.0042	-.0051
#3	.0013	-.0066	-.0005	.0011	.0014	.0035	-.0017	.0008	-.0051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 14:30:08 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0001**	**.0003**	**.0009**	**.0004**	**.0034**	**-.0002**	**.0002**
Stddev	.0003	.0001	.0002	.0006	.0004	.0001	.0001	.0001
%RSD	26.72	43.17	58.04	63.13	85.19	3.670	50.36	65.60
#1	.0012	.0001	.0004	.0015	.0005	.0033	-.0003	.0003
#2	.0009	.0002	.0002	.0006	.0008	.0035	-.0001	.0003
#3	.0016	.0002	.0001	.0005	.0000	.0033	-.0001	.0001

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5769.5**	**54940.**	**4950.8**	**2089.2**
Stddev	42.3	999.	59.9	16.3
%RSD	.73393	1.8187	1.2095	.77910
#1	5732.5	53821.	4920.6	2076.7
#2	5760.3	55259.	4912.0	2083.4
#3	5815.7	55741.	5019.8	2107.6

Zoom In Zoom Out

Sample Name: jd56483-1 Acquired: 12/7/2022 14:35:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**86.00**	**.0304**	**.1010**	**.6574**	**.0091**	**-.0043**	**123.8**	**.0024**
Stddev	.0007	.13	.0010	.0014	.0009	.0001	.0013	.4	.0003
%RSD	22.25	.1535	3.327	1.379	.1342	.7940	30.31	.3396	10.79
#1	.0025	86.01	.0316	.1010	.6578	.0092	-.0044	123.9	.0022
#2	.0039	86.13	.0299	.1024	.6581	.0090	-.0029	124.1	.0025
#3	.0031	85.86	.0297	.0996	.6564	.0091	-.0055	123.3	.0027

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4865**	**.0849**	**.2148**	**.1138**	**184.3**	**22.05**	**.2273**	**53.86**	**3.604**
Stddev	.0022	.0002	.0009	.0001	.6	.05	.0003	.23	.010
%RSD	.4432	.2092	.4035	.0665	.3200	.2320	.1363	.4363	.2805
#1	.4881	.0849	.2156	.1137	184.3	22.04	.2270	53.91	3.615
#2	.4873	.0848	.2148	.1139	184.8	22.11	.2277	54.07	3.603
#3	.4840	.0851	.2139	.1137	183.6	22.01	.2273	53.61	3.595

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045**	**6.457**	**.2171**	**2.747**	**.1609**	**3.947**	**.0028**	**.0026**	**2.975**
Stddev	.0003	.006	.0017	.006	.0018	.009	.0017	.0016	.004
%RSD	7.512	.0924	.7769	.2265	1.131	.2343	60.55	61.85	.1208
#1	.0049	6.460	.2178	2.748	.1626	3.956	.0041	.0017	2.976
#2	.0043	6.461	.2183	2.752	.1611	3.938	.0009	.0016	2.978
#3	.0043	6.450	.2151	2.740	.1590	3.946	.0033	.0045	2.971

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0507**	**.3132**	**1.585**	**.0021**	**.2119**	**.0101**	**.4847**	**.0662**
Stddev	.0003	.0000	.003	.0021	.0009	.0006	.0019	.0002
%RSD	.6701	.0086	.1684	101.4	.4040	5.678	.3967	.3471
#1	.0508	.3132	1.588	.0019	.2113	.0097	.4860	.0662
#2	.0503	.3132	1.584	.0001	.2115	.0099	.4856	.0660
#3	.0510	.3132	1.583	.0043	.2129	.0108	.4825	.0665

Zoom In Zoom Out

Sample Name: jd56483-1 Acquired: 12/7/2022 14:35:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5059.0**	**54936.**	**5097.8**	**2057.5**
Stddev	8.8	133.	33.9	3.2
%RSD	.17376	.24264	.66552	.15394
#1	5061.8	54814.	5112.2	2059.3
#2	5049.2	55078.	5059.0	2053.8
#3	5066.1	54915.	5122.1	2059.3

Zoom In Zoom Out

Sample Name: jd56534-20 Acquired: 12/7/2022 14:40:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**94.07**	**.0551**	**.0477**	**.5653**	**.0052**	**.0010**	**80.33**	**.0043**
Stddev	.0001	.10	.0011	.0016	.0006	.0001	.0011	.23	.0003
%RSD	3.525	.1020	2.072	3.400	.1073	2.133	105.1	.2851	7.437
#1	.0028	94.18	.0560	.0481	.5658	.0051	.0012	80.36	.0043
#2	.0027	94.00	.0555	.0491	.5656	.0053	-.0001	80.09	.0040
#3	.0028	94.02	.0538	.0459	.5647	.0052	.0020	80.54	.0047

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.242**	**.2157**	**.1290**	**.3564**	**189.3**	**9.099**	**.1783**	**45.22**	F **12.37**
Stddev	.007	.0004	.0004	.0008	.1	.025	.0008	.13	.11
%RSD	.5460	.2035	.2894	.2110	.0608	.2692	.4467	.2921	.8922
#1	1.249	.2160	.1294	.3555	189.5	9.124	.1776	45.07	12.49
#2	1.239	.2159	.1289	.3568	189.3	9.099	.1791	45.24	12.31
#3	1.237	.2152	.1286	.3568	189.2	9.075	.1781	45.34	12.30

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0077**	**9.405**	**.2373**	**3.001**	**.1860**	**3.485**	**.0058**	**.0113**	**1.583**
Stddev	.0004	.038	.0006	.011	.0020	.028	.0003	.0027	.013
%RSD	4.770	.4021	.2654	.3603	1.060	.7972	4.958	23.46	.8049
#1	.0080	9.446	.2376	3.014	.1846	3.503	.0059	.0140	1.591
#2	.0073	9.397	.2366	2.996	.1883	3.499	.0060	.0087	1.591
#3	.0076	9.372	.2377	2.994	.1852	3.453	.0054	.0113	1.568

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0300**	**.3759**	**3.572**	**.0048**	**.2357**	**.0072**	**.5680**	**.0831**
Stddev	.0009	.0005	.006	.0009	.0026	.0012	.0010	.0004
%RSD	3.005	.1336	.1598	19.66	1.099	16.98	.1820	.4684
#1	.0298	.3765	3.573	.0057	.2370	.0081	.5690	.0834
#2	.0292	.3757	3.577	.0038	.2374	.0058	.5680	.0834
#3	.0310	.3756	3.565	.0048	.2328	.0078	.5669	.0827

Zoom In Zoom Out

Sample Name: jd56534-20 Acquired: 12/7/2022 14:40:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5158.5**	**55875.**	**5181.5**	**2088.3**
Stddev	4.5	146.	9.2	4.7
%RSD	.08720	.26218	.17850	.22646
#1	5153.8	55723.	5188.6	2083.2
#2	5158.9	55887.	5171.0	2089.2
#3	5162.8	56016.	5184.8	2092.6

Zoom In Zoom Out

Sample Name: jd56534-21 Acquired: 12/7/2022 14:45:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**91.57**	**.0631**	**.0396**	**.4697**	**.0057**	**-.0028**	**21.22**	**.0023**
Stddev	.0019	2.71	.0022	.0009	.0127	.0003	.0005	.58	.0009
%RSD	89.26	2.955	3.533	2.383	2.698	4.529	18.03	2.748	38.89
#1	.0008	88.93	.0640	.0387	.4568	.0056	-.0030	20.66	.0022
#2	.0043	94.34	.0648	.0396	.4822	.0060	-.0031	21.83	.0032
#3	.0013	91.44	.0606	.0406	.4700	.0056	-.0022	21.18	.0015

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6816**	**.0773**	**.1534**	**.1624**	**F 207.5**	**13.08**	**.1640**	**39.50**	**3.355**
Stddev	.0034	.0011	.0003	.0010	6.4	.39	.0058	1.20	.009
%RSD	.4964	1.441	.1696	.6430	3.075	2.995	3.528	3.042	.2823
#1	.6813	.0764	.1537	.1620	201.2	12.69	.1578	38.40	3.362
#2	.6783	.0769	.1532	.1615	213.9	13.48	.1692	40.78	3.358
#3	.6851	.0786	.1533	.1635	207.4	13.06	.1652	39.33	3.344

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0058**	**1.896**	**.1694**	**2.910**	**.1537**	**8.371**	**.0044**	**.0027**	**2.050**
Stddev	.0004	.054	.0021	.039	.0033	.115	.0007	.0033	.025
%RSD	6.312	2.834	1.258	1.339	2.176	1.375	15.88	120.6	1.222
#1	.0060	1.846	.1691	2.896	.1517	8.298	.0051	.0006	2.034
#2	.0054	1.953	.1674	2.880	.1518	8.310	.0037	.0065	2.038
#3	.0060	1.888	.1716	2.954	.1576	8.503	.0045	.0010	2.079

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0284**	**.0849**	**2.194**	**.0003**	**.2614**	**.0061**	**.4427**	**.0894**
Stddev	.0006	.0026	.004	.0024	.0015	.0019	.0054	.0002
%RSD	2.094	3.013	.1625	729.0	.5828	30.71	1.230	.2508
#1	.0291	.0824	2.199	.0024	.2599	.0044	.4391	.0891
#2	.0283	.0875	2.193	.0009	.2614	.0081	.4400	.0894
#3	.0279	.0849	2.192	-.0023	.2629	.0059	.4489	.0896

Zoom In Zoom Out

Sample Name: jd56534-21 Acquired: 12/7/2022 14:45:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5228.6**	**56426.**	**5213.3**	**2107.4**
Stddev	50.6	269.	167.8	22.5
%RSD	.96688	.47723	3.2194	1.0697
#1	5256.3	56214.	5373.8	2118.8
#2	5259.2	56334.	5039.0	2122.0
#3	5170.2	56729.	5227.1	2081.4

Zoom In Zoom Out

Sample Name: jd56534-22 Acquired: 12/7/2022 14:50:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**112.0**	**.0646**	**.0476**	**.3922**	**.0067**	**.0020**	**107.6**	**.0025**
Stddev	.0009	.4	.0005	.0019	.0019	.0001	.0006	.4	.0003
%RSD	33.16	.3920	.8454	3.972	.4795	1.347	31.60	.3383	13.11
#1	.0018	111.5	.0651	.0495	.3900	.0066	.0013	107.3	.0021
#2	.0037	112.4	.0649	.0476	.3935	.0066	.0024	108.0	.0028
#3	.0029	112.1	.0640	.0457	.3930	.0068	.0023	107.6	.0026

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6776**	**.0651**	**.2355**	**.5691**	**177.5**	**12.96**	**.2609**	**50.64**	**3.524**
Stddev	.0015	.0012	.0003	.0010	.9	.08	.0014	.49	.002
%RSD	.2229	1.782	.1466	.1805	.5060	.6189	.5536	.9658	.0667
#1	.6765	.0663	.2359	.5686	176.5	12.88	.2597	50.13	3.526
#2	.6771	.0648	.2352	.5685	178.2	13.03	.2604	50.67	3.524
#3	.6793	.0640	.2354	.5703	177.9	12.99	.2625	51.11	3.522

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062**	**3.482**	**.1906**	**7.646**	**.2049**	**4.523**	**.0050**	**.0047**	**1.833**
Stddev	.0003	.020	.0047	.215	.0042	.105	.0005	.0010	.059
%RSD	4.354	.5785	2.469	2.807	2.068	2.328	10.58	20.95	3.213
#1	.0059	3.471	.1960	7.891	.2095	4.642	.0044	.0036	1.897
#2	.0064	3.506	.1887	7.559	.2041	4.482	.0054	.0053	1.818
#3	.0063	3.471	.1872	7.489	.2011	4.443	.0051	.0052	1.782

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0295**	**.4461**	**3.868**	**-.0015**	**.3027**	**.0078**	**.4393**	**.0763**
Stddev	.0004	.0016	.001	.0020	.0010	.0015	.0117	.0002
%RSD	1.302	.3646	.0337	135.6	.3312	18.58	2.655	.2943
#1	.0296	.4444	3.867	-.0030	.3015	.0092	.4527	.0761
#2	.0291	.4462	3.869	-.0023	.3030	.0080	.4338	.0766
#3	.0299	.4476	3.867	.0008	.3034	.0063	.4314	.0763

Zoom In Zoom Out

Sample Name: jd56534-22 Acquired: 12/7/2022 14:50:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5038.8**	**55914.**	**5207.9**	**2084.5**
Stddev	102.2	57.	26.5	43.9
%RSD	2.0281	.10270	.50801	2.1080
#1	4924.4	55922.	5238.1	2034.8
#2	5070.8	55853.	5196.5	2100.2
#3	5121.1	55967.	5189.1	2118.4

Zoom In Zoom Out

Sample Name: jd56534-23 Acquired: 12/7/2022 14:55:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**39.40**	**.0254**	**.0210**	**.1798**	**.0025**	**-.0024**	**11.49**	**.0017**
Stddev	.0002	.05	.0001	.0005	.0004	.0001	.0013	.01	.0001
%RSD	23.62	.1297	.2726	2.399	.1952	5.303	53.30	.0871	3.191
#1	.0005	39.34	.0254	.0209	.1797	.0024	-.0020	11.50	.0016
#2	.0006	39.41	.0253	.0216	.1795	.0025	-.0013	11.50	.0017
#3	.0008	39.44	.0255	.0206	.1802	.0027	-.0038	11.48	.0017

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3335**	**.0279**	**.0850**	**.0678**	**74.57**	**4.861**	**.0617**	**12.66**	**.7299**
Stddev	.0046	.0001	.0002	.0003	.05	.019	.0012	.01	.0013
%RSD	1.375	.3441	.2937	.4359	.0724	.3930	1.926	.0931	.1747
#1	.3309	.0279	.0850	.0675	74.53	4.882	.0630	12.65	.7286
#2	.3308	.0279	.0848	.0679	74.56	4.847	.0608	12.68	.7299
#3	.3388	.0278	.0852	.0681	74.63	4.853	.0612	12.66	.7312

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**6.868**	**.0596**	**1.486**	**.0570**	**1.013**	**.0015**	**.0030**	**1.787**
Stddev	.0001	.016	.0003	.006	.0010	.007	.0015	.0018	.023
%RSD	4.707	.2381	.4554	.3760	1.823	.6766	97.53	61.70	1.305
#1	.0020	6.873	.0593	1.485	.0573	1.021	.0005	.0019	1.813
#2	.0022	6.881	.0599	1.492	.0558	1.007	.0008	.0051	1.780
#3	.0020	6.850	.0596	1.481	.0578	1.013	.0032	.0020	1.768

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0246**	**.0662**	**1.147**	**.0012**	**.1092**	**.0026**	**.1890**	**.0301**
Stddev	.0013	.0000	.003	.0003	.0004	.0008	.0003	.0001
%RSD	5.129	.0724	.2797	24.13	.3737	31.61	.1361	.4860
#1	.0243	.0662	1.146	.0012	.1094	.0032	.1891	.0300
#2	.0260	.0663	1.145	.0015	.1087	.0029	.1888	.0302
#3	.0235	.0662	1.151	.0010	.1094	.0017	.1893	.0302

Zoom In Zoom Out

Sample Name: jd56534-23 Acquired: 12/7/2022 14:55:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5345.4**	**55827.**	**5140.6**	**2086.0**
Stddev	6.4	198.	9.0	1.9
%RSD	.12012	.35545	.17556	.08985
#1	5340.3	56052.	5130.4	2085.3
#2	5343.3	55750.	5147.6	2084.7
#3	5352.6	55678.	5143.8	2088.2

Zoom In Zoom Out

Sample Name: jd56534-24 Acquired: 12/7/2022 15:00:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**93.13**	**.0476**	**.0333**	**.3867**	**.0045**	**-.0067**	**178.9**	**.0018**
Stddev	.0005	.14	.0009	.0010	.0014	.0001	.0013	.3	.0003
%RSD	627.9	.1527	1.883	3.052	.3605	3.068	19.59	.1727	16.29
#1	.0005	93.02	.0486	.0342	.3868	.0047	-.0077	178.6	.0017
#2	-.0005	93.29	.0469	.0322	.3881	.0044	-.0071	179.2	.0016
#3	-.0003	93.09	.0473	.0335	.3853	.0045	-.0052	178.8	.0022

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7630**	**.0782**	**.1230**	**.1972**	**193.6**	**12.04**	**.1716**	**53.34**	**4.942**
Stddev	.0066	.0011	.0003	.0009	.3	.04	.0006	.13	.071
%RSD	.8667	1.361	.2238	.4357	.1373	.3685	.3527	.2394	1.428
#1	.7594	.0794	.1228	.1974	193.5	12.07	.1720	53.21	4.906
#2	.7706	.0776	.1233	.1980	193.9	12.07	.1719	53.47	5.024
#3	.7589	.0776	.1228	.1963	193.4	11.99	.1709	53.35	4.897

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**1.675**	**.1742**	**3.380**	**.1131**	**2.679**	**-.0000**	**.0029**	**1.529**
Stddev	.0003	.005	.0025	.043	.0012	.047	.0010	.0029	.036
%RSD	6.595	.3287	1.421	1.275	1.072	1.760	6921.	99.99	2.364
#1	.0042	1.681	.1771	3.428	.1143	2.734	.0001	.0022	1.571
#2	.0043	1.673	.1728	3.345	.1131	2.658	-.0011	.0061	1.512
#3	.0038	1.670	.1728	3.366	.1119	2.647	.0010	.0004	1.505

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0276**	**.5216**	**.5760**	**.0021**	**.1553**	**.0056**	**.5421**	**.0998**
Stddev	.0008	.0021	.0039	.0019	.0020	.0002	.0079	.0007
%RSD	2.857	.4122	.6743	90.20	1.284	2.973	1.460	.7332
#1	.0283	.5218	.5719	.0036	.1547	.0057	.5512	.0989
#2	.0268	.5236	.5796	-.0000	.1575	.0054	.5369	.1002
#3	.0275	.5193	.5766	.0028	.1537	.0058	.5381	.1002

Zoom In Zoom Out

Sample Name: jd56534-24 Acquired: 12/7/2022 15:00:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4971.0**	**54841.**	**5166.9**	**2042.2**
Stddev	33.6	184.	13.8	13.9
%RSD	.67612	.33558	.26646	.68140
#1	4932.2	54900.	5166.8	2026.4
#2	4991.1	54634.	5153.2	2052.5
#3	4989.6	54988.	5180.7	2047.7

Zoom In Zoom Out

Sample Name: jd56537-9 Acquired: 12/7/2022 15:05:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**31.49**	**.0417**	**.0157**	**.1060**	**.0015**	**.0002**	**5.928**	**.0008**
Stddev	.0003	.07	.0005	.0001	.0002	.0001	.0008	.040	.0000
%RSD	44.36	.2218	1.312	.7465	.2205	5.556	435.6	.6673	2.661
#1	.0010	31.43	.0411	.0157	.1058	.0016	.0004	5.884	.0008
#2	.0009	31.57	.0417	.0158	.1062	.0014	.0009	5.961	.0008
#3	.0004	31.48	.0422	.0155	.1059	.0015	-.0007	5.939	.0008

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1637**	**.0175**	**.0676**	**.0577**	**59.87**	**3.729**	**.0693**	**12.70**	**.3960**
Stddev	.0026	.0001	.0001	.0005	.10	.052	.0016	.11	.0007
%RSD	1.611	.7693	.1007	.8524	.1703	1.404	2.275	.8404	.1655
#1	.1623	.0175	.0677	.0572	59.78	3.668	.0697	12.65	.3953
#2	.1668	.0174	.0676	.0582	59.98	3.755	.0706	12.83	.3963
#3	.1621	.0177	.0676	.0579	59.87	3.762	.0675	12.64	.3965

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**1.061**	**.0554**	**.8194**	**.0507**	**2.693**	**.0019**	**.0037**	**.9259**
Stddev	.0001	.013	.0005	.0069	.0006	.009	.0009	.0004	.0079
%RSD	2.575	1.207	.8737	.8392	1.127	.3399	48.93	11.23	.8485
#1	.0027	1.048	.0553	.8125	.0512	2.703	.0029	.0039	.9243
#2	.0027	1.073	.0550	.8195	.0510	2.690	.0019	.0032	.9191
#3	.0028	1.063	.0559	.8263	.0501	2.686	.0010	.0039	.9345

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0276**	**.0456**	**1.163**	**.0002**	**.0841**	**.0021**	**.1496**	**.0222**
Stddev	.0002	.0003	.005	.0005	.0001	.0012	.0002	.0004
%RSD	.6634	.7058	.4335	264.2	.0704	55.49	.1203	1.658
#1	.0274	.0452	1.158	.0006	.0842	.0012	.1497	.0221
#2	.0276	.0459	1.168	-.0004	.0841	.0018	.1496	.0226
#3	.0278	.0456	1.163	.0004	.0840	.0035	.1494	.0219

Zoom In Zoom Out

Sample Name: jd56537-9 Acquired: 12/7/2022 15:05:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5469.4**	**56058.**	**5067.8**	**2091.4**
Stddev	4.4	183.	8.1	4.7
%RSD	.08008	.32698	.16012	.22618
#1	5465.4	56257.	5072.7	2091.0
#2	5474.1	55897.	5072.2	2096.3
#3	5468.7	56019.	5058.4	2086.9

Zoom In Zoom Out

Sample Name: jd56558-1 Acquired: 12/7/2022 15:10:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1782**	**.0025**	**.1630**	**.0029**	**-.0000**	**.0009**	**8.022**
Stddev	.0006	.0212	.0002	.0004	.0002	.0001	.0009	.047
%RSD	1452.	11.90	7.134	.2227	5.639	768.4	105.1	.5804
#1	.0003	.1930	.0025	.1634	.0028	-.0001	.0016	8.072
#2	.0004	.1539	.0027	.1628	.0027	.0000	-.0002	8.016
#3	-.0006	.1876	.0023	.1627	.0030	.0001	.0012	7.979

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0013**	**.0002**	**.0021**	**.0286**	**.5487**	**.0555**	**.0006**
Stddev	.0001	.0037	.0002	.0002	.0002	.0026	.0197	.0007
%RSD	64.82	277.8	149.7	7.995	.7123	.4733	35.54	105.7
#1	.0003	.0027	.0001	.0020	.0284	.5512	.0360	.0001
#2	.0001	-.0029	.0004	.0023	.0287	.5487	.0550	.0005
#3	.0001	.0042	-.0000	.0021	.0287	.5460	.0754	.0014

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3404**	**.0060**	**.0474**	**.0987**	**.0015**	**1.757**	**.0189**	**10.36**
Stddev	.0139	.0000	.0002	.0017	.0004	.004	.0009	.01
%RSD	4.089	.5745	.3536	1.690	23.08	.2455	4.562	.1385
#1	.3523	.0060	.0472	.0969	.0013	1.762	.0191	10.38
#2	.3251	.0060	.0475	.0990	.0014	1.755	.0197	10.35
#3	.3438	.0060	.0475	.1002	.0020	1.754	.0180	10.36

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0068**	**.1892**	**.0220**	**.0046**	**.0106**	F **-.0042**	**.0011**
Stddev	.0005	.0032	.0008	.0005	.0001	.0002	.0023	.0002
%RSD	17.17	47.04	.4125	2.394	1.581	2.104	54.80	14.22
#1	.0028	.0048	.1894	.0222	.0046	.0105	-.0066	.0011
#2	.0034	.0105	.1883	.0214	.0046	.0104	-.0040	.0010
#3	.0024	.0051	.1898	.0223	.0047	.0108	-.0020	.0013

Zoom In Zoom Out

Sample Name: jd56558-1 Acquired: 12/7/2022 15:10:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0140**	**4.449**	**.0013**
Stddev	.0006	.005	.0002
%RSD	4.265	.1057	13.30
#1	.0135	4.451	.0015
#2	.0147	4.453	.0013
#3	.0138	4.444	.0012

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5714.3**	**55570.**	**4912.5**	**2069.2**
Stddev	17.6	59.	19.7	6.8
%RSD	.30717	.10630	.40181	.32967
#1	5698.6	55635.	4910.7	2063.7
#2	5711.1	55555.	4933.0	2067.0
#3	5733.2	55520.	4893.7	2076.8

Zoom In Zoom Out

Sample Name: jd56558-2 Acquired: 12/7/2022 15:15:31 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0296**	**.0022**	**.1888**	**.0004**	**-.0001**	**.0004**	**5.197**
Stddev	.0002	.0029	.0005	.0042	.0001	.0002	.0011	.028
%RSD	97.98	9.748	21.73	2.200	32.69	215.5	303.3	.5351
#1	.0004	.0279	.0017	.1936	.0005	-.0003	-.0009	5.222
#2	.0000	.0280	.0025	.1867	.0004	.0001	.0011	5.201
#3	.0001	.0329	.0025	.1861	.0003	-.0000	.0009	5.167

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0013**	**.0000**	**.0016**	**.0318**	**.1520**	**.0050**	**.0007**
Stddev	.0004	.0025	.0001	.0000	.0006	.0009	.0315	.0011
%RSD	729.9	199.6	339.8	2.637	1.835	.6038	629.3	165.7
#1	.0004	.0008	-.0001	.0017	.0317	.1516	-.0310	.0000
#2	.0001	-.0010	.0002	.0016	.0324	.1530	.0185	.0020
#3	-.0004	.0040	-.0000	.0016	.0312	.1513	.0276	.0000

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4510**	**.0052**	**.0345**	**.0918**	**.0016**	**1.336**	**.0031**	**3.891**
Stddev	.0282	.0001	.0005	.0158	.0003	.027	.0004	.094
%RSD	6.254	1.357	1.547	17.25	21.13	2.041	14.28	2.415
#1	.4187	.0051	.0351	.0977	.0017	1.367	.0034	4.000
#2	.4710	.0053	.0342	.1039	.0012	1.324	.0032	3.839
#3	.4633	.0052	.0341	.0739	.0018	1.316	.0026	3.835

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0051**	**.0281**	**.0213**	**.0025**	**.0005**	F **-.0025**	**.0004**
Stddev	.0010	.0005	.0014	.0009	.0000	.0001	.0015	.0001
%RSD	111.3	9.292	4.937	4.069	.7216	15.83	60.12	15.76
#1	.0016	.0051	.0295	.0222	.0025	.0004	-.0030	.0004
#2	.0013	.0056	.0268	.0211	.0025	.0006	-.0036	.0005
#3	-.0002	.0046	.0278	.0205	.0025	.0006	-.0008	.0004

Zoom In Zoom Out

Sample Name: jd56558-2 Acquired: 12/7/2022 15:15:31 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0061**	**1.788**	**.0001**
Stddev	.0014	.038	.0001
%RSD	23.38	2.141	110.9
#1	.0069	1.832	.0002
#2	.0044	1.763	.0001
#3	.0069	1.768	-.0000

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5680.9**	**56206.**	**5051.7**	**2068.3**
Stddev	99.3	94.	21.1	39.5
%RSD	1.7487	.16741	.41701	1.9084
#1	5566.2	56152.	5029.4	2022.8
#2	5739.7	56314.	5071.3	2093.6
#3	5736.8	56151.	5054.4	2088.4

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 15:20:37 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2445**	**39.07**	**1.918**	**1.941**	**1.929**	**1.972**	**1.943**	**38.93**	**1.920**
Stddev	.0007	.01	.007	.007	.005	.004	.005	.09	.001
%RSD	.2768	.0368	.3926	.3676	.2648	.1969	.2610	.2403	.0618
#1	.2450	39.09	1.913	1.938	1.923	1.972	1.943	38.92	1.921
#2	.2447	39.06	1.914	1.935	1.929	1.969	1.938	38.85	1.919
#3	.2437	39.06	1.926	1.949	1.934	1.976	1.949	39.03	1.920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.920**	**1.930**	**1.923**	**1.904**	**40.12**	**38.75**	**1.914**	**38.76**	**1.941**
Stddev	.003	.003	.004	.003	.02	.12	.002	.09	.004
%RSD	.1610	.1393	.1930	.1597	.0614	.3109	.1256	.2304	.2184
#1	1.920	1.929	1.921	1.906	40.10	38.62	1.912	38.77	1.940
#2	1.917	1.928	1.921	1.900	40.13	38.76	1.912	38.67	1.937
#3	1.923	1.933	1.927	1.905	40.15	38.86	1.916	38.85	1.946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.938**	**39.76**	**1.907**	F **1.786**	**1.943**	**1.867**	**1.937**	**1.908**	**4.702**
Stddev	.005	.02	.004	.005	.002	.006	.001	.008	.013
%RSD	.2510	.0408	.2086	.2660	.1213	.3402	.0416	.4071	.2768
#1	1.934	39.77	1.907	1.790	1.943	1.862	1.936	1.899	4.696
#2	1.937	39.77	1.903	1.787	1.941	1.866	1.937	1.911	4.693
#3	1.943	39.74	1.911	1.781	1.945	1.875	1.938	1.914	4.717
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000					
Range				-10.00%					

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 15:20:37 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.949**	**1.928**	**1.888**	**1.999**	**1.899**	**1.907**	**1.925**	**1.909**
Stddev	.010	.003	.003	.025	.002	.004	.010	.001
%RSD	.5005	.1362	.1761	1.254	.1263	.2004	.5101	.0679
#1	1.938	1.926	1.886	1.971	1.900	1.904	1.917	1.908
#2	1.953	1.928	1.886	2.006	1.897	1.905	1.923	1.908
#3	1.957	1.931	1.892	2.020	1.901	1.911	1.936	1.910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5183.1**	**54546.**	**5081.4**	**2045.1**
Stddev	7.1	194.	19.6	3.7
%RSD	.13699	.35567	.38657	.17935
#1	5176.3	54746.	5060.5	2044.6
#2	5190.5	54533.	5099.4	2049.0
#3	5182.6	54359.	5084.4	2041.7

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 15:25:25 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0047**	**.0012**	**.0038**	**.0002**	**.0001**	**-.0003**	**-.0004**	**.0004**
Stddev	.0008	.0034	.0005	.0004	.0001	.0001	.0004	.0021	.0003
%RSD	205.7	71.19	41.43	11.09	59.69	160.1	149.1	539.8	69.60
#1	-.0013	-.0083	.0014	.0035	.0003	.0001	-.0005	-.0000	.0001
#2	-.0001	-.0044	.0015	.0043	.0003	-.0000	-.0005	.0015	.0006
#3	.0002	-.0015	.0006	.0036	.0001	.0001	.0002	-.0026	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0001**	**-.0003**	**-.0007**	**.0053**	**.0226**	**.0008**	**-.0150**	**.0001**
Stddev	.0022	.0002	.0002	.0002	.0014	.0277	.0012	.0271	.0000
%RSD	304.6	299.8	68.32	33.30	25.99	122.6	149.6	180.4	35.42
#1	.0006	.0003	-.0003	-.0007	.0067	-.0036	-.0001	-.0406	.0002
#2	-.0014	.0001	-.0005	-.0004	.0039	.0516	.0003	.0133	.0001
#3	.0030	-.0002	-.0001	-.0009	.0053	.0198	.0022	-.0177	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0068**	**.0006**	**.0011**	**.0008**	**-.0016**	**.0009**	**.0013**	**-.0063**
Stddev	.0003	.0057	.0002	.0004	.0002	.0027	.0010	.0014	.0008
%RSD	74.45	83.84	29.37	40.74	28.30	172.2	103.0	108.7	12.66
#1	.0004	-.0062	.0007	.0015	.0008	-.0023	.0020	-.0003	-.0060
#2	.0001	-.0014	.0004	.0011	.0006	-.0038	.0001	.0018	-.0058
#3	.0007	-.0127	.0006	.0007	.0011	.0014	.0007	.0023	-.0073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 15:25:25 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0001**	**.0001**	**.0008**	**.0005**	**.0006**	**.0003**	**.0002**
Stddev	.0004	.0000	.0003	.0009	.0003	.0009	.0001	.0002
%RSD	71.23	20.25	397.5	116.9	46.47	154.7	45.90	110.2
#1	.0003	.0001	.0004	.0008	.0003	.0013	.0003	-.0000
#2	.0009	.0001	-.0001	-.0001	.0005	-.0004	.0004	.0003
#3	.0003	.0001	-.0001	.0016	.0008	.0009	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5771.1**	**56056.**	**4972.9**	**2095.2**
Stddev	16.4	193.	49.3	6.4
%RSD	.28458	.34388	.99059	.30593
#1	5770.8	56051.	4932.1	2094.7
#2	5754.9	55865.	4959.1	2089.1
#3	5787.7	56250.	5027.7	2101.9

Zoom In Zoom Out

Sample Name: jd56558-3 Acquired: 12/7/2022 15:30:37 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1326**	**.0019**	**.4744**	**.0083**	**.0002**	**-.0006**	**3.961**
Stddev	.0006	.0178	.0015	.0002	.0004	.0001	.0005	.107
%RSD	1315.	13.45	80.59	.0327	4.903	93.76	80.65	2.690
#1	-.0002	.1349	.0036	.4743	.0079	-.0000	-.0009	3.908
#2	.0007	.1492	.0012	.4745	.0087	.0003	-.0008	4.083
#3	-.0004	.1138	.0008	.4742	.0084	.0002	-.0000	3.891

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0021**	**.0005**	**.0027**	**.0221**	**.2026**	**4.442**	**.0014**
Stddev	.0001	.0021	.0002	.0004	.0001	.0042	.104	.0004
%RSD	15.76	100.8	47.74	13.11	.4239	2.094	2.334	31.29
#1	.0004	.0020	.0003	.0030	.0220	.1993	4.401	.0016
#2	.0003	.0043	.0007	.0028	.0222	.2074	4.561	.0009
#3	.0003	.0001	.0004	.0023	.0221	.2011	4.366	.0016

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7477**	**.0081**	**.2280**	**6.147**	**.0021**	**1.603**	**.0180**	**4.408**
Stddev	.0417	.0001	.0005	.157	.0004	.004	.0009	.016
%RSD	5.575	1.059	.2155	2.550	20.10	.2680	4.967	.3544
#1	.7369	.0081	.2277	6.058	.0021	1.608	.0171	4.395
#2	.7937	.0080	.2286	6.328	.0017	1.602	.0189	4.425
#3	.7124	.0081	.2277	6.055	.0025	1.600	.0178	4.404

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.0031**	**.0935**	**.0229**	**.0018**	**.0046**	F **-.0022**	**.0022**
Stddev	.0003	.0014	.0004	.0004	.0001	.0005	.0009	.0002
%RSD	10.91	43.06	.4671	1.765	4.578	11.80	39.21	9.499
#1	.0026	.0036	.0931	.0233	.0017	.0047	-.0012	.0022
#2	.0023	.0042	.0937	.0226	.0019	.0050	-.0025	.0020
#3	.0029	.0016	.0939	.0226	.0018	.0040	-.0028	.0024

Zoom In Zoom Out

Sample Name: jd56558-3 Acquired: 12/7/2022 15:30:37 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0060**	**1.772**	**.0015**
Stddev	.0011	.001	.0000
%RSD	18.91	.0674	3.088
#1	.0073	1.772	.0015
#2	.0051	1.773	.0016
#3	.0055	1.771	.0015

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5652.5**	**55713.**	**4924.8**	**2068.4**
Stddev	19.8	408.	113.6	6.2
%RSD	.34983	.73212	2.3058	.29902
#1	5629.7	56028.	4985.9	2061.3
#2	5664.2	55859.	4793.8	2072.6
#3	5663.7	55252.	4994.8	2071.4

Zoom In Zoom Out

Sample Name: jd56558-4 Acquired: 12/7/2022 15:35:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0645**	**.0022**	**.4876**	**.0024**	**.0002**	**-.0009**	**3.859**
Stddev	.0003	.0041	.0003	.0011	.0002	.0001	.0015	.033
%RSD	255.8	6.386	14.96	.2233	7.204	48.30	166.6	.8441
#1	.0003	.0692	.0026	.4865	.0023	.0001	-.0019	3.836
#2	.0003	.0624	.0019	.4887	.0023	.0001	.0008	3.896
#3	-.0003	.0618	.0021	.4877	.0026	.0003	-.0016	3.845

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0010**	**.0001**	**.0014**	**.0456**	**.2937**	**3.903**	**.0014**
Stddev	.0002	.0036	.0002	.0001	.0005	.0030	.028	.0010
%RSD	49.91	367.3	173.8	9.870	1.198	1.017	.7114	72.75
#1	.0002	-.0041	-.0001	.0013	.0453	.2972	3.877	.0022
#2	.0004	.0030	.0001	.0015	.0454	.2922	3.901	.0003
#3	.0005	-.0019	.0003	.0016	.0463	.2918	3.932	.0016

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.108**	**.0055**	**.2278**	**6.476**	**.0013**	**1.680**	**.0645**	**5.109**
Stddev	.016	.0000	.0009	.018	.0004	.003	.0016	.011
%RSD	1.446	.4568	.3748	.2717	34.45	.1853	2.435	.2188
#1	1.126	.0055	.2272	6.484	.0008	1.677	.0652	5.100
#2	1.097	.0055	.2274	6.488	.0013	1.679	.0627	5.106
#3	1.100	.0055	.2288	6.455	.0017	1.683	.0657	5.122

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0064**	**.0919**	**.0226**	**.0023**	**.0084**	F **-.0044**	**.0022**
Stddev	.0015	.0023	.0019	.0003	.0001	.0004	.0005	.0002
%RSD	72.50	35.57	2.034	1.445	2.241	4.850	10.39	9.485
#1	.0035	.0088	.0906	.0222	.0023	.0085	-.0048	.0019
#2	.0020	.0042	.0911	.0229	.0022	.0087	-.0039	.0023
#3	.0006	.0063	.0940	.0227	.0023	.0080	-.0043	.0022

Zoom In Zoom Out

Sample Name: jd56558-4 Acquired: 12/7/2022 15:35:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0062**	**1.995**	**.0008**
Stddev	.0004	.006	.0001
%RSD	7.078	.3054	18.22
#1	.0063	1.989	.0008
#2	.0057	1.996	.0009
#3	.0066	2.001	.0006

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5621.5**	**55160.**	**4957.6**	**2057.9**
Stddev	6.8	81.	24.1	3.3
%RSD	.12098	.14744	.48636	.16194
#1	5625.7	55200.	4984.6	2061.0
#2	5625.1	55066.	4938.2	2058.4
#3	5613.6	55213.	4950.1	2054.4

Zoom In Zoom Out

Sample Name: jd56558-5 Acquired: 12/7/2022 15:40:45 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0240**	**.0026**	**.3498**	**.0058**	**.0002**	**-.0000**	**4.191**
Stddev	.0003	.0161	.0003	.0011	.0001	.0000	.0010	.012
%RSD	85.50	67.14	12.26	.3048	1.054	17.15	3212.	.2848
#1	-.0005	.0208	.0025	.3503	.0057	.0002	.0010	4.192
#2	-.0000	.0414	.0024	.3486	.0058	.0001	-.0009	4.202
#3	-.0006	.0097	.0030	.3505	.0059	.0002	-.0002	4.178

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0012**	**.0000**	**.0016**	**.0490**	**.9923**	**4.626**	**.0001**
Stddev	.0003	.0016	.0001	.0006	.0003	.0061	.049	.0003
%RSD	207.1	137.2	1035.	35.47	.5829	.6107	1.057	209.8
#1	.0004	-.0005	-.0001	.0016	.0488	.9985	4.679	-.0002
#2	-.0002	.0013	-.0000	.0022	.0494	.9920	4.615	.0002
#3	.0003	.0028	.0001	.0011	.0490	.9864	4.584	.0004

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7178**	**.0101**	**.0769**	**3.372**	**.0016**	**1.237**	**.0255**	**3.747**
Stddev	.0194	.0000	.0004	.016	.0006	.004	.0013	.003
%RSD	2.706	.4101	.4993	.4689	35.24	.3620	5.246	.0734
#1	.7383	.0101	.0767	3.378	.0011	1.236	.0263	3.745
#2	.7153	.0101	.0774	3.384	.0015	1.233	.0262	3.746
#3	.6997	.0100	.0767	3.354	.0022	1.242	.0239	3.750

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0055**	**.0486**	**.0239**	**.0021**	**.0034**	F **-.0027**	**.0012**
Stddev	.0005	.0013	.0007	.0006	.0001	.0003	.0013	.0001
%RSD	58.31	23.56	1.386	2.630	4.562	8.836	49.63	9.808
#1	.0007	.0041	.0493	.0233	.0020	.0033	-.0025	.0011
#2	.0015	.0059	.0482	.0238	.0020	.0032	-.0041	.0013
#3	.0005	.0066	.0482	.0245	.0022	.0038	-.0015	.0011

Zoom In Zoom Out

Sample Name: jd56558-5 Acquired: 12/7/2022 15:40:45 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0040**	**1.383**	**.0005**
Stddev	.0007	.004	.0002
%RSD	16.82	.2784	38.50
#1	.0047	1.387	.0006
#2	.0035	1.382	.0005
#3	.0036	1.379	.0003

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5671.1**	**55579.**	**4968.1**	**2070.2**
Stddev	12.5	36.	36.6	2.7
%RSD	.22065	.06446	.73628	.13121
#1	5658.5	55611.	4927.1	2067.3
#2	5671.3	55540.	4979.5	2072.7
#3	5683.5	55585.	4997.6	2070.7

Zoom In Zoom Out

Sample Name: jd56558-6 Acquired: 12/7/2022 15:45:50 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0118**	**.0015**	**.4391**	**.0002**	**-.0000**	**.0006**	**1.792**	**.0003**
Stddev	.0001	.0121	.0012	.0020	.0002	.0001	.0010	.013	.0001
%RSD	52.43	102.9	78.05	.4464	88.21	2666.	172.3	.7316	26.16
#1	-.0001	.0221	.0002	.4406	-.0000	-.0001	.0018	1.790	.0003
#2	-.0003	.0147	.0023	.4369	.0003	.0001	-.0000	1.780	.0003
#3	-.0004	-.0015	.0022	.4398	.0003	-.0000	.0001	1.806	.0002

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**.0002**	**.0024**	**.0058**	**.8011**	**.1276**	**.0005**	**1.404**	**.0100**
Stddev	.0030	.0004	.0002	.0004	.0043	.0309	.0009	.016	.0001
%RSD	79.60	169.5	7.841	7.177	.5400	24.19	174.9	1.111	1.353
#1	.0023	.0002	.0025	.0061	.7962	.0968	.0014	1.417	.0099
#2	.0072	-.0001	.0025	.0060	.8044	.1274	.0005	1.408	.0102
#3	.0018	.0007	.0022	.0053	.8027	.1586	-.0004	1.387	.0100

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0577**	**.5865**	**.0020**	**1.031**	**.0056**	**1.505**	**.0009**	**.0006**	**.0340**
Stddev	.0002	.0072	.0002	.006	.0011	.008	.0005	.0006	.0008
%RSD	.3634	1.223	10.92	.6137	19.61	.5023	49.91	102.1	2.278
#1	.0578	.5865	.0018	1.037	.0052	1.511	.0015	.0013	.0340
#2	.0579	.5936	.0022	1.030	.0069	1.507	.0007	.0006	.0333
#3	.0575	.5793	.0021	1.025	.0048	1.496	.0006	.0000	.0348

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0214**	**.0013**	**.0022**	**-.0015**	**.0008**	**.0020**	**.6239**	**-.0001**
Stddev	.0006	.0001	.0001	.0011	.0002	.0008	.0013	.0002
%RSD	2.832	4.928	4.994	69.35	28.67	42.56	.2016	225.7
#1	.0214	.0013	.0024	-.0003	.0009	.0028	.6227	-.0001
#2	.0208	.0013	.0022	-.0019	.0005	.0020	.6237	-.0003
#3	.0220	.0012	.0021	-.0023	.0009	.0012	.6252	.0001

Zoom In Zoom Out

Sample Name: jd56558-6 Acquired: 12/7/2022 15:45:50 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5782.5**	**56381.**	**5104.7**	**2100.6**
Stddev	11.3	955.	25.7	8.2
%RSD	.19494	1.6947	.50400	.39058
#1	5769.6	56941.	5134.5	2091.2
#2	5787.4	55277.	5089.8	2106.6
#3	5790.5	56924.	5090.0	2103.9

Zoom In Zoom Out

Sample Name: jd56558-7 Acquired: 12/7/2022 15:50:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0169**	**.0023**	**.2913**	**.0007**	**.0004**	**-.0004**	**5.164**
Stddev	.0003	.0056	.0008	.0007	.0001	.0001	.0006	.094
%RSD	31.11	33.18	36.79	.2307	13.63	30.74	148.8	1.814
#1	.0008	.0138	.0025	.2909	.0006	.0002	-.0008	5.100
#2	.0012	.0135	.0014	.2921	.0006	.0004	.0003	5.121
#3	.0007	.0233	.0030	.2908	.0008	.0004	-.0006	5.271

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0023**	**.0022**	**.0045**	**.0384**	**.2299**	**8.897**	**.0009**
Stddev	.0001	.0031	.0002	.0003	.0001	.0058	.146	.0014
%RSD	16.87	137.3	8.157	6.923	.2419	2.509	1.647	157.9
#1	.0003	-.0013	.0020	.0042	.0384	.2252	8.752	-.0007
#2	.0004	.0041	.0022	.0048	.0383	.2282	8.895	.0018
#3	.0003	.0041	.0023	.0045	.0385	.2363	9.045	.0015

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.136**	**.0029**	**1.157**	**13.32**	**.0005**	**3.382**	**.0146**	**7.158**
Stddev	.041	.0000	.003	.18	.0004	.008	.0010	.011
%RSD	3.586	.8181	.2920	1.363	75.04	.2263	6.724	.1500
#1	1.098	.0029	1.157	13.20	.0005	3.378	.0157	7.149
#2	1.131	.0029	1.160	13.23	.0009	3.391	.0144	7.170
#3	1.179	.0029	1.153	13.53	.0001	3.377	.0138	7.156

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0070**	**.0965**	**.0251**	**.0028**	**.0020**	F **-.0034**	**.0075**
Stddev	.0007	.0004	.0020	.0007	.0001	.0003	.0009	.0004
%RSD	35.69	5.008	2.027	2.983	3.219	14.51	26.95	5.790
#1	.0020	.0066	.0987	.0245	.0027	.0024	-.0044	.0070
#2	.0012	.0070	.0950	.0259	.0029	.0019	-.0031	.0079
#3	.0026	.0073	.0957	.0247	.0029	.0018	-.0027	.0076

Zoom In Zoom Out

Sample Name: jd56558-7 Acquired: 12/7/2022 15:50:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0112**	**3.557**	**.0011**
Stddev	.0006	.006	.0000
%RSD	5.392	.1641	3.114
#1	.0119	3.556	.0012
#2	.0107	3.563	.0011
#3	.0111	3.551	.0011

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5501.7**	**54297.**	**4876.0**	**2028.3**
Stddev	8.0	97.	70.9	3.0
%RSD	.14526	.17881	1.4537	.14593
#1	5492.8	54337.	4954.3	2026.6
#2	5503.7	54186.	4857.7	2026.7
#3	5508.4	54367.	4816.1	2031.7

Zoom In Zoom Out

Sample Name: jd56558-8 Acquired: 12/7/2022 15:56:03 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0139**	**.0025**	**.0126**	**.0013**	**-.0001**	**-.0001**	**3.434**
Stddev	.0004	.0083	.0006	.0011	.0002	.0001	.0008	.069
%RSD	193.9	59.81	23.72	8.501	18.21	166.6	702.1	2.009
#1	.0006	.0235	.0031	.0138	.0012	.0000	.0008	3.391
#2	.0002	.0084	.0019	.0125	.0016	-.0000	-.0004	3.514
#3	-.0002	.0099	.0025	.0116	.0012	-.0002	-.0007	3.397

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0007**	**.0001**	**.0016**	**.0054**	**.2281**	**.0259**	**.0005**
Stddev	.0004	.0007	.0002	.0001	.0005	.0020	.0305	.0016
%RSD	139.3	101.2	176.2	4.987	9.513	.8785	117.9	292.9
#1	-.0001	-.0012	-.0000	.0016	.0048	.2289	.0610	.0023
#2	.0003	.0001	.0003	.0015	.0058	.2295	.0096	-.0003
#3	.0007	-.0009	.0000	.0016	.0056	.2258	.0069	-.0005

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8948**	**.0024**	**.0585**	**.0963**	**.0010**	**1.070**	**.0022**	**4.757**
Stddev	.0579	.0000	.0002	.0047	.0001	.002	.0004	.011
%RSD	6.470	.9208	.3511	4.831	8.304	.2216	16.29	.2396
#1	.8281	.0025	.0584	.0920	.0010	1.068	.0022	4.767
#2	.9324	.0024	.0584	.0958	.0011	1.072	.0026	4.745
#3	.9239	.0025	.0588	.1013	.0010	1.069	.0019	4.758

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**.0050**	**.0224**	**.0209**	**.0018**	**.0007**	F **-.0027**	**.0009**
Stddev	.0008	.0009	.0007	.0003	.0000	.0004	.0004	.0003
%RSD	59.75	17.86	3.243	1.290	2.800	54.73	14.80	28.32
#1	.0018	.0055	.0224	.0212	.0018	.0008	-.0023	.0007
#2	.0004	.0055	.0217	.0208	.0018	.0010	-.0026	.0012
#3	.0018	.0039	.0232	.0206	.0017	.0003	-.0031	.0009

Zoom In Zoom Out

Sample Name: jd56558-8 Acquired: 12/7/2022 15:56:03 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0064**	**1.834**	**.0000**
Stddev	.0005	.006	.0001
%RSD	7.480	.3030	368.8
#1	.0060	1.831	-.0000
#2	.0069	1.832	.0000
#3	.0063	1.841	.0001

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5773.7**	**56015.**	**4878.5**	**2097.8**
Stddev	5.6	192.	68.4	4.0
%RSD	.09758	.34276	1.4019	.19112
#1	5778.2	55795.	4899.0	2094.4
#2	5767.4	56097.	4802.2	2102.2
#3	5775.5	56152.	4934.3	2096.7

Zoom In Zoom Out

Sample Name: jd56558-9 Acquired: 12/7/2022 16:01:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0109**	**.0009**	**.0032**	**.0012**	**-.0001**	**.0001**	**.2894**
Stddev	.0005	.0151	.0007	.0005	.0003	.0001	.0014	.0008
%RSD	94.35	138.7	82.96	14.39	21.52	105.2	1838.	.2729
#1	-.0008	.0231	.0017	.0035	.0011	-.0000	-.0012	.2895
#2	-.0009	.0155	.0004	.0033	.0011	-.0002	-.0003	.2902
#3	.0000	-.0060	.0005	.0027	.0016	-.0000	.0017	.2886

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0019**	**-.0001**	**.0005**	**.0020**	**.5236**	**.0542**	**-.0009**
Stddev	.0000	.0032	.0002	.0000	.0003	.0028	.0112	.0015
%RSD	26.53	169.3	167.8	9.251	12.54	.5316	20.72	157.8
#1	.0001	.0050	.0001	.0005	.0019	.5223	.0542	-.0008
#2	.0001	-.0014	-.0002	.0004	.0023	.5267	.0431	-.0025
#3	.0002	.0021	-.0002	.0005	.0018	.5216	.0655	.0005

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0314**	**.0035**	**.0007**	**.0620**	**.0005**	**.0735**	**.0015**	**.2256**
Stddev	.0101	.0000	.0000	.0087	.0002	.0015	.0006	.0031
%RSD	32.09	.5749	2.703	14.07	31.94	2.062	42.46	1.393
#1	.0212	.0035	.0007	.0635	.0007	.0742	.0021	.2244
#2	.0318	.0035	.0007	.0698	.0006	.0746	.0016	.2292
#3	.0414	.0035	.0007	.0526	.0003	.0718	.0008	.2233

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.0055**	**.0079**	**.0229**	**.0007**	**.0006**	F **-.0033**	**.0002**
Stddev	.0006	.0005	.0010	.0006	.0001	.0002	.0004	.0003
%RSD	34.47	9.644	12.27	2.660	9.575	34.50	12.04	132.5
#1	.0026	.0060	.0089	.0225	.0008	.0003	-.0036	.0002
#2	.0014	.0054	.0080	.0226	.0007	.0006	-.0034	-.0000
#3	.0016	.0049	.0070	.0236	.0007	.0007	-.0028	.0005

Zoom In Zoom Out

Sample Name: jd56558-9 Acquired: 12/7/2022 16:01:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.0006**	**.0694**	**.0001**
Stddev	.0004	.0007	.0002
%RSD	65.30	.9522	286.3
#1	-.0009	.0701	-.0002
#2	-.0002	.0688	.0003
#3	-.0005	.0693	.0001

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5804.8**	**56069.**	**4910.5**	**2084.8**
Stddev	40.9	175.	21.1	17.8
%RSD	.70391	.31131	.43012	.85432
#1	5757.7	55870.	4933.5	2064.2
#2	5830.8	56196.	4906.1	2094.5
#3	5825.8	56142.	4891.9	2095.7

Zoom In Zoom Out

Sample Name: jd56558-10 Acquired: 12/7/2022 16:06:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0267**	**.0024**	**.6613**	**.0009**	**.0001**	**.0072**	**2.078**
Stddev	.0006	.0068	.0001	.0007	.0001	.0001	.0008	.008
%RSD	541.8	25.34	3.567	.1012	16.74	82.26	10.46	.3838
#1	.0004	.0224	.0025	.6620	.0010	.0000	.0066	2.086
#2	-.0006	.0345	.0024	.6606	.0009	.0000	.0081	2.070
#3	.0005	.0232	.0023	.6612	.0007	.0001	.0069	2.078

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0038**	**-.0000**	**.0023**	**.0166**	**.3083**	**1.157**	**-.0004**
Stddev	.0002	.0017	.0002	.0004	.0005	.0007	.034	.0015
%RSD	68.28	43.98	1064.	18.93	2.730	.2430	2.970	359.7
#1	.0001	.0023	.0000	.0021	.0162	.3085	1.164	-.0003
#2	.0003	.0035	-.0002	.0019	.0165	.3075	1.187	.0010
#3	.0004	.0056	.0001	.0028	.0171	.3090	1.119	-.0020

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9718**	**.0105**	**.1877**	**4.928**	**.0017**	**1.075**	**.0068**	**2.763**
Stddev	.0097	.0001	.0003	.021	.0001	.002	.0005	.007
%RSD	1.003	1.091	.1701	.4169	6.566	.2270	7.238	.2386
#1	.9649	.0103	.1878	4.934	.0016	1.078	.0065	2.763
#2	.9674	.0105	.1879	4.945	.0017	1.074	.0066	2.756
#3	.9829	.0106	.1873	4.905	.0018	1.074	.0074	2.770

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0025**	**.0260**	**.0218**	**.0017**	**.0009**	F **-.0026**	**.0018**
Stddev	.0006	.0012	.0007	.0011	.0001	.0001	.0015	.0001
%RSD	71.27	46.58	2.886	4.940	6.706	10.82	57.30	6.114
#1	.0011	.0015	.0254	.0228	.0018	.0011	-.0032	.0017
#2	.0014	.0022	.0257	.0207	.0018	.0009	-.0009	.0019
#3	.0002	.0038	.0268	.0221	.0016	.0009	-.0037	.0018

Zoom In Zoom Out

Sample Name: jd56558-10 Acquired: 12/7/2022 16:06:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0051**	**1.480**	**.0002**
Stddev	.0008	.002	.0001
%RSD	14.87	.1123	22.87
#1	.0058	1.481	.0002
#2	.0043	1.480	.0002
#3	.0054	1.478	.0003

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5649.0**	**55183.**	**4890.7**	**2060.1**
Stddev	1.2	161.	10.8	2.9
%RSD	.02102	.29145	.22076	.14257
#1	5647.7	54997.	4888.4	2058.1
#2	5649.9	55266.	4902.4	2063.5
#3	5649.5	55285.	4881.2	2058.7

Zoom In Zoom Out

Sample Name: jd56558-11 Acquired: 12/7/2022 16:11:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0133**	**.0002**	**.0036**	**.0006**	**-.0001**	**.0007**	**.1747**	**.0002**
Stddev	.0002	.0115	.0005	.0007	.0001	.0001	.0007	.0038	.0001
%RSD	1210.	86.90	266.8	18.84	20.15	119.3	100.2	2.150	57.21
#1	.0000	.0256	-.0002	.0035	.0007	.0000	.0014	.1782	.0001
#2	.0002	.0114	.0007	.0042	.0005	-.0002	-.0000	.1707	.0001
#3	-.0003	.0028	.0000	.0029	.0007	-.0001	.0008	.1751	.0003

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**-.0000**	**.0007**	**.0024**	**2.096**	**.1120**	**-.0009**	**.0199**	**.0143**
Stddev	.0029	.0001	.0003	.0005	.010	.0245	.0013	.0353	.0001
%RSD	77.46	911.4	46.94	21.46	.4624	21.85	150.4	177.4	.4893
#1	.0012	-.0001	.0004	.0019	2.105	.0872	.0003	.0156	.0143
#2	.0031	.0001	.0010	.0029	2.097	.1127	-.0006	.0571	.0142
#3	.0070	-.0000	.0007	.0026	2.086	.1361	-.0023	-.0131	.0143

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0802**	**.0006**	**.0234**	**.0025**	**.0328**	**-.0006**	**.0025**	**.0004**
Stddev	.0003	.0066	.0002	.0004	.0009	.0015	.0020	.0007	.0017
%RSD	79.38	8.178	33.35	1.806	35.82	4.665	311.7	27.70	404.9
#1	.0003	.0740	.0004	.0233	.0030	.0322	.0014	.0030	.0024
#2	.0001	.0796	.0008	.0239	.0015	.0316	-.0007	.0017	-.0006
#3	.0006	.0871	.0005	.0231	.0031	.0345	-.0026	.0027	-.0006

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0217**	**.0008**	**.0003**	**.0013**	**.0007**	**-.0005**	**.0231**	**.0001**
Stddev	.0004	.0002	.0004	.0015	.0005	.0006	.0003	.0001
%RSD	1.927	24.97	157.2	114.4	70.64	123.7	1.140	130.0
#1	.0218	.0006	.0007	.0012	.0010	-.0007	.0231	-.0000
#2	.0221	.0010	-.0000	-.0002	.0001	.0002	.0229	.0001
#3	.0213	.0008	.0001	.0028	.0008	-.0009	.0234	.0002

Zoom In Zoom Out

Sample Name: jd56558-11 Acquired: 12/7/2022 16:11:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5761.4**	**56305.**	**5080.5**	**2080.2**
Stddev	7.5	207.	3.9	1.3
%RSD	.13085	.36811	.07598	.06359
#1	5762.1	56535.	5076.1	2078.8
#2	5753.6	56132.	5081.9	2081.4
#3	5768.6	56249.	5083.5	2080.4

Zoom In Zoom Out

Sample Name: jd56558-12 Acquired: 12/7/2022 16:16:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0222**	**.0030**	**.1115**	**.0012**	**-.0000**	**-.0004**	**4.289**
Stddev	.0004	.0087	.0008	.0006	.0000	.0001	.0013	.012
%RSD	317.1	39.07	25.66	.5209	2.547	279.1	324.2	.2864
#1	.0001	.0160	.0035	.1112	.0013	-.0001	-.0018	4.295
#2	-.0005	.0321	.0034	.1111	.0012	.0000	-.0003	4.274
#3	.0001	.0185	.0021	.1122	.0012	.0000	.0009	4.296

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0022**	**.0006**	**.0019**	**.0024**	**.1547**	**.0636**	**.0014**
Stddev	.0003	.0027	.0002	.0004	.0002	.0031	.0235	.0017
%RSD	83.25	123.6	37.84	18.33	9.555	1.975	36.88	122.3
#1	.0001	.0001	.0003	.0015	.0026	.1552	.0407	.0027
#2	.0007	.0052	.0006	.0020	.0022	.1575	.0626	-.0005
#3	.0003	.0012	.0008	.0022	.0024	.1514	.0875	.0018

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.839**	**.0023**	**.4621**	**.0609**	**.0008**	**2.585**	**.0033**	**6.740**
Stddev	.062	.0001	.0028	.0101	.0002	.016	.0003	.032
%RSD	3.380	2.734	.6088	16.52	29.27	.6181	9.306	.4725
#1	1.895	.0022	.4631	.0515	.0008	2.586	.0033	6.745
#2	1.772	.0023	.4589	.0597	.0005	2.568	.0029	6.706
#3	1.851	.0022	.4642	.0715	.0010	2.600	.0035	6.770

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**.0071**	**.0166**	**.0221**	**.0020**	**.0011**	F **-.0043**	**.0031**
Stddev	.0012	.0003	.0005	.0004	.0001	.0000	.0014	.0003
%RSD	59.56	3.821	3.189	1.887	4.054	3.584	31.65	10.92
#1	.0032	.0068	.0171	.0217	.0021	.0011	-.0055	.0034
#2	.0022	.0070	.0161	.0225	.0021	.0012	-.0047	.0027
#3	.0008	.0074	.0165	.0220	.0019	.0011	-.0028	.0033

Zoom In Zoom Out

Sample Name: jd56558-12 Acquired: 12/7/2022 16:16:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0097**	**3.416**	**.0003**
Stddev	.0010	.014	.0003
%RSD	10.59	.4128	105.2
#1	.0086	3.432	.0004
#2	.0107	3.411	.0004
#3	.0096	3.405	-.0001

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5727.3**	**55434.**	**4923.8**	**2064.5**
Stddev	29.6	829.	8.0	11.7
%RSD	.51768	1.4959	.16313	.56549
#1	5695.5	55794.	4916.3	2052.3
#2	5732.1	54485.	4932.2	2065.6
#3	5754.2	56022.	4922.9	2075.6

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 16:21:40 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2471**	**39.18**	**1.926**	**1.955**	**1.933**	**1.982**	**1.956**	**39.09**	**1.931**
Stddev	.0007	.07	.004	.003	.002	.002	.000	.04	.000
%RSD	.2927	.1823	.1975	.1257	.1041	.0926	.0123	.1024	.0178
#1	.2467	39.18	1.925	1.952	1.933	1.980	1.957	39.06	1.931
#2	.2467	39.11	1.922	1.956	1.931	1.982	1.956	39.08	1.931
#3	.2479	39.25	1.930	1.957	1.935	1.984	1.957	39.14	1.931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.927**	**1.934**	**1.926**	**1.918**	**40.31**	**38.90**	**1.929**	**39.10**	**1.942**
Stddev	.005	.003	.001	.004	.09	.03	.004	.11	.003
%RSD	.2698	.1569	.0655	.2060	.2327	.0804	.1938	.2796	.1409
#1	1.921	1.932	1.926	1.923	40.25	38.86	1.927	39.07	1.942
#2	1.931	1.933	1.924	1.917	40.26	38.92	1.926	39.02	1.944
#3	1.928	1.938	1.927	1.915	40.41	38.90	1.933	39.23	1.939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.946**	**39.96**	**1.908**	**1.805**	**1.947**	**1.883**	**1.951**	**1.915**	**4.731**
Stddev	.002	.03	.003	.003	.002	.007	.001	.002	.006
%RSD	.0977	.0645	.1326	.1609	.0891	.3850	.0716	.0958	.1364
#1	1.944	39.94	1.909	1.806	1.948	1.891	1.950	1.914	4.725
#2	1.946	39.98	1.905	1.806	1.948	1.881	1.952	1.918	4.730
#3	1.948	39.98	1.910	1.801	1.945	1.878	1.950	1.915	4.737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 16:21:40 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.961**	**1.934**	**1.890**	**2.035**	**1.902**	**1.914**	**1.928**	**1.909**
Stddev	.004	.003	.004	.017	.001	.005	.002	.002
%RSD	.1767	.1369	.2184	.8518	.0671	.2864	.0835	.1113
#1	1.959	1.934	1.893	2.054	1.901	1.912	1.926	1.911
#2	1.965	1.931	1.892	2.023	1.902	1.910	1.929	1.910
#3	1.958	1.937	1.885	2.027	1.904	1.920	1.928	1.907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5166.5**	**54554.**	**5049.5**	**2035.5**
Stddev	6.9	168.	16.6	4.5
%RSD	.13296	.30773	.32840	.22342
#1	5172.3	54432.	5067.8	2040.7
#2	5168.4	54486.	5035.6	2032.5
#3	5158.9	54746.	5045.0	2033.2

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 16:26:28 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0123**	**.0018**	**.0028**	**.0000**	**.0001**	**.0006**	**-.0060**	**.0002**
Stddev	.0002	.0116	.0004	.0007	.0002	.0001	.0002	.0043	.0001
%RSD	833.9	93.95	19.83	25.61	1423.	78.94	29.66	72.81	35.60
#1	-.0001	-.0009	.0015	.0025	-.0002	.0001	.0007	-.0109	.0003
#2	-.0002	.0205	.0016	.0023	.0002	.0000	.0007	-.0044	.0002
#3	.0003	.0174	.0022	.0036	.0001	.0001	.0004	-.0026	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**.0001**	**.0003**	**-.0004**	**.0040**	**.0046**	**.0005**	**-.0085**	**.0001**
Stddev	.0012	.0001	.0004	.0001	.0020	.0246	.0004	.0393	.0001
%RSD	59.37	93.15	121.2	19.16	49.64	539.5	80.24	460.2	74.68
#1	.0028	.0000	-.0001	-.0005	.0059	-.0231	.0009	-.0292	.0001
#2	.0027	.0000	.0004	-.0004	.0020	.0241	.0005	.0368	.0000
#3	.0007	.0002	.0007	-.0003	.0040	.0128	.0001	-.0333	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0041**	**.0000**	**.0001**	**.0017**	**-.0021**	**.0001**	**.0034**	**-.0062**
Stddev	.0001	.0179	.0004	.0006	.0006	.0061	.0017	.0007	.0013
%RSD	31.50	434.5	2746.	489.2	34.52	286.8	1461.	20.17	21.37
#1	.0003	-.0025	.0004	.0007	.0022	.0029	.0004	.0037	-.0075
#2	.0004	-.0228	-.0003	-.0005	.0011	-.0004	.0016	.0038	-.0062
#3	.0005	.0130	-.0001	.0002	.0018	-.0089	-.0017	.0026	-.0049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 16:26:28 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0001**	**.0004**	**-.0002**	**.0003**	**-.0001**	**.0004**	**.0003**
Stddev	.0006	.0001	.0001	.0008	.0000	.0002	.0001	.0001
%RSD	92.79	109.6	26.35	327.9	11.71	341.5	26.26	43.57
#1	.0000	-.0000	.0003	.0005	.0003	-.0002	.0004	.0003
#2	.0012	.0001	.0006	-.0011	.0004	.0001	.0005	.0001
#3	.0007	.0002	.0004	-.0001	.0003	.0000	.0003	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5783.8**	**56364.**	**5123.4**	**2092.9**
Stddev	13.8	246.	23.2	2.5
%RSD	.23941	.43565	.45202	.12120
#1	5768.6	56346.	5141.5	2090.5
#2	5786.8	56618.	5097.3	2092.5
#3	5795.8	56128.	5131.4	2095.6

Zoom In Zoom Out

Sample Name: mp36771-mb1 Acquired: 12/7/2022 16:31:41 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0096**	**.0008**	**.0037**	**.0003**	**-.0001**	**-.0000**	**.0908**	**.0002**
Stddev	.0005	.0165	.0011	.0001	.0001	.0000	.0011	.0035	.0002
%RSD	1297.	172.5	143.0	2.748	28.88	35.75	2309.	3.811	79.89
#1	.0001	-.0076	.0020	.0037	.0002	-.0001	.0008	.0868	.0000
#2	.0003	.0254	.0003	.0039	.0003	-.0001	.0003	.0930	.0004
#3	-.0005	.0109	-.0000	.0037	.0003	-.0001	-.0013	.0926	.0003

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**-.0000**	**.0007**	**.0022**	**.0413**	**.0203**	**-.0010**	**-.0085**	**.0010**
Stddev	.0018	.0002	.0002	.0002	.0016	.0187	.0019	.0550	.0000
%RSD	210.2	1900.	31.52	8.703	3.794	92.03	184.1	650.5	5.063
#1	-.0009	.0003	.0009	.0022	.0420	.0024	-.0023	.0517	.0009
#2	-.0027	-.0001	.0005	.0024	.0423	.0397	.0011	-.0207	.0010
#3	.0010	-.0002	.0005	.0020	.0395	.0189	-.0019	-.0563	.0010

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0680**	**.0005**	**.0200**	**.0010**	**.0046**	**.0005**	**.0018**	**.0006**
Stddev	.0002	.0082	.0005	.0011	.0004	.0029	.0008	.0026	.0016
%RSD	46.35	12.06	106.0	5.590	38.63	62.41	172.1	144.6	252.3
#1	.0002	.0626	.0006	.0203	.0009	.0013	.0013	.0029	-.0005
#2	.0006	.0639	.0010	.0188	.0007	.0062	.0004	-.0012	.0024
#3	.0005	.0774	-.0001	.0210	.0015	.0063	-.0003	.0036	-.0000

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0218**	**.0005**	**.0004**	**-.0009**	**.0003**	**.0006**	**.0061**	**.0002**
Stddev	.0004	.0001	.0001	.0011	.0006	.0009	.0001	.0001
%RSD	1.956	12.18	22.49	119.0	207.6	163.1	1.327	52.92
#1	.0217	.0006	.0003	-.0021	-.0004	.0003	.0062	.0003
#2	.0223	.0005	.0004	.0000	.0004	-.0002	.0062	.0001
#3	.0215	.0006	.0004	-.0006	.0008	.0016	.0060	.0002

Zoom In Zoom Out

Sample Name: mp36771-mb1 Acquired: 12/7/2022 16:31:41 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5733.2	56392.	5070.1	2072.3
Stddev	64.0	145.	15.1	24.6
%RSD	1.1155	.25768	.29785	1.1859
#1	5768.7	56232.	5084.4	2086.9
#2	5771.6	56428.	5054.3	2086.1
#3	5659.4	56516.	5071.5	2044.0

Zoom In Zoom Out

Sample Name: mp36771-b1 Acquired: 12/7/2022 16:36:54 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2314**	**24.21**	**1.786**	**1.826**	**1.898**	**1.948**	F **-.0279**	**24.25**
Stddev	.0005	.07	.004	.002	.003	.001	.0002	.00
%RSD	.2173	.2906	.2048	.1307	.1637	.0244	.7649	.0177
#1	.2308	24.15	1.790	1.828	1.897	1.948	-.0276	24.25
#2	.2318	24.19	1.783	1.825	1.901	1.948	-.0280	24.25
#3	.2316	24.29	1.786	1.824	1.895	1.949	-.0280	24.24

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.863**	**.1833**	**1.868**	**1.892**	**1.855**	**25.11**	**23.99**	**-.0011**
Stddev	.002	.0035	.000	.009	.003	.03	.03	.0005
%RSD	.1060	1.923	.0122	.4595	.1644	.1209	.1315	45.44
#1	1.865	.1850	1.869	1.895	1.853	25.13	23.96	-.0005
#2	1.863	.1857	1.868	1.900	1.859	25.07	24.01	-.0013
#3	1.861	.1793	1.868	1.883	1.854	25.12	24.01	-.0015

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.17**	**1.919**	**1.819**	**24.39**	**1.854**	**1.758**	**1.882**	W **-.0232**
Stddev	.03	.006	.005	.05	.001	.003	.006	.0033
%RSD	.1417	.3107	.2517	.2237	.0570	.1773	.2958	14.01
#1	24.20	1.924	1.824	24.37	1.856	1.756	1.880	-.0261
#2	24.18	1.921	1.815	24.35	1.854	1.762	1.888	-.0240
#3	24.13	1.913	1.818	24.45	1.854	1.756	1.877	-.0197

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.799**	**1.788**	**.1462**	**1.861**	**1.897**	**1.806**	**1.847**	**1.861**
Stddev	.004	.008	.0004	.006	.003	.005	.035	.005
%RSD	.2205	.4403	.3001	.3323	.1294	.2716	1.920	.2718
#1	1.803	1.797	.1457	1.867	1.898	1.810	1.887	1.864
#2	1.799	1.785	.1464	1.861	1.900	1.806	1.819	1.863
#3	1.795	1.782	.1464	1.855	1.895	1.801	1.835	1.855

Zoom In Zoom Out

Sample Name: mp36771-b1 Acquired: 12/7/2022 16:36:54 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.423**	**1.908**	**1.813**
Stddev	.002	.005	.004
%RSD	.1220	.2566	.2093
#1	1.425	1.913	1.816
#2	1.422	1.903	1.814
#3	1.423	1.909	1.809

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5311.4**	**54695.**	**5024.8**	**2054.4**
Stddev	5.5	133.	34.8	2.7
%RSD	.10355	.24304	.69315	.13269
#1	5307.6	54542.	5065.0	2051.5
#2	5317.7	54764.	5005.2	2057.0
#3	5308.8	54779.	5004.2	2054.6

Zoom In Zoom Out

Sample Name: mp36771-s1 Acquired: 12/7/2022 16:41:41 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2323**	**270.5**	**1.683**	**1.635**	**3.328**	**1.811**	**.0011**	**94.94**	**1.746**
Stddev	.0013	.2	.005	.008	.006	.002	.0002	.10	.005
%RSD	.5792	.0859	.3206	.4833	.1880	.1003	20.44	.1031	.2951
#1	.2320	270.4	1.678	1.627	3.321	1.810	.0010	95.02	1.740
#2	.2311	270.8	1.681	1.637	3.333	1.813	.0013	94.97	1.748
#3	.2338	270.4	1.689	1.642	3.331	1.810	.0009	94.83	1.750

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9794**	**1.939**	**2.175**	**3.303**	F **269.3**	**70.51**	**.1521**	**94.97**	**5.292**
Stddev	.0065	.004	.003	.007	.2	.17	.0018	.05	.022
%RSD	.6656	.1966	.1270	.2154	.0800	.2468	1.160	.0563	.4249
#1	.9822	1.935	2.172	3.297	269.1	70.32	.1501	95.00	5.310
#2	.9719	1.938	2.176	3.302	269.6	70.66	.1526	95.01	5.267
#3	.9840	1.943	2.177	3.311	269.3	70.56	.1535	94.91	5.298

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.603**	**25.44**	**2.121**	**4.531**	**5.843**	**1.983**	**.6658**	**1.646**	**3.223**
Stddev	.005	.02	.006	.008	.014	.013	.0028	.011	.002
%RSD	.3182	.0833	.2942	.1862	.2431	.6443	.4253	.6614	.0681
#1	1.598	25.45	2.116	4.525	5.839	1.977	.6636	1.637	3.221
#2	1.604	25.46	2.118	4.527	5.831	1.974	.6690	1.643	3.224
#3	1.608	25.42	2.128	4.540	5.859	1.997	.6650	1.658	3.225

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.595**	**2.119**	F **10.89**	**1.722**	**2.097**	**1.031**	**3.302**	**1.675**
Stddev	.009	.002	.02	.006	.004	.005	.009	.002
%RSD	.5815	.1090	.2107	.3239	.1803	.5343	.2704	.1222
#1	1.590	2.117	10.87	1.715	2.092	1.026	3.297	1.674
#2	1.589	2.118	10.89	1.725	2.099	1.030	3.297	1.673
#3	1.605	2.121	10.92	1.725	2.099	1.037	3.313	1.677

Zoom In Zoom Out

Sample Name: mp36771-s1 Acquired: 12/7/2022 16:41:41 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4981.6**	**56877.**	**5377.1**	**2137.1**
Stddev	9.1	122.	22.7	4.3
%RSD	.18243	.21407	.42172	.20333
#1	4981.5	57012.	5391.8	2140.1
#2	4990.7	56776.	5351.0	2139.1
#3	4972.5	56845.	5388.5	2132.1

Zoom In Zoom Out

Sample Name: mp36771-s2 Acquired: 12/7/2022 16:46:36 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2365**	**279.4**	**1.676**	**1.637**	**3.115**	**1.814**	**-.0011**	**72.23**	**1.752**
Stddev	.0004	1.2	.006	.004	.020	.008	.0005	.33	.001
%RSD	.1901	.4356	.3729	.2333	.6371	.4473	50.04	.4514	.0572
#1	.2369	280.8	1.682	1.641	3.136	1.823	-.0017	72.59	1.752
#2	.2360	278.5	1.676	1.634	3.097	1.807	-.0006	72.15	1.753
#3	.2365	278.8	1.669	1.635	3.112	1.811	-.0009	71.95	1.751

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9346**	**1.915**	**2.142**	**3.579**	F **239.1**	**63.80**	**.1387**	**83.19**	**4.871**
Stddev	.0015	.003	.007	.004	1.4	.38	.0007	.12	.017
%RSD	.1601	.1654	.3502	.1201	.5805	.6021	.4752	.1470	.3420
#1	.9362	1.919	2.146	3.583	240.7	64.22	.1394	83.31	4.870
#2	.9345	1.913	2.147	3.580	238.0	63.47	.1382	83.19	4.888
#3	.9332	1.914	2.133	3.574	238.5	63.70	.1383	83.07	4.855

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.601**	**25.39**	**2.092**	**3.883**	**3.323**	**1.856**	**.6495**	**1.659**	**3.261**
Stddev	.005	.08	.003	.003	.009	.012	.0021	.006	.010
%RSD	.3270	.3089	.1615	.0673	.2698	.6346	.3303	.3794	.3036
#1	1.607	25.48	2.094	3.886	3.330	1.870	.6519	1.666	3.267
#2	1.599	25.33	2.093	3.882	3.326	1.852	.6488	1.656	3.267
#3	1.597	25.37	2.088	3.881	3.313	1.847	.6478	1.654	3.250

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.851**	**1.990**	F **10.09**	**1.679**	**2.080**	**1.001**	**3.379**	**1.700**
Stddev	.005	.011	.04	.034	.005	.004	.012	.003
%RSD	.2718	.5522	.4384	2.037	.2462	.3723	.3651	.1654
#1	1.856	2.002	10.12	1.711	2.082	.9986	3.393	1.702
#2	1.850	1.981	10.12	1.681	2.084	1.006	3.374	1.701
#3	1.846	1.986	10.04	1.643	2.075	1.000	3.370	1.696

Zoom In Zoom Out

Sample Name: mp36771-s2 Acquired: 12/7/2022 16:46:36 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5029.5**	**56691.**	**5447.8**	**2138.6**
Stddev	9.3	112.	54.6	4.7
%RSD	.18502	.19672	1.0014	.22001
#1	5020.0	56581.	5387.7	2133.2
#2	5030.0	56689.	5494.2	2142.0
#3	5038.6	56804.	5461.5	2140.5

Zoom In Zoom Out

Sample Name: jd56522-1 Acquired: 12/7/2022 16:51:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088**	**207.7**	**.0406**	**.0323**	**1.409**	**.0141**	**.0152**	**55.84**	**.0080**
Stddev	.0002	1.2	.0007	.0005	.006	.0002	.0010	.26	.0001
%RSD	2.312	.5704	1.712	1.510	.4464	1.148	6.414	.4602	.6385
#1	.0090	208.3	.0398	.0323	1.409	.0142	.0141	55.96	.0081
#2	.0086	208.5	.0408	.0328	1.415	.0143	.0154	56.00	.0080
#3	.0087	206.4	.0411	.0318	1.403	.0139	.0160	55.54	.0081

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8136**	**.1243**	**.3833**	**1.399**	F **267.5**	**43.98**	**.1388**	**72.54**	**3.689**
Stddev	.0047	.0007	.0032	.002	1.1	.22	.0012	.46	.010
%RSD	.5784	.5593	.8243	.1602	.4209	.5049	.8775	.6322	.2614
#1	.8082	.1250	.3800	1.397	268.5	44.03	.1378	72.82	3.679
#2	.8160	.1236	.3863	1.398	267.7	44.17	.1401	72.80	3.697
#3	.8167	.1244	.3836	1.402	266.3	43.74	.1383	72.01	3.693

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0094**	**2.037**	**.3148**	**2.698**	**1.849**	**1.864**	**.0290**	**.0132**	**1.954**
Stddev	.0002	.015	.0018	.005	.000	.011	.0021	.0046	.006
%RSD	2.449	.7371	.5712	.1883	.0062	.5784	7.297	34.73	.3331
#1	.0096	2.047	.3159	2.695	1.849	1.876	.0291	.0180	1.960
#2	.0092	2.044	.3128	2.704	1.849	1.857	.0269	.0126	1.956
#3	.0093	2.020	.3158	2.695	1.849	1.859	.0311	.0089	1.947

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1793**	**.1969**	F **9.124**	**.0135**	**.3972**	**.0201**	**1.821**	**.0385**
Stddev	.0014	.0009	.030	.0047	.0008	.0011	.004	.0002
%RSD	.7840	.4592	.3277	34.54	.2093	5.278	.2193	.6362
#1	.1787	.1969	9.089	.0188	.3972	.0210	1.824	.0386
#2	.1783	.1979	9.142	.0102	.3964	.0189	1.816	.0387
#3	.1809	.1961	9.140	.0114	.3981	.0204	1.822	.0382

Zoom In Zoom Out

Sample Name: jd56522-1 Acquired: 12/7/2022 16:51:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5079.0**	**56175.**	**5282.5**	**2125.5**
Stddev	10.5	77.	30.9	1.9
%RSD	.20742	.13749	.58436	.08904
#1	5085.7	56161.	5247.0	2125.1
#2	5084.4	56105.	5303.0	2123.9
#3	5066.9	56258.	5297.5	2127.6

Zoom In Zoom Out

Sample Name: mp36771-sd1 Acquired: 12/7/2022 16:56:29 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0144**	**218.7**	**.0476**	**.0500**	**1.530**	**.0154**	**.0183**	**60.33**	**.0104**
Stddev	.0046	4.6	.0039	.0003	.032	.0008	.0048	1.26	.0014
%RSD	32.14	2.119	8.173	.5007	2.074	5.453	26.01	2.087	13.05
#1	.0192	224.0	.0521	.0498	1.566	.0163	.0178	61.70	.0099
#2	.0099	216.9	.0457	.0500	1.519	.0153	.0138	60.04	.0120
#3	.0141	215.2	.0451	.0503	1.505	.0146	.0232	59.23	.0094

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8816**	**.1297**	**.4208**	**1.428**	**301.9**	**46.98**	**.1467**	**78.66**	**4.093**
Stddev	.0076	.0013	.0038	.014	6.5	1.06	.0085	1.71	.007
%RSD	.8647	1.027	.8963	.9606	2.152	2.248	5.814	2.171	.1794
#1	.8770	.1310	.4185	1.433	309.2	48.16	.1540	80.52	4.098
#2	.8904	.1295	.4187	1.413	299.8	46.66	.1373	78.29	4.084
#3	.8774	.1284	.4252	1.439	296.7	46.12	.1489	77.16	4.097

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0109**	**2.100**	**.3302**	**2.903**	**1.957**	**1.998**	**.0313**	**.0154**	**2.060**
Stddev	.0004	.077	.0015	.012	.014	.019	.0022	.0095	.037
%RSD	3.309	3.687	.4671	.4202	.7157	.9308	7.187	61.94	1.821
#1	.0106	2.176	.3317	2.908	1.969	1.983	.0311	.0262	2.101
#2	.0109	2.103	.3303	2.913	1.960	2.019	.0291	.0116	2.051
#3	.0113	2.021	.3286	2.890	1.942	1.992	.0336	.0083	2.028

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2045**	**.2146**	**9.857**	**.0119**	**.4512**	**.0263**	**2.056**	**.0407**
Stddev	.0041	.0049	.044	.0075	.0028	.0077	.014	.0021
%RSD	1.997	2.305	.4447	63.07	.6159	29.47	.6893	5.141
#1	.2031	.2200	9.892	.0173	.4536	.0328	2.070	.0417
#2	.2091	.2132	9.808	.0152	.4482	.0177	2.056	.0383
#3	.2013	.2104	9.871	.0033	.4519	.0283	2.042	.0421

Zoom In Zoom Out

Sample Name: mp36771-sd1 Acquired: 12/7/2022 16:56:29 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5466.7**	**55696.**	**4978.4**	**2114.7**
Stddev	23.0	89.	87.1	8.5
%RSD	.42155	.15965	1.7491	.40405
#1	5443.2	55798.	4879.7	2106.1
#2	5467.8	55657.	5010.7	2114.7
#3	5489.2	55633.	5044.6	2123.2

Zoom In Zoom Out

Sample Name: mp36771-s1 Acquired: 12/7/2022 17:01:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2418**	**284.6**	**1.773**	**1.753**	**3.542**	**1.933**	**-.0007**	**100.7**	**1.846**
Stddev	.0007	1.9	.004	.005	.019	.014	.0020	1.1	.001
%RSD	.2956	.6671	.2371	.2935	.5398	.7031	309.2	1.065	.0453
#1	.2414	286.7	1.768	1.752	3.564	1.949	-.0029	101.9	1.846
#2	.2413	283.2	1.774	1.748	3.530	1.926	-.0002	100.2	1.847
#3	.2426	283.7	1.776	1.758	3.532	1.924	.0011	99.95	1.846

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.044**	**2.010**	**2.277**	**3.362**	**296.1**	**73.91**	**.1598**	**100.7**	**5.780**
Stddev	.009	.002	.003	.004	2.3	.41	.0019	.8	.002
%RSD	.8471	.0833	.1212	.1082	.7927	.5546	1.211	.7836	.0369
#1	1.054	2.008	2.276	3.363	298.8	74.38	.1617	101.6	5.779
#2	1.042	2.011	2.275	3.358	294.6	73.61	.1597	100.1	5.778
#3	1.036	2.010	2.280	3.364	295.0	73.75	.1579	100.5	5.782

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.720**	**26.53**	**2.203**	**4.689**	**6.145**	**2.081**	**.7006**	**1.757**	**3.410**
Stddev	.005	.15	.003	.005	.011	.011	.0065	.006	.007
%RSD	.2728	.5778	.1169	.1053	.1785	.5122	.9284	.3597	.2036
#1	1.715	26.70	2.201	4.684	6.138	2.089	.6935	1.757	3.402
#2	1.721	26.45	2.206	4.693	6.158	2.086	.7062	1.750	3.415
#3	1.725	26.42	2.202	4.691	6.139	2.069	.7020	1.763	3.412

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.744**	**2.245**	**11.51**	**1.968**	**2.227**	**1.101**	**3.596**	**1.736**
Stddev	.008	.012	.01	.033	.002	.003	.011	.001
%RSD	.4495	.5162	.0988	1.662	.0950	.3087	.2950	.0776
#1	1.738	2.259	11.50	1.931	2.226	1.099	3.584	1.737
#2	1.753	2.238	11.51	1.981	2.225	1.098	3.601	1.735
#3	1.741	2.239	11.52	1.992	2.229	1.105	3.604	1.737

Zoom In Zoom Out

Sample Name: mp36771-s1 Acquired: 12/7/2022 17:01:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5154.1**	**56060.**	**5204.8**	**2119.7**
Stddev	3.4	94.	50.3	1.1
%RSD	.06625	.16837	.96585	.05371
#1	5150.8	56079.	5151.5	2119.2
#2	5154.1	55957.	5251.4	2118.8
#3	5157.6	56143.	5211.5	2121.0

Zoom In Zoom Out

Sample Name: mp36771-s2 Acquired: 12/7/2022 17:06:16 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2440**	**290.3**	**1.788**	**1.765**	**3.247**	**1.917**	**-.0031**	**75.63**	**1.847**
Stddev	.0002	.8	.010	.008	.015	.004	.0024	.12	.003
%RSD	.0723	.2625	.5655	.4345	.4751	.2162	75.62	.1619	.1606
#1	.2439	290.7	1.796	1.770	3.256	1.920	-.0043	75.58	1.847
#2	.2442	290.7	1.793	1.769	3.255	1.918	-.0004	75.76	1.850
#3	.2439	289.4	1.777	1.756	3.229	1.912	-.0047	75.53	1.844

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9930**	**2.001**	**2.234**	**3.627**	**259.6**	**65.96**	**.1471**	**87.65**	**5.290**
Stddev	.0026	.004	.007	.011	.5	.28	.0023	.13	.007
%RSD	.2658	.2075	.3066	.3010	.1762	.4226	1.592	.1427	.1347
#1	.9960	2.004	2.242	3.635	259.8	66.18	.1473	87.68	5.298
#2	.9919	2.003	2.232	3.631	259.9	66.05	.1493	87.75	5.284
#3	.9911	1.996	2.229	3.615	259.1	65.64	.1446	87.51	5.289

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.731**	**26.10**	**2.177**	**4.060**	**3.531**	**1.966**	**.6851**	**1.761**	**3.490**
Stddev	.007	.05	.004	.008	.005	.010	.0006	.003	.019
%RSD	.4028	.2031	.1932	.1982	.1487	.4863	.0869	.1860	.5378
#1	1.736	26.16	2.178	4.063	3.531	1.965	.6852	1.758	3.496
#2	1.734	26.07	2.180	4.066	3.536	1.976	.6844	1.765	3.504
#3	1.723	26.06	2.172	4.051	3.526	1.957	.6856	1.761	3.468

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.034**	**2.065**	**10.58**	**1.965**	**2.186**	**1.073**	**3.684**	**1.751**
Stddev	.007	.009	.02	.009	.004	.003	.014	.001
%RSD	.3568	.4536	.1644	.4458	.1912	.2704	.3903	.0282
#1	2.037	2.072	10.59	1.958	2.191	1.076	3.684	1.752
#2	2.040	2.070	10.56	1.963	2.186	1.071	3.698	1.751
#3	2.026	2.054	10.58	1.975	2.182	1.072	3.669	1.751

Zoom In Zoom Out

Sample Name: mp36771-s2 Acquired: 12/7/2022 17:06:16 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5166.9**	**55852.**	**5184.3**	**2115.8**
Stddev	23.1	151.	13.0	10.3
%RSD	.44802	.27031	.25048	.48487
#1	5145.0	55897.	5184.0	2107.4
#2	5164.5	55975.	5171.5	2112.7
#3	5191.1	55684.	5197.4	2127.3

Zoom In Zoom Out

Sample Name: jd56522-1 Acquired: 12/7/2022 17:11:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0111**	**213.1**	**.0446**	**.0380**	**1.452**	**.0146**	**.0156**	**57.63**	**.0081**
Stddev	.0026	.5	.0026	.0016	.006	.0002	.0039	.30	.0010
%RSD	23.23	.2136	5.832	4.242	.3824	1.645	24.84	.5283	12.35
#1	.0138	213.6	.0476	.0397	1.447	.0148	.0112	57.92	.0092
#2	.0087	213.1	.0427	.0366	1.458	.0144	.0173	57.31	.0076
#3	.0107	212.7	.0436	.0376	1.452	.0145	.0184	57.65	.0074

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8403**	**.1292**	**.4017**	**1.390**	**285.9**	**44.76**	**.1436**	**75.19**	**3.859**
Stddev	.0177	.0033	.0098	.028	.7	.13	.0016	.32	.067
%RSD	2.104	2.557	2.430	2.042	.2612	.3012	1.098	.4202	1.746
#1	.8200	.1274	.3910	1.357	286.7	44.61	.1435	75.55	3.783
#2	.8517	.1273	.4101	1.408	285.3	44.79	.1452	75.05	3.911
#3	.8493	.1330	.4040	1.404	285.6	44.88	.1421	74.96	3.883

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093**	**2.105**	**.3236**	**2.760**	**1.924**	**1.961**	**.0265**	**.0106**	**2.089**
Stddev	.0005	.017	.0074	.066	.048	.037	.0011	.0038	.039
%RSD	5.618	.8208	2.295	2.383	2.467	1.889	4.251	35.67	1.883
#1	.0092	2.124	.3201	2.718	1.910	1.938	.0272	.0123	2.084
#2	.0088	2.090	.3186	2.725	1.886	1.942	.0252	.0132	2.052
#3	.0098	2.101	.3321	2.835	1.977	2.004	.0270	.0063	2.130

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1913**	**.2047**	**9.314**	**.0022**	**.4293**	**.0186**	**1.969**	**.0402**
Stddev	.0006	.0008	.158	.0073	.0077	.0040	.043	.0006
%RSD	.2988	.3754	1.699	331.4	1.792	21.39	2.209	1.533
#1	.1918	.2038	9.138	.0058	.4207	.0200	1.950	.0399
#2	.1906	.2049	9.443	.0070	.4356	.0141	1.938	.0409
#3	.1914	.2053	9.362	-.0062	.4314	.0216	2.019	.0398

Zoom In Zoom Out

Sample Name: jd56522-1 Acquired: 12/7/2022 17:11:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5261.4**	**57242.**	**5147.8**	**2114.4**
Stddev	97.0	710.	9.6	41.4
%RSD	1.8427	1.2409	.18614	1.9574
#1	5308.3	58051.	5136.8	2135.8
#2	5326.0	56720.	5152.4	2140.8
#3	5150.0	56955.	5154.2	2066.7

Zoom In Zoom Out

Sample Name: mp36771-sd1 Acquired: 12/7/2022 17:16:01 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068**	**213.2**	**.0544**	**.0621**	**1.500**	**.0144**	**.0205**	**59.25**	**.0081**
Stddev	.0025	.5	.0072	.0035	.009	.0008	.0154	.06	.0032
%RSD	36.73	.2471	13.29	5.646	.6045	5.790	75.36	.0997	39.37
#1	.0059	213.2	.0463	.0595	1.490	.0135	.0188	59.20	.0118
#2	.0048	212.7	.0600	.0661	1.503	.0147	.0367	59.25	.0061
#3	.0096	213.7	.0571	.0607	1.508	.0150	.0059	59.31	.0064

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8836**	**.1264**	**.4170**	**1.414**	**297.5**	**45.68**	**.1621**	**77.24**	**4.058**
Stddev	.0240	.0012	.0029	.006	.5	.14	.0101	.49	.011
%RSD	2.717	.9826	.7019	.3986	.1539	.3105	6.203	.6354	.2728
#1	.8747	.1273	.4170	1.414	297.0	45.84	.1657	76.68	4.050
#2	.8653	.1268	.4142	1.419	297.5	45.57	.1507	77.44	4.052
#3	.9108	.1249	.4200	1.408	297.9	45.63	.1698	77.60	4.070

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084**	**2.108**	**.3194**	**2.815**	**1.928**	**2.013**	**.0241**	**.0051**	**2.040**
Stddev	.0019	.108	.0033	.040	.010	.055	.0077	.0114	.018
%RSD	22.22	5.114	1.038	1.413	.4974	2.708	31.78	223.0	.8643
#1	.0065	1.995	.3190	2.773	1.917	2.002	.0177	.0088	2.054
#2	.0102	2.210	.3228	2.821	1.932	1.964	.0221	.0143	2.047
#3	.0086	2.119	.3162	2.852	1.935	2.072	.0326	-.0077	2.020

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2015**	**.2092**	**9.669**	**.0080**	**.4485**	**.0156**	**2.056**	**.0405**
Stddev	.0099	.0006	.034	.0134	.0035	.0112	.021	.0015
%RSD	4.923	.2657	.3464	167.4	.7756	72.10	1.043	3.680
#1	.1950	.2086	9.644	.0105	.4505	.0240	2.031	.0417
#2	.1966	.2097	9.657	-.0065	.4444	.0199	2.067	.0410
#3	.2129	.2091	9.707	.0200	.4504	.0028	2.070	.0388

Zoom In Zoom Out

Sample Name: mp36771-sd1 Acquired: 12/7/2022 17:16:01 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5620.3**	**55823.**	**4969.7**	**2141.6**
Stddev	35.3	256.	20.7	14.0
%RSD	.62803	.45861	.41675	.65265
#1	5660.5	55987.	4988.2	2157.7
#2	5606.0	55954.	4973.6	2135.0
#3	5594.3	55528.	4947.3	2132.2

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 17:21:07 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2458**	**39.03**	**1.932**	**1.952**	**1.917**	**1.975**	**1.954**	**38.93**	**1.929**
Stddev	.0050	.08	.005	.005	.004	.001	.004	.14	.005
%RSD	2.026	.2091	.2607	.2557	.2344	.0270	.2326	.3647	.2860
#1	.2511	39.07	1.928	1.949	1.914	1.974	1.952	38.93	1.926
#2	.2412	38.94	1.930	1.951	1.923	1.975	1.952	38.79	1.926
#3	.2451	39.09	1.937	1.958	1.916	1.975	1.960	39.07	1.935
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.938**	**1.960**	**1.962**	**1.912**	**40.30**	**38.49**	**1.908**	**38.92**	**1.974**
Stddev	.053	.004	.048	.047	.07	.10	.005	.10	.046
%RSD	2.744	.1988	2.452	2.441	.1631	.2582	.2457	.2585	2.331
#1	1.997	1.957	2.013	1.964	40.37	38.38	1.914	38.88	2.024
#2	1.895	1.958	1.918	1.873	40.24	38.54	1.905	38.85	1.933
#3	1.920	1.964	1.955	1.901	40.29	38.55	1.907	39.04	1.966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.949**	**39.77**	**1.931**	**1.823**	**1.968**	**1.864**	**1.944**	**1.907**	**4.726**
Stddev	.003	.04	.002	.006	.001	.012	.005	.007	.012
%RSD	.1371	.1086	.0850	.3156	.0315	.6511	.2644	.3539	.2458
#1	1.949	39.81	1.931	1.818	1.967	1.850	1.938	1.900	4.720
#2	1.946	39.72	1.929	1.821	1.968	1.866	1.947	1.913	4.719
#3	1.952	39.77	1.933	1.829	1.968	1.874	1.947	1.909	4.739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 17:21:07 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.969**	**1.917**	**1.903**	**1.933**	**1.928**	**1.918**	**1.956**	**1.932**
Stddev	.002	.004	.043	.031	.047	.005	.003	.049
%RSD	.1186	.1844	2.277	1.586	2.416	.2734	.1297	2.553
#1	1.966	1.913	1.951	1.925	1.979	1.916	1.953	1.986
#2	1.970	1.919	1.866	1.967	1.888	1.914	1.957	1.889
#3	1.971	1.919	1.893	1.907	1.917	1.924	1.958	1.921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5118.9**	**53827.**	**4983.1**	**2025.0**
Stddev	4.0	1074.	22.0	3.4
%RSD	.07866	1.9953	.44079	.16878
#1	5123.5	52699.	4960.9	2027.0
#2	5116.1	54837.	4983.6	2026.9
#3	5117.1	53945.	5004.8	2021.0

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 17:25:54 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	F **.0564**	**.0028**	**.0054**	**.0025**	F **.0025**	**.0020**	**.0500**	F **.0014**
Stddev	.0005	.0205	.0014	.0003	.0006	.0006	.0004	.0082	.0002
%RSD	394.9	36.30	49.80	5.146	24.12	23.83	18.53	16.33	12.70
#1	-.0005	.0798	.0034	.0056	.0031	.0032	.0024	.0581	.0016
#2	.0005	.0418	.0038	.0055	.0026	.0023	.0019	.0503	.0014
#3	.0004	.0475	.0012	.0051	.0019	.0020	.0017	.0417	.0012
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit		.0200				.0002			.0007
Low Limit		-.0200				-.0002			-.0007

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0012**	**.0014**	**.0010**	F **.0531**	**.0721**	**.0021**	**.0458**	F **.0018**
Stddev	.0014	.0000	.0001	.0005	.0161	.0325	.0020	.0214	.0000
%RSD	269.8	4.205	5.228	45.54	30.21	45.09	93.52	46.76	2.192
#1	-.0006	.0012	.0014	.0010	.0698	.1046	.0030	.0357	.0019
#2	.0021	.0012	.0013	.0006	.0518	.0721	.0036	.0703	.0018
#3	.0000	.0011	.0015	.0015	.0378	.0396	-.0001	.0312	.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit					.0100				.0015
Low Limit					-.0100				-.0015

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0372**	F **.0013**	**.0025**	**.0026**	**-.0015**	**.0010**	**.0035**	**-.0029**
Stddev	.0001	.0084	.0002	.0010	.0017	.0031	.0005	.0017	.0003
%RSD	5.022	22.66	18.16	41.97	63.80	211.0	53.26	48.16	11.72
#1	.0015	.0405	.0012	.0032	.0040	-.0007	.0015	.0053	-.0025
#2	.0017	.0434	.0016	.0029	.0031	.0012	.0011	.0019	-.0031
#3	.0016	.0276	.0011	.0013	.0008	-.0049	.0004	.0034	-.0031
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.0012						
Low Limit			-.0012						

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 17:25:54 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	F **.0026**	**.0020**	**.0018**	**.0018**	**.0015**	**.0015**	F **.0017**
Stddev	.0006	.0005	.0004	.0018	.0004	.0009	.0002	.0002
%RSD	43.45	19.38	19.22	99.48	21.59	58.87	15.73	9.936
#1	.0021	.0032	.0019	.0038	.0022	.0022	.0017	.0019
#2	.0013	.0023	.0016	.0002	.0017	.0019	.0016	.0015
#3	.0009	.0022	.0024	.0014	.0015	.0005	.0013	.0017
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit		.0010						.0013
Low Limit		-.0010						-.0013

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5780.8**	**56227.**	**5017.4**	**2100.4**
Stddev	10.4	164.	38.3	4.5
%RSD	.18058	.29199	.76279	.21598
#1	5769.4	56073.	4973.2	2096.4
#2	5789.9	56207.	5038.0	2105.3
#3	5783.2	56400.	5040.9	2099.5

Zoom In Zoom Out

Sample Name: mp36766-mb1 Acquired: 12/7/2022 17:31:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0027**	**-.0001**	**.0034**	**.0001**	**-.0001**	**-.0006**	**.0173**	**.0001**
Stddev	.0005	.0037	.0009	.0002	.0001	.0001	.0005	.0051	.0001
%RSD	350.3	137.1	627.5	7.177	169.0	69.94	82.27	29.41	228.3
#1	-.0002	.0051	-.0009	.0032	-.0001	-.0001	-.0004	.0216	-.0001
#2	-.0006	.0044	-.0004	.0037	.0001	-.0000	-.0012	.0117	.0001
#3	.0004	-.0015	.0008	.0035	.0002	-.0002	-.0003	.0187	.0002

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035**	**-.0001**	**-.0001**	**-.0004**	**.0079**	**.0191**	**.0008**	**.0178**	**.0002**
Stddev	.0035	.0000	.0004	.0003	.0033	.0370	.0013	.0148	.0000
%RSD	98.49	46.90	284.1	59.14	41.68	194.0	156.6	83.37	9.774
#1	.0066	-.0001	-.0003	-.0006	.0042	-.0235	.0022	.0324	.0002
#2	.0042	-.0001	.0003	-.0001	.0090	.0380	-.0001	.0182	.0001
#3	-.0002	-.0000	-.0005	-.0005	.0104	.0427	.0002	.0028	.0002

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0069**	**.0002**	**.0001**	**.0010**	**.0038**	**.0004**	**.0028**	**.0075**
Stddev	.0001	.0024	.0002	.0007	.0011	.0019	.0007	.0018	.0012
%RSD	34.99	34.55	109.3	580.1	113.0	50.07	177.1	64.63	15.59
#1	.0002	-.0048	.0003	-.0006	.0011	.0017	.0003	.0048	.0076
#2	.0003	-.0095	.0003	.0007	-.0002	.0054	.0012	.0013	.0063
#3	.0003	-.0065	-.0000	.0002	.0021	.0043	-.0002	.0023	.0086

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**-.0003**	**-.0004**	**-.0001**	**-.0004**	**.0016**	**.0002**
Stddev	.0002	.0001	.0006	.0008	.0002	.0004	.0001	.0001
%RSD	205.6	909.3	214.2	218.4	355.9	108.9	3.820	36.23
#1	.0003	-.0001	-.0002	-.0008	-.0000	-.0009	.0016	.0003
#2	-.0001	.0001	.0003	-.0008	-.0003	-.0000	.0016	.0002
#3	.0001	-.0000	-.0009	.0005	.0001	-.0003	.0017	.0002

Zoom In Zoom Out

Sample Name: mp36766-mb1 Acquired: 12/7/2022 17:31:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5803.1	55673.	5036.4	2102.4
Stddev	38.0	1430.	10.3	14.6
%RSD	.65467	2.5690	.20501	.69337
#1	5787.2	56372.	5048.2	2097.8
#2	5846.4	54028.	5032.0	2118.8
#3	5775.6	56620.	5029.0	2090.8

Zoom In Zoom Out

Sample Name: mp36766-b1 Acquired: 12/7/2022 17:36:17 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2354	24.03	1.791	1.861	1.899	1.950	F -.0377	24.00
Stddev	.0002	.03	.004	.002	.003	.002	.0006	.08
%RSD	.1008	.1204	.1988	.1036	.1693	.1111	1.507	.3355
#1	.2356	24.06	1.794	1.863	1.902	1.953	-.0382	24.00
#2	.2351	24.02	1.787	1.861	1.900	1.949	-.0371	24.08
#3	.2354	24.01	1.792	1.859	1.896	1.949	-.0378	23.92

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.872	.1843	1.879	1.900	1.860	24.91	23.87	-.0008
Stddev	.001	.0039	.003	.010	.002	.08	.07	.0024
%RSD	.0513	2.143	.1342	.5252	.0799	.3104	.3001	290.0
#1	1.873	.1868	1.881	1.907	1.861	25.00	23.91	.0016
#2	1.872	.1863	1.880	1.888	1.858	24.88	23.92	-.0010
#3	1.871	.1797	1.876	1.904	1.859	24.85	23.79	-.0032

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.10	1.926	1.840	24.15	1.868	1.769	1.901	W -.0453
Stddev	.05	.008	.002	.03	.002	.006	.005	.0057
%RSD	.2020	.4240	.0819	.1370	.0922	.3562	.2843	12.48
#1	24.13	1.932	1.839	24.18	1.870	1.776	1.907	-.0519
#2	24.04	1.917	1.839	24.12	1.868	1.763	1.896	-.0419
#3	24.12	1.930	1.842	24.14	1.867	1.769	1.901	-.0422

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.810	1.810	.1167	1.857	1.902	1.815	1.852	1.876
Stddev	.005	.007	.0018	.006	.004	.005	.022	.009
%RSD	.2611	.3701	1.564	.3488	.1858	.2798	1.209	.4733
#1	1.815	1.816	.1174	1.865	1.904	1.816	1.861	1.881
#2	1.807	1.810	.1146	1.854	1.903	1.809	1.869	1.866
#3	1.807	1.803	.1181	1.853	1.898	1.819	1.827	1.882

Zoom In Zoom Out

Sample Name: mp36766-b1 Acquired: 12/7/2022 17:36:17 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	1.806	1.905	1.817
Stddev	.003	.003	.002
%RSD	.1628	.1742	.1236
#1	1.808	1.906	1.818
#2	1.802	1.901	1.814
#3	1.807	1.907	1.818

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5333.2	54956.	4991.1	2070.9
Stddev	3.8	166.	23.6	2.9
%RSD	.07059	.30191	.47373	.14197
#1	5330.4	54814.	4964.8	2071.6
#2	5337.5	55138.	5010.6	2073.5
#3	5331.7	54917.	4997.8	2067.7

Zoom In Zoom Out

Sample Name: mp36766-b2 Acquired: 12/7/2022 17:41:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2340	24.63	1.786	1.855	1.883	1.938	F -.0354	24.51
Stddev	.0008	.02	.009	.009	.003	.004	.0006	.05
%RSD	.3609	.0965	.5227	.4777	.1630	.2125	1.628	.1876
#1	.2343	24.64	1.785	1.852	1.884	1.937	-.0353	24.50
#2	.2346	24.65	1.777	1.848	1.886	1.942	-.0349	24.56
#3	.2330	24.61	1.796	1.865	1.880	1.934	-.0360	24.46

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.868	.1812	1.873	1.893	1.843	25.53	24.45	-.0011
Stddev	.012	.0026	.008	.008	.004	.13	.03	.0022
%RSD	.6633	1.436	.4454	.4134	.2411	.5082	.1210	201.9
#1	1.863	.1842	1.871	1.898	1.846	25.48	24.45	-.0034
#2	1.858	.1800	1.867	1.898	1.845	25.67	24.48	-.0011
#3	1.882	.1795	1.883	1.884	1.838	25.42	24.42	.0011

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.71	1.918	1.827	24.78	1.866	1.769	1.896	W -.0462
Stddev	.17	.005	.012	.07	.011	.007	.012	.0031
%RSD	.7022	.2579	.6733	.2859	.5820	.4179	.6195	6.626
#1	24.55	1.921	1.821	24.78	1.860	1.768	1.897	-.0483
#2	24.90	1.921	1.819	24.85	1.859	1.763	1.884	-.0427
#3	24.69	1.912	1.841	24.71	1.878	1.777	1.907	-.0477

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.794	1.798	.1168	1.845	1.885	1.803	1.839	1.870
Stddev	.014	.011	.0011	.012	.003	.006	.010	.006
%RSD	.7975	.5921	.9471	.6439	.1310	.3184	.5540	.3033
#1	1.795	1.794	.1166	1.843	1.885	1.799	1.851	1.868
#2	1.779	1.790	.1158	1.833	1.888	1.810	1.833	1.876
#3	1.808	1.810	.1180	1.857	1.883	1.801	1.833	1.865

Zoom In Zoom Out

Sample Name: mp36766-b2 Acquired: 12/7/2022 17:41:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.798**	**1.897**	**1.799**
Stddev	.010	.014	.002
%RSD	.5403	.7583	.1131
#1	1.794	1.891	1.799
#2	1.791	1.886	1.801
#3	1.809	1.913	1.797

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5323.0**	**54792.**	**5024.6**	**2068.4**
Stddev	18.4	88.	59.5	10.1
%RSD	.34568	.16039	1.1841	.48916
#1	5326.9	54755.	5041.2	2070.4
#2	5339.2	54893.	4958.5	2077.4
#3	5303.0	54730.	5074.0	2057.4

Zoom In Zoom Out

Sample Name: mp36766-s1 Acquired: 12/7/2022 17:45:48 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2381**	**24.53**	**1.812**	**2.007**	**1.927**	**1.930**	F **-.0355**	**48.23**
Stddev	.0003	.05	.004	.004	.007	.003	.0009	.09
%RSD	.1401	.2068	.2254	.2161	.3871	.1303	2.433	.1944
#1	.2380	24.59	1.811	2.008	1.932	1.932	-.0345	48.14
#2	.2378	24.53	1.808	2.002	1.931	1.929	-.0362	48.33
#3	.2385	24.48	1.816	2.011	1.919	1.927	-.0357	48.22

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.875**	**.6036**	**1.887**	**1.876**	**1.843**	**31.08**	**26.87**	**-.0007**
Stddev	.002	.0030	.005	.005	.004	.08	.08	.0005
%RSD	.0826	.5009	.2484	.2935	.2344	.2589	.3117	74.27
#1	1.877	.6002	1.884	1.870	1.844	31.12	26.93	-.0009
#2	1.874	.6058	1.886	1.875	1.838	31.13	26.91	-.0001
#3	1.875	.6049	1.893	1.881	1.847	30.98	26.78	-.0010

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.32**	F **8.727**	**1.822**	**100.5**	**1.872**	**1.825**	**1.893**	**1.749**
Stddev	.05	.041	.003	.2	.002	.003	.003	.009
%RSD	.1242	.4726	.1460	.2098	.1066	.1635	.1542	.5182
#1	38.33	8.684	1.825	100.8	1.872	1.821	1.893	1.754
#2	38.36	8.766	1.820	100.4	1.870	1.827	1.890	1.754
#3	38.27	8.731	1.820	100.5	1.874	1.826	1.896	1.738

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.813**	**1.825**	**5.036**	**1.821**	**2.054**	**1.789**	**1.802**	**1.837**
Stddev	.002	.007	.010	.003	.005	.004	.033	.002
%RSD	.1176	.3845	.2051	.1633	.2605	.2176	1.814	.1267
#1	1.814	1.833	5.044	1.819	2.059	1.786	1.840	1.836
#2	1.814	1.819	5.024	1.819	2.055	1.788	1.787	1.836
#3	1.810	1.822	5.039	1.824	2.048	1.794	1.781	1.840

Zoom In Zoom Out

Sample Name: mp36766-s1 Acquired: 12/7/2022 17:45:48 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.796**	**1.883**	**1.795**
Stddev	.003	.003	.001
%RSD	.1793	.1581	.0679
#1	1.794	1.880	1.795
#2	1.800	1.882	1.794
#3	1.795	1.886	1.796

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5088.7**	**53939.**	**5012.5**	**2020.4**
Stddev	17.9	219.	20.7	5.9
%RSD	.35105	.40684	.41395	.29277
#1	5104.0	54184.	5015.1	2025.8
#2	5093.0	53871.	4990.6	2021.4
#3	5069.1	53761.	5031.9	2014.1

Zoom In Zoom Out

Sample Name: mp36766-s2 Acquired: 12/7/2022 17:50:42 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2396**	**24.79**	**1.857**	**2.025**	**1.939**	**1.944**	F **-.0363**	**48.44**
Stddev	.0010	.03	.016	.017	.006	.007	.0005	.12
%RSD	.4081	.1202	.8351	.8559	.3315	.3655	1.430	.2559
#1	.2398	24.82	1.871	2.040	1.946	1.950	-.0369	48.57
#2	.2405	24.79	1.840	2.006	1.935	1.936	-.0362	48.33
#3	.2385	24.76	1.860	2.028	1.936	1.945	-.0358	48.42

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.877**	**.5976**	**1.900**	**1.898**	**1.867**	**31.30**	**26.95**	**.0014**
Stddev	.018	.0023	.013	.006	.005	.12	.07	.0004
%RSD	.9353	.3766	.7007	.3443	.2613	.3964	.2664	30.14
#1	1.894	.6001	1.915	1.902	1.872	31.42	27.00	.0010
#2	1.859	.5968	1.888	1.891	1.864	31.17	26.86	.0018
#3	1.880	.5958	1.898	1.902	1.864	31.30	26.98	.0015

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.05**	F **8.709**	**1.857**	**101.2**	**1.875**	**1.770**	**1.903**	**1.766**
Stddev	.37	.036	.015	.2	.014	.023	.022	.028
%RSD	.9711	.4104	.8007	.2077	.7675	1.324	1.146	1.576
#1	38.44	8.749	1.872	101.3	1.890	1.797	1.927	1.795
#2	37.71	8.682	1.842	101.0	1.862	1.756	1.887	1.739
#3	38.01	8.696	1.858	101.3	1.871	1.756	1.893	1.765

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.857**	**1.875**	**5.089**	**1.865**	**2.069**	**1.800**	**1.919**	**1.856**
Stddev	.022	.026	.042	.027	.007	.005	.034	.009
%RSD	1.213	1.389	.8267	1.470	.3217	.2772	1.756	.4630
#1	1.883	1.903	5.129	1.896	2.076	1.806	1.957	1.865
#2	1.840	1.852	5.045	1.849	2.064	1.799	1.907	1.848
#3	1.849	1.869	5.093	1.849	2.066	1.796	1.893	1.856

Zoom In Zoom Out

Sample Name: mp36766-s2 Acquired: 12/7/2022 17:50:42 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.824**	**1.902**	**1.825**
Stddev	.016	.018	.002
%RSD	.8916	.9387	.1292
#1	1.839	1.920	1.827
#2	1.806	1.884	1.823
#3	1.826	1.900	1.824

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5068.2**	**54125.**	**5040.9**	**2009.9**
Stddev	35.2	56.	30.2	16.2
%RSD	.69488	.10395	.59864	.80764
#1	5030.1	54157.	5023.4	1993.9
#2	5099.6	54159.	5075.8	2026.4
#3	5074.8	54060.	5023.6	2009.5

Zoom In Zoom Out

Sample Name: jd56542-1f Acquired: 12/7/2022 17:55:35 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0148**	**.0074**	**.1528**	**.0579**	**.0001**	**-.0014**	**23.84**	**.0039**
Stddev	.0004	.0058	.0026	.0005	.0001	.0000	.0009	.03	.0001
%RSD	97.44	39.11	34.58	.3354	.1454	34.62	67.84	.1180	2.074
#1	-.0006	.0209	.0048	.1534	.0578	.0001	-.0006	23.88	.0038
#2	.0000	.0094	.0099	.1527	.0579	.0001	-.0024	23.82	.0039
#3	-.0008	.0141	.0076	.1524	.0580	.0001	-.0011	23.83	.0040

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4390**	**.0021**	**-.0019**	**.0002**	**6.043**	**2.428**	**.0014**	**14.06**	**7.209**
Stddev	.0043	.0001	.0003	.0005	.009	.044	.0004	.03	.007
%RSD	.9712	5.599	16.53	226.6	.1424	1.796	27.35	.2413	.1040
#1	.4410	.0023	-.0022	.0002	6.052	2.465	.0013	14.09	7.202
#2	.4419	.0020	-.0020	.0007	6.042	2.380	.0018	14.08	7.217
#3	.4341	.0021	-.0016	-.0003	6.035	2.438	.0011	14.03	7.209

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**77.14**	**.0026**	**.0244**	**.0017**	**1.828**	**.0007**	**.0035**	**5.097**
Stddev	.0001	.22	.0001	.0010	.0010	.015	.0008	.0006	.007
%RSD	3.131	.2830	3.159	4.290	57.43	.8211	114.7	18.66	.1474
#1	.0017	77.34	.0025	.0237	.0010	1.822	.0003	.0030	5.088
#2	.0018	76.91	.0026	.0239	.0013	1.817	.0001	.0032	5.098
#3	.0017	77.18	.0027	.0256	.0028	1.845	.0016	.0042	5.103

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.1881**	**-.0011**	**.0028**	**-.0041**	**.0073**	**.0025**	**.0004**
Stddev	.0005	.0004	.0001	.0012	.0030	.0008	.0001	.0001
%RSD	76.39	.2208	7.418	43.80	73.51	10.25	4.384	35.44
#1	-.0002	.1884	-.0012	.0014	-.0006	.0069	.0024	.0004
#2	-.0013	.1883	-.0010	.0032	-.0055	.0069	.0025	.0005
#3	-.0006	.1876	-.0012	.0037	-.0061	.0082	.0026	.0002

Zoom In Zoom Out

Sample Name: jd56542-1f Acquired: 12/7/2022 17:55:35 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5281.7**	**54415.**	**5001.9**	**2027.7**
Stddev	6.6	207.	14.8	3.7
%RSD	.12461	.38117	.29624	.18372
#1	5286.4	54632.	4985.1	2032.0
#2	5274.2	54392.	5013.1	2025.7
#3	5284.4	54219.	5007.4	2025.4

Zoom In Zoom Out

Sample Name: mp36766-sd1 Acquired: 12/7/2022 18:00:50 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	**.7117**	**.0129**	**.1774**	**.0673**	**-.0001**	**.0014**	**25.33**	**.0052**
Stddev	.0021	.0473	.0030	.0035	.0012	.0004	.0020	.11	.0008
%RSD	103.8	6.644	23.32	1.974	1.720	711.8	142.5	.4145	14.60
#1	-.0043	.6593	.0137	.1775	.0667	.0003	-.0008	25.40	.0053
#2	-.0001	.7247	.0096	.1809	.0666	-.0000	.0019	25.21	.0044
#3	-.0018	.7511	.0154	.1739	.0687	-.0005	.0031	25.38	.0060

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4925**	**.0022**	**-.0036**	**.0001**	**6.458**	**2.490**	**.0016**	**14.87**	**7.959**
Stddev	.0078	.0010	.0010	.0013	.008	.023	.0027	.15	.006
%RSD	1.582	44.03	27.39	935.0	.1251	.9112	164.3	1.035	.0766
#1	.4928	.0033	-.0042	-.0012	6.467	2.464	-.0011	14.87	7.952
#2	.5001	.0018	-.0025	.0002	6.456	2.505	.0018	15.02	7.960
#3	.4845	.0015	-.0042	.0014	6.451	2.501	.0042	14.71	7.964

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**79.24**	**.0034**	**.0369**	**.0012**	**1.931**	**.0024**	**.0030**	**5.361**
Stddev	.0015	.28	.0020	.0008	.0054	.006	.0032	.0074	.005
%RSD	77.24	.3534	58.31	2.165	437.8	.3138	134.7	249.3	.0925
#1	.0006	79.34	.0054	.0373	.0067	1.926	.0059	-.0018	5.364
#2	.0035	78.92	.0015	.0360	.0011	1.938	.0017	.0115	5.363
#3	.0017	79.46	.0033	.0375	-.0041	1.930	-.0005	-.0008	5.355

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**.1970**	**-.0010**	**-.0026**	**.0585**	**.0095**	**.0405**	**-.0003**
Stddev	.0033	.0009	.0005	.0107	.0023	.0039	.0004	.0005
%RSD	117.8	.4772	46.93	410.6	3.872	40.93	1.094	164.6
#1	.0030	.1968	-.0010	-.0116	.0606	.0086	.0407	-.0005
#2	-.0006	.1961	-.0005	-.0055	.0587	.0061	.0400	-.0007
#3	.0061	.1980	-.0015	.0093	.0561	.0137	.0408	.0003

Zoom In Zoom Out

Sample Name: mp36766-sd1 Acquired: 12/7/2022 18:00:50 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5595.4**	**55342.**	**4902.6**	**2075.3**
Stddev	17.0	145.	33.0	9.2
%RSD	.30318	.26117	.67406	.44558
#1	5586.7	55506.	4908.0	2069.1
#2	5584.5	55287.	4932.6	2071.0
#3	5614.9	55233.	4867.2	2086.0

Zoom In Zoom Out

Sample Name: jd56542-2f Acquired: 12/7/2022 18:05:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0137**	**.1060**	**.0134**	**.3090**	**.0172**	**.0078**	**-.0063**	F **255.2**
Stddev	.0003	.0122	.0006	.0015	.0001	.0001	.0011	.7
%RSD	2.267	11.47	4.407	.5010	.4963	1.430	17.47	.2870
#1	.0134	.0960	.0131	.3107	.0173	.0078	-.0067	256.0
#2	.0136	.1196	.0140	.3077	.0171	.0079	-.0050	255.2
#3	.0140	.1025	.0130	.3086	.0172	.0077	-.0071	254.5

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0150**	**.0224**	**.0007**	**-.0001**	**.0021**	**.1120**	**122.2**	**.6402**
Stddev	.0000	.0012	.0002	.0006	.0004	.0010	.6	.0008
%RSD	.2554	5.142	28.24	612.4	16.98	.8813	.4652	.1183
#1	.0150	.0215	.0008	-.0005	.0025	.1108	122.7	.6405
#2	.0149	.0237	.0009	-.0004	.0021	.1125	121.5	.6393
#3	.0150	.0221	.0005	.0006	.0017	.1125	122.2	.6408

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8378**	**.0020**	**.2844**	**152.8**	**.0090**	**.0117**	**.0010**	F **302.6**
Stddev	.0272	.0000	.0040	.5	.0004	.0011	.0024	3.5
%RSD	3.248	2.145	1.390	.2979	4.531	9.340	244.4	1.170
#1	.8674	.0019	.2887	153.3	.0094	.0122	.0005	306.7
#2	.8319	.0020	.2810	152.5	.0086	.0124	-.0011	300.6
#3	.8140	.0020	.2834	152.6	.0089	.0104	.0035	300.6

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0106**	**.0127**	**9.542**	**-.0019**	**1.437**	**.0004**	**.0129**	F **11.19**
Stddev	.0011	.0030	.098	.0007	.006	.0004	.0004	.02
%RSD	10.35	23.43	1.028	37.56	.4008	114.0	2.732	.1381
#1	.0099	.0120	9.655	-.0011	1.442	.0000	.0125	11.19
#2	.0100	.0102	9.480	-.0023	1.431	.0002	.0129	11.20
#3	.0119	.0160	9.491	-.0023	1.437	.0009	.0132	11.17

Zoom In Zoom Out

Sample Name: jd56542-2f Acquired: 12/7/2022 18:05:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0171**	**.0040**	W **-.0033**
Stddev	.0010	.0002	.0001
%RSD	5.820	5.748	1.933
#1	.0174	.0037	-.0032
#2	.0180	.0041	-.0033
#3	.0161	.0041	-.0033

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4731.5**	**51724.**	**4923.3**	**1906.4**
Stddev	38.6	207.	27.1	15.7
%RSD	.81615	.39968	.55105	.82601
#1	4686.9	51562.	4894.6	1888.5
#2	4754.8	51654.	4926.6	1918.1
#3	4752.8	51957.	4948.6	1912.6

Zoom In Zoom Out

Sample Name: jd56542-3f Acquired: 12/7/2022 18:11:03 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**-.0216**	**.0022**	**1.341**	**.2439**	**.0015**	**-.0015**	**80.43**	**.0050**
Stddev	.0004	.0077	.0013	.007	.0011	.0001	.0008	.20	.0001
%RSD	18.93	35.37	60.74	.5179	.4515	4.250	53.72	.2510	2.603
#1	.0019	-.0181	.0029	1.337	.2452	.0014	-.0012	80.66	.0051
#2	.0024	-.0304	.0006	1.337	.2436	.0015	-.0009	80.33	.0050
#3	.0016	-.0164	.0030	1.349	.2430	.0015	-.0024	80.30	.0048

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0356**	**.0000**	**.0005**	**.0001**	**13.12**	**30.94**	**.0270**	**15.00**	**.4228**
Stddev	.0032	.0001	.0006	.0002	.07	.09	.0005	.08	.0003
%RSD	8.900	479.1	103.7	198.6	.5111	.2966	1.910	.5300	.0614
#1	.0373	.0001	.0010	.0003	13.19	31.02	.0276	15.04	.4226
#2	.0376	.0001	.0007	.0002	13.12	30.97	.0267	15.05	.4229
#3	.0320	-.0001	-.0001	-.0001	13.06	30.84	.0267	14.91	.4231

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**136.9**	**.0005**	**.0648**	**.0038**	**4.075**	**-.0002**	**.0035**	**9.541**
Stddev	.0001	.5	.0003	.0022	.0008	.008	.0005	.0014	.019
%RSD	8.335	.3921	68.57	3.423	21.38	.2008	215.5	40.41	.1952
#1	.0015	137.4	.0007	.0646	.0029	4.070	-.0008	.0029	9.529
#2	.0018	136.8	.0001	.0627	.0043	4.071	-.0002	.0024	9.531
#3	.0018	136.4	.0006	.0672	.0043	4.085	.0003	.0051	9.563

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.8403**	**-.0015**	**.0021**	**.0046**	**.0119**	**.0131**	**-.0006**
Stddev	.0003	.0029	.0007	.0024	.0003	.0008	.0002	.0000
%RSD	37.47	.3500	45.59	114.7	7.184	6.955	1.743	8.056
#1	-.0012	.8434	-.0022	.0022	.0049	.0118	.0129	-.0006
#2	-.0006	.8397	-.0013	-.0004	.0047	.0111	.0134	-.0005
#3	-.0008	.8376	-.0010	.0044	.0043	.0128	.0131	-.0006

Zoom In Zoom Out

Sample Name: jd56542-3f Acquired: 12/7/2022 18:11:03 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5042.9**	**52999.**	**4945.1**	**1981.4**
Stddev	12.4	69.	9.6	6.6
%RSD	.24650	.13070	.19414	.33138
#1	5056.1	53078.	4934.3	1987.6
#2	5041.0	52968.	4952.8	1982.0
#3	5031.5	52950.	4948.1	1974.5

Zoom In Zoom Out

Sample Name: jd56542-4f Acquired: 12/7/2022 18:16:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0021**	**.0207**	**.0525**	**.1177**	**.0001**	**-.0024**	**35.37**	**.0037**
Stddev	.0003	.0041	.0008	.0011	.0006	.0000	.0009	.06	.0001
%RSD	110.9	196.6	3.874	2.065	.5046	23.01	38.07	.1663	2.091
#1	-.0001	.0017	.0207	.0535	.1177	.0001	-.0028	35.33	.0037
#2	.0006	-.0018	.0198	.0526	.1172	.0001	-.0013	35.44	.0037
#3	.0003	.0064	.0214	.0514	.1183	.0001	-.0030	35.33	.0036

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1041**	**.0026**	**.0016**	**.0034**	**65.37**	**4.907**	**.0014**	**28.58**	**1.013**
Stddev	.0041	.0007	.0003	.0005	.03	.019	.0011	.08	.001
%RSD	3.898	27.30	18.47	15.31	.0384	.3929	78.87	.2861	.1090
#1	.1069	.0033	.0014	.0033	65.36	4.922	.0001	28.68	1.012
#2	.0994	.0019	.0019	.0039	65.35	4.885	.0020	28.53	1.014
#3	.1059	.0025	.0014	.0029	65.40	4.913	.0020	28.54	1.014

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**18.53**	**.0025**	**.0363**	**.0017**	**.4575**	**.0003**	**-.0019**	**6.930**
Stddev	.0002	.02	.0003	.0010	.0005	.0143	.0008	.0026	.099
%RSD	15.79	.1002	12.60	2.863	28.03	3.116	298.6	139.3	1.422
#1	.0016	18.55	.0026	.0369	.0020	.4734	-.0004	-.0045	7.044
#2	.0018	18.52	.0027	.0369	.0021	.4459	.0001	.0007	6.881
#3	.0013	18.51	.0021	.0351	.0012	.4532	.0011	-.0017	6.866

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.2908**	**-.0008**	**.0017**	**.0147**	**.0074**	**.0025**	**.0005**
Stddev	.0005	.0006	.0003	.0012	.0000	.0008	.0002	.0001
%RSD	100.1	.2202	32.23	73.70	.2528	10.54	9.721	24.40
#1	-.0011	.2901	-.0005	.0026	.0147	.0069	.0026	.0005
#2	-.0003	.2913	-.0008	.0022	.0147	.0083	.0023	.0004
#3	-.0001	.2911	-.0010	.0003	.0148	.0069	.0027	.0006

Zoom In Zoom Out

Sample Name: jd56542-4f Acquired: 12/7/2022 18:16:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5333.8**	**54878.**	**5064.1**	**2012.8**
Stddev	58.8	162.	19.0	25.4
%RSD	1.1026	.29571	.37459	1.2640
#1	5266.0	55061.	5042.3	1983.5
#2	5371.0	54821.	5076.6	2027.4
#3	5364.5	54752.	5073.5	2027.7

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 18:21:15 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2451**	**39.80**	**1.929**	**1.946**	**1.953**	**2.006**	**1.945**	**39.74**	**1.919**
Stddev	.0014	.08	.002	.005	.001	.005	.005	.16	.002
%RSD	.5666	.2039	.0845	.2774	.0655	.2589	.2675	.3953	.1133
#1	.2458	39.74	1.928	1.947	1.952	2.001	1.940	39.69	1.920
#2	.2436	39.89	1.931	1.941	1.952	2.008	1.950	39.92	1.916
#3	.2461	39.76	1.928	1.952	1.954	2.011	1.945	39.62	1.921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.940**	**1.958**	**1.965**	**1.911**	**41.09**	**39.30**	**1.932**	**39.68**	**1.977**
Stddev	.004	.006	.006	.005	.06	.01	.005	.24	.005
%RSD	.2201	.2974	.2952	.2527	.1344	.0338	.2428	.6065	.2673
#1	1.939	1.961	1.969	1.914	41.02	39.32	1.927	39.55	1.982
#2	1.937	1.951	1.958	1.905	41.10	39.29	1.934	39.96	1.971
#3	1.945	1.962	1.967	1.913	41.13	39.29	1.936	39.54	1.978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.945**	**40.41**	**1.931**	F **1.790**	**1.968**	**1.866**	**1.942**	**1.909**	**4.717**
Stddev	.002	.07	.007	.006	.008	.016	.004	.008	.005
%RSD	.1132	.1642	.3449	.3361	.3970	.8427	.1967	.3985	.1162
#1	1.947	40.40	1.936	1.796	1.975	1.882	1.946	1.918	4.711
#2	1.943	40.49	1.923	1.784	1.959	1.850	1.940	1.905	4.722
#3	1.946	40.35	1.933	1.789	1.970	1.865	1.940	1.905	4.718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000					
Range				-10.00%					

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 18:21:15 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.972**	**1.955**	**1.904**	**1.990**	**1.930**	**1.913**	**1.958**	**1.932**
Stddev	.005	.002	.006	.017	.006	.003	.004	.006
%RSD	.2660	.1086	.3044	.8431	.2911	.1739	.2305	.2921
#1	1.977	1.957	1.907	2.006	1.933	1.917	1.960	1.937
#2	1.967	1.955	1.897	1.973	1.924	1.910	1.953	1.926
#3	1.973	1.953	1.908	1.992	1.934	1.913	1.961	1.934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5135.9**	**53924.**	**4962.3**	**2035.0**
Stddev	6.2	96.	32.6	1.7
%RSD	.12155	.17770	.65696	.08412
#1	5136.2	53854.	4990.1	2036.8
#2	5142.0	53884.	4970.4	2034.8
#3	5129.5	54033.	4926.4	2033.4

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 18:26:02 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**.0123**	**.0004**	**.0053**	**.0005**	F **.0003**	**.0010**	**.0059**	**.0002**
Stddev	.0003	.0105	.0010	.0002	.0001	.0001	.0003	.0025	.0002
%RSD	24.20	85.14	228.7	3.467	24.61	41.31	30.15	42.34	108.0
#1	-.0014	.0224	.0016	.0052	.0006	.0003	.0013	.0045	.0002
#2	-.0013	.0132	-.0000	.0051	.0005	.0003	.0007	.0044	.0004
#3	-.0009	.0014	-.0003	.0055	.0004	.0001	.0009	.0087	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.0002			
Low Limit						-.0002			

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0003**	**.0003**	**-.0003**	**.0094**	**.0259**	**.0014**	**.0013**	**.0004**
Stddev	.0048	.0001	.0001	.0003	.0003	.0210	.0005	.0415	.0000
%RSD	8585.	37.83	23.22	111.0	3.133	80.84	33.31	3264.	3.740
#1	.0047	.0002	.0004	-.0005	.0093	.0475	.0019	-.0460	.0004
#2	-.0049	.0003	.0003	.0001	.0098	.0056	.0010	.0321	.0004
#3	.0004	.0003	.0003	-.0004	.0092	.0247	.0012	.0177	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0058**	**.0001**	**.0012**	**.0018**	**-.0011**	**.0009**	**.0005**	**-.0066**
Stddev	.0001	.0170	.0005	.0018	.0009	.0051	.0005	.0007	.0011
%RSD	25.87	294.5	362.7	150.6	48.99	481.0	50.89	133.0	16.90
#1	.0005	.0253	-.0002	.0003	.0012	-.0060	.0015	.0003	-.0056
#2	.0007	-.0026	-.0002	.0032	.0029	.0041	.0006	-.0001	-.0065
#3	.0004	-.0054	.0007	.0000	.0015	-.0013	.0007	.0013	-.0078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 18:26:02 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0003**	**.0001**	**-.0006**	**.0005**	**.0006**	**.0004**	**.0002**
Stddev	.0003	.0001	.0003	.0011	.0003	.0006	.0000	.0001
%RSD	93.68	22.82	225.9	181.0	65.94	87.30	6.430	29.68
#1	-.0000	.0003	-.0002	-.0012	.0004	.0009	.0004	.0003
#2	.0004	.0003	.0003	.0007	.0008	.0010	.0004	.0001
#3	.0004	.0002	.0002	-.0012	.0002	.0000	.0005	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5769.5**	**55662.**	**4861.7**	**2097.6**
Stddev	28.5	84.	28.8	10.5
%RSD	.49345	.15057	.59297	.50091
#1	5744.3	55663.	4892.7	2089.1
#2	5800.4	55746.	4856.6	2109.4
#3	5763.7	55578.	4835.7	2094.5

Zoom In Zoom Out

Sample Name: jd56542-5f Acquired: 12/7/2022 18:31:14 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0022**	**.0029**	**.0402**	**.0075**	**.0000**	**-.0006**	**7.519**	**.0027**
Stddev	.0007	.0051	.0007	.0003	.0001	.0001	.0009	.028	.0003
%RSD	157.9	236.1	22.49	.7664	1.838	318.0	160.2	.3661	12.73
#1	.0003	-.0078	.0030	.0403	.0076	.0001	-.0009	7.551	.0027
#2	-.0010	-.0010	.0036	.0403	.0076	-.0001	-.0013	7.506	.0023
#3	-.0007	.0022	.0023	.0398	.0074	.0001	.0005	7.501	.0030

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**-.0002**	**.0015**	**.0036**	**.0159**	**1.778**	**.0017**	**.7753**	**.0032**
Stddev	.0007	.0003	.0002	.0003	.0015	.013	.0005	.0135	.0000
%RSD	39.73	157.0	10.76	8.902	9.339	.7058	28.18	1.739	.6319
#1	.0014	.0001	.0017	.0037	.0161	1.790	.0018	.7614	.0031
#2	.0025	-.0002	.0015	.0039	.0143	1.765	.0012	.7883	.0031
#3	.0012	-.0004	.0014	.0032	.0173	1.778	.0022	.7762	.0032

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**100.0**	**.0004**	**1.400**	**.0019**	**7.295**	**.0014**	**.0035**	**4.852**
Stddev	.0002	.3	.0004	.007	.0017	.023	.0006	.0027	.007
%RSD	15.44	.2746	95.83	.5113	91.89	.3159	43.81	77.22	.1429
#1	.0009	100.3	.0001	1.396	.0034	7.278	.0011	.0006	4.856
#2	.0013	100.1	.0003	1.395	-.0000	7.286	.0021	.0040	4.844
#3	.0011	99.73	.0008	1.408	.0023	7.321	.0009	.0060	4.855

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0490**	**-.0001**	**.0017**	**.0021**	**.0050**	**.0028**	**-.0004**
Stddev	.0005	.0002	.0003	.0007	.0005	.0005	.0001	.0001
%RSD	174.8	.4409	184.9	39.16	22.72	10.62	1.876	24.80
#1	-.0006	.0491	-.0004	.0017	.0016	.0054	.0029	-.0005
#2	-.0005	.0491	.0000	.0023	.0023	.0044	.0028	-.0003
#3	.0003	.0488	.0000	.0010	.0025	.0050	.0029	-.0004

Zoom In Zoom Out

Sample Name: jd56542-5f Acquired: 12/7/2022 18:31:14 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5283.7**	**54292.**	**5052.4**	**2027.6**
Stddev	4.2	212.	52.2	.8
%RSD	.07912	.39012	1.0341	.03890
#1	5283.9	54459.	5063.5	2026.9
#2	5287.8	54363.	4995.5	2027.6
#3	5279.4	54053.	5098.2	2028.5

Zoom In Zoom Out

Sample Name: jd56549-1f Acquired: 12/7/2022 18:36:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0073**	**.0330**	**.0312**	**.0168**	**.0001**	**-.0024**	**6.259**	**.0033**
Stddev	.0001	.0046	.0010	.0003	.0002	.0000	.0012	.053	.0001
%RSD	19.67	63.01	2.933	.9846	1.386	30.87	50.08	.8531	2.348
#1	.0005	-.0031	.0319	.0311	.0170	.0001	-.0027	6.201	.0033
#2	.0004	-.0122	.0339	.0309	.0166	.0002	-.0034	6.270	.0033
#3	.0005	-.0065	.0331	.0315	.0166	.0001	-.0011	6.306	.0032

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0659**	**.0022**	**.0008**	**.0005**	**39.83**	**4.868**	**.0017**	**4.792**	**.6984**
Stddev	.0015	.0001	.0001	.0001	.04	.017	.0010	.044	.0015
%RSD	2.281	3.995	9.614	24.86	.1016	.3476	58.80	.9268	.2119
#1	.0643	.0023	.0008	.0005	39.87	4.887	.0027	4.766	.6969
#2	.0660	.0021	.0009	.0006	39.79	4.861	.0017	4.768	.6999
#3	.0674	.0021	.0007	.0004	39.84	4.855	.0007	4.844	.6983

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**38.62**	**.0012**	**.1111**	**.0027**	**2.592**	**.0011**	**.0006**	**6.107**
Stddev	.0002	.04	.0005	.0015	.0009	.012	.0004	.0032	.005
%RSD	16.31	.1037	36.50	1.343	31.43	.4690	33.11	503.9	.0834
#1	.0010	38.65	.0014	.1101	.0023	2.605	.0013	.0042	6.102
#2	.0011	38.63	.0007	.1128	.0037	2.582	.0007	-.0005	6.109
#3	.0014	38.58	.0016	.1104	.0022	2.587	.0013	-.0018	6.112

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0790**	**-.0006**	**.0007**	**.0087**	**.0056**	**.0003**	**.0002**
Stddev	.0006	.0004	.0007	.0011	.0002	.0016	.0002	.0000
%RSD	113.0	.4867	112.3	167.8	2.750	29.00	65.95	17.69
#1	-.0011	.0789	-.0010	.0013	.0086	.0073	.0005	.0002
#2	-.0007	.0787	.0002	-.0006	.0089	.0041	.0002	.0002
#3	.0001	.0795	-.0010	.0013	.0085	.0054	.0002	.0002

Zoom In Zoom Out

Sample Name: jd56549-1f Acquired: 12/7/2022 18:36:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5409.9**	**54624.**	**4953.8**	**2031.2**
Stddev	8.3	165.	33.6	3.2
%RSD	.15422	.30277	.67863	.15687
#1	5419.2	54803.	4930.5	2034.8
#2	5407.3	54591.	4992.4	2029.8
#3	5403.1	54477.	4938.7	2028.9

Zoom In Zoom Out

Sample Name: jd56549-2f Acquired: 12/7/2022 18:41:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.0005**	**.0154**	**.0268**	**.0067**	**-.0000**	**-.0011**	**5.511**	**.0022**
Stddev	.0002	.0065	.0012	.0005	.0002	.0001	.0012	.006	.0002
%RSD	36.71	1349.	7.525	1.905	3.733	279.0	102.6	.1020	10.42
#1	-.0003	.0042	.0141	.0273	.0070	-.0000	-.0023	5.510	.0020
#2	-.0008	.0023	.0163	.0267	.0066	-.0001	.0000	5.506	.0025
#3	-.0006	-.0080	.0156	.0263	.0065	.0001	-.0011	5.517	.0022

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0156**	**.0007**	**.0003**	**.0058**	**20.49**	**2.332**	**-.0003**	**4.344**	**.1161**
Stddev	.0041	.0002	.0002	.0002	.03	.021	.0009	.011	.0003
%RSD	26.50	28.03	92.18	3.963	.1293	.9152	288.0	.2436	.2451
#1	.0114	.0007	.0004	.0059	20.52	2.322	-.0001	4.348	.1160
#2	.0157	.0005	-.0000	.0059	20.49	2.356	-.0013	4.332	.1165
#3	.0197	.0009	.0004	.0055	20.47	2.317	.0005	4.352	.1159

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**21.25**	**.0014**	**.2080**	**.0018**	**2.964**	**-.0002**	**-.0010**	**4.531**
Stddev	.0004	.06	.0004	.0022	.0013	.009	.0006	.0006	.011
%RSD	68.48	.3046	31.08	1.081	71.68	.3027	239.2	62.47	.2465
#1	.0005	21.31	.0017	.2104	.0003	2.975	-.0002	-.0017	4.544
#2	.0002	21.18	.0015	.2074	.0025	2.961	.0003	-.0006	4.525
#3	.0009	21.25	.0009	.2061	.0025	2.958	-.0008	-.0007	4.524

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0370**	**-.0006**	**.0002**	**.0029**	**.0051**	**.0006**	**-.0001**
Stddev	.0007	.0001	.0002	.0008	.0001	.0008	.0003	.0003
%RSD	1524.	.1761	29.30	511.2	2.708	14.90	39.83	224.1
#1	-.0008	.0369	-.0005	.0003	.0029	.0057	.0009	-.0003
#2	.0005	.0371	-.0005	.0009	.0028	.0052	.0004	-.0002
#3	.0002	.0370	-.0008	-.0007	.0029	.0042	.0006	.0002

Zoom In Zoom Out

Sample Name: jd56549-2f Acquired: 12/7/2022 18:41:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5540.8**	**55225.**	**4995.0**	**2062.5**
Stddev	2.3	178.	38.4	2.7
%RSD	.04118	.32178	.76964	.12898
#1	5541.7	55250.	4951.9	2059.5
#2	5542.5	55036.	5025.5	2064.2
#3	5538.2	55389.	5007.8	2063.9

Zoom In Zoom Out

Sample Name: jd56549-3f Acquired: 12/7/2022 18:46:28 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0669**	**.0151**	**.0175**	**.0218**	**-.0000**	**-.0009**	**12.63**	**.0027**
Stddev	.0006	.0146	.0013	.0001	.0001	.0001	.0013	.02	.0003
%RSD	376.8	21.77	8.329	.7337	.4551	194.1	149.6	.1405	9.953
#1	.0001	.0592	.0145	.0176	.0217	-.0001	-.0021	12.64	.0024
#2	-.0004	.0579	.0166	.0174	.0217	-.0001	-.0012	12.64	.0029
#3	.0007	.0838	.0143	.0174	.0219	.0000	.0006	12.61	.0028

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1706**	**.0364**	**.0012**	**.0012**	**59.97**	**2.114**	**.0002**	**4.007**	**2.214**
Stddev	.0009	.0004	.0004	.0000	.04	.040	.0007	.041	.003
%RSD	.5251	1.186	33.34	4.063	.0604	1.912	335.4	1.032	.1375
#1	.1704	.0369	.0010	.0012	59.93	2.158	.0010	4.049	2.212
#2	.1699	.0361	.0017	.0012	60.00	2.107	-.0001	4.005	2.217
#3	.1716	.0364	.0010	.0011	59.99	2.078	-.0003	3.966	2.212

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**78.05**	**.0028**	**.1050**	**.0017**	**.5926**	**.0008**	**.0021**	**3.976**
Stddev	.0001	.17	.0003	.0022	.0003	.0103	.0018	.0022	.047
%RSD	6.536	.2207	11.58	2.099	18.34	1.742	221.8	102.8	1.190
#1	.0011	78.21	.0027	.1073	.0015	.6018	.0025	-.0001	4.030
#2	.0011	78.06	.0032	.1046	.0021	.5814	.0011	.0043	3.942
#3	.0010	77.87	.0026	.1030	.0016	.5945	-.0011	.0023	3.956

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.0839**	**.0014**	**.0007**	**.0211**	**.0036**	**.0014**	**.0005**
Stddev	.0004	.0002	.0002	.0018	.0004	.0015	.0001	.0002
%RSD	43.43	.2365	16.08	242.3	1.864	40.98	9.721	46.78
#1	-.0008	.0841	.0016	-.0013	.0210	.0036	.0015	.0007
#2	-.0014	.0838	.0013	.0020	.0207	.0050	.0013	.0003
#3	-.0006	.0837	.0012	.0016	.0215	.0021	.0014	.0005

Zoom In Zoom Out

Sample Name: jd56549-3f Acquired: 12/7/2022 18:46:28 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5295.3**	**53758.**	**4957.9**	**2013.6**
Stddev	57.4	97.	18.5	19.7
%RSD	1.0831	.18101	.37347	.97748
#1	5229.5	53787.	4979.1	1991.1
#2	5334.8	53649.	4949.5	2027.6
#3	5321.6	53837.	4945.0	2022.0

Zoom In Zoom Out

Sample Name: jd56549-4f Acquired: 12/7/2022 18:51:34 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**-.0026**	**.0343**	**.0247**	**.0107**	**.0001**	**-.0023**	**13.36**	**.0040**
Stddev	.0003	.0104	.0013	.0006	.0001	.0000	.0017	.06	.0005
%RSD	25.10	396.0	3.676	2.384	.5776	49.28	71.35	.4114	12.50
#1	.0014	-.0145	.0349	.0245	.0107	.0001	-.0035	13.34	.0040
#2	.0009	.0017	.0328	.0254	.0107	.0000	-.0031	13.33	.0045
#3	.0010	.0050	.0351	.0242	.0106	.0001	-.0004	13.43	.0035

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1510**	**.0017**	**.0015**	**.0011**	**73.85**	**2.848**	**.0002**	**5.205**	**1.728**
Stddev	.0052	.0003	.0003	.0003	.09	.020	.0006	.037	.003
%RSD	3.456	15.34	20.18	26.90	.1283	.7034	346.2	.7030	.1810
#1	.1456	.0019	.0014	.0014	73.77	2.825	.0008	5.163	1.725
#2	.1513	.0017	.0018	.0009	73.95	2.863	-.0004	5.231	1.728
#3	.1560	.0014	.0012	.0009	73.81	2.855	.0001	5.221	1.731

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**21.82**	**.0016**	**.0494**	**.0021**	**.0420**	**.0004**	**.0006**	**6.094**
Stddev	.0003	.05	.0002	.0011	.0011	.0026	.0005	.0010	.093
%RSD	15.32	.2162	13.63	2.139	54.52	6.265	150.7	167.3	1.526
#1	.0016	21.79	.0014	.0486	.0010	.0438	.0009	.0017	6.037
#2	.0022	21.79	.0018	.0489	.0020	.0431	-.0001	-.0001	6.201
#3	.0022	21.87	.0016	.0506	.0033	.0389	.0002	.0001	6.043

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0976**	**-.0004**	**.0018**	**.0186**	**.0061**	**.0002**	**.0005**
Stddev	.0008	.0001	.0001	.0013	.0002	.0010	.0002	.0001
%RSD	796.5	.1478	23.21	73.20	1.085	16.84	135.1	24.39
#1	-.0001	.0974	-.0004	.0032	.0186	.0060	.0000	.0004
#2	.0007	.0977	-.0004	.0006	.0188	.0051	.0005	.0006
#3	-.0009	.0976	-.0005	.0017	.0184	.0072	.0001	.0004

Zoom In Zoom Out

Sample Name: jd56549-4f Acquired: 12/7/2022 18:51:34 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5466.2**	**54996.**	**4924.7**	**2038.9**
Stddev	57.0	9.	27.0	27.7
%RSD	1.0426	.01556	.54790	1.3589
#1	5494.3	55000.	4921.0	2050.3
#2	5400.6	54986.	4899.7	2007.3
#3	5503.6	55002.	4953.3	2059.1

Zoom In Zoom Out

Sample Name: jd56550-1f Acquired: 12/7/2022 18:56:41 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0154**	**.0045**	**.0186**	**.0106**	**-.0000**	**-.0019**	**12.19**	**.0016**
Stddev	.0003	.0055	.0007	.0007	.0000	.0001	.0008	.29	.0002
%RSD	240.3	35.71	14.60	3.986	.3295	476.8	40.47	2.406	13.24
#1	.0005	.0132	.0053	.0194	.0106	.0001	-.0020	12.51	.0016
#2	-.0000	.0216	.0041	.0183	.0105	-.0001	-.0026	11.93	.0015
#3	-.0001	.0113	.0042	.0180	.0105	-.0001	-.0011	12.14	.0019

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0140**	**.0017**	**.0004**	**.0005**	**13.70**	**1.501**	**-.0002**	**1.423**	**.0858**
Stddev	.0038	.0002	.0005	.0005	.28	.027	.0003	.040	.0001
%RSD	27.06	10.89	111.3	94.69	2.028	1.808	146.5	2.815	.0795
#1	.0100	.0019	.0008	.0011	14.01	1.530	.0000	1.434	.0858
#2	.0143	.0016	.0005	.0002	13.47	1.496	-.0001	1.379	.0857
#3	.0176	.0016	-.0001	.0003	13.62	1.477	-.0006	1.457	.0858

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**24.50**	**.0010**	**.0177**	**.0016**	**1.517**	**.0004**	**.0019**	**3.062**
Stddev	.0002	.45	.0003	.0006	.0003	.000	.0005	.0012	.007
%RSD	56.88	1.832	35.18	3.344	20.80	.0178	124.8	64.10	.2195
#1	.0005	25.01	.0006	.0171	.0019	1.517	-.0002	.0005	3.058
#2	.0001	24.16	.0012	.0176	.0013	1.517	.0009	.0024	3.070
#3	.0005	24.34	.0012	.0183	.0016	1.517	.0006	.0027	3.060

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0650**	**-.0002**	**-.0005**	**.0025**	**.0027**	**.0055**	**-.0002**
Stddev	.0005	.0010	.0007	.0004	.0002	.0014	.0001	.0001
%RSD	197.9	1.488	321.1	82.72	9.823	50.90	2.518	69.41
#1	-.0007	.0661	.0005	-.0004	.0024	.0014	.0056	-.0003
#2	-.0004	.0643	-.0005	-.0009	.0024	.0026	.0056	-.0000
#3	.0003	.0646	-.0007	-.0001	.0028	.0042	.0053	-.0003

Zoom In Zoom Out

Sample Name: jd56550-1f Acquired: 12/7/2022 18:56:41 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5554.3**	**55625.**	**4964.6**	**2068.9**
Stddev	2.1	137.	79.9	3.3
%RSD	.03843	.24555	1.6095	.15879
#1	5555.4	55597.	4875.9	2071.6
#2	5555.6	55774.	5031.0	2069.8
#3	5551.8	55505.	4987.0	2065.2

Zoom In Zoom Out

Sample Name: jd56550-2f Acquired: 12/7/2022 19:01:47 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.1605**	**.0042**	**.0110**	**.0281**	**.0001**	**-.0006**	**8.399**	**.0022**
Stddev	.0005	.0095	.0006	.0009	.0010	.0000	.0009	.188	.0002
%RSD	153.0	5.933	13.56	8.206	3.665	50.79	150.8	2.242	8.335
#1	-.0002	.1512	.0036	.0099	.0274	.0001	.0001	8.308	.0024
#2	.0003	.1703	.0047	.0115	.0277	.0000	-.0003	8.273	.0021
#3	.0008	.1600	.0044	.0114	.0293	.0000	-.0017	8.615	.0021

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0450**	**.0005**	**.0022**	**.0004**	**37.17**	**1.634**	**-.0008**	**4.404**	**.2978**
Stddev	.0040	.0003	.0004	.0002	.93	.033	.0011	.137	.0012
%RSD	8.890	65.10	19.13	41.56	2.503	2.034	136.8	3.104	.3925
#1	.0431	.0006	.0018	.0002	36.64	1.596	.0004	4.321	.2969
#2	.0423	.0007	.0026	.0006	36.63	1.645	-.0010	4.330	.2975
#3	.0496	.0001	.0024	.0004	38.25	1.660	-.0017	4.562	.2991

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**100.6**	**.0009**	**.0736**	**.0018**	**.2605**	**.0006**	**.0011**	**3.858**
Stddev	.0002	2.4	.0003	.0013	.0007	.0036	.0017	.0034	.031
%RSD	133.4	2.340	30.32	1.816	39.82	1.386	287.8	319.8	.8069
#1	.0004	98.99	.0006	.0726	.0023	.2574	.0011	.0026	3.828
#2	.0001	99.42	.0009	.0730	.0010	.2597	-.0013	.0034	3.890
#3	-.0000	103.3	.0011	.0751	.0022	.2645	.0019	-.0028	3.857

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0767**	**.0027**	**.0018**	**.0096**	**.0023**	**.0014**	**.0010**
Stddev	.0002	.0023	.0004	.0009	.0002	.0005	.0002	.0002
%RSD	24.71	3.051	13.56	52.58	2.056	23.86	11.30	17.45
#1	.0009	.0755	.0024	.0008	.0097	.0029	.0015	.0011
#2	.0006	.0752	.0025	.0018	.0094	.0018	.0015	.0008
#3	.0006	.0794	.0031	.0027	.0097	.0023	.0012	.0010

Zoom In Zoom Out

Sample Name: jd56550-2f Acquired: 12/7/2022 19:01:47 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5249.4**	**54312.**	**4868.1**	**2021.4**
Stddev	38.0	181.	108.6	12.9
%RSD	.72315	.33272	2.2313	.64037
#1	5280.7	54461.	4900.0	2030.9
#2	5207.2	54111.	4957.2	2006.7
#3	5260.4	54363.	4747.1	2026.7

Zoom In Zoom Out

Sample Name: jd56550-3f Acquired: 12/7/2022 19:06:54 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0364**	**.0013**	**.0176**	**.0203**	**.0001**	**-.0010**	**5.256**	**.0018**
Stddev	.0004	.0190	.0008	.0005	.0003	.0001	.0010	.079	.0001
%RSD	68.94	52.06	62.30	2.921	1.609	101.2	102.5	1.497	4.299
#1	-.0008	.0576	.0004	.0181	.0205	.0001	-.0003	5.347	.0019
#2	-.0002	.0309	.0017	.0174	.0199	-.0000	-.0005	5.212	.0018
#3	-.0010	.0209	.0017	.0172	.0204	.0001	-.0021	5.209	.0018

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0198**	**.0020**	**-.0003**	**.0003**	**5.195**	**2.363**	**.0008**	**1.942**	**.2481**
Stddev	.0008	.0002	.0004	.0004	.099	.062	.0016	.029	.0003
%RSD	4.277	10.16	132.0	165.5	1.907	2.606	209.3	1.489	.1168
#1	.0198	.0018	.0001	-.0001	5.307	2.432	.0025	1.975	.2477
#2	.0190	.0019	-.0004	.0008	5.122	2.316	.0005	1.921	.2482
#3	.0207	.0022	-.0006	.0001	5.154	2.339	-.0007	1.931	.2482

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**24.62**	**.0012**	**.0095**	**.0014**	**.9321**	**.0001**	**.0027**	**3.302**
Stddev	.0002	.42	.0002	.0000	.0005	.0106	.0008	.0021	.028
%RSD	138.3	1.688	18.81	.3686	36.18	1.142	1275.	78.00	.8518
#1	-.0001	25.09	.0014	.0095	.0013	.9408	-.0008	.0042	3.334
#2	.0002	24.31	.0010	.0095	.0019	.9353	.0003	.0003	3.284
#3	.0002	24.45	.0012	.0096	.0009	.9202	.0007	.0035	3.287

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0333**	**-.0002**	**-.0004**	**.0026**	**.0025**	**.0015**	**-.0002**
Stddev	.0006	.0007	.0001	.0014	.0001	.0003	.0001	.0001
%RSD	128.0	2.130	41.16	409.7	5.327	13.08	4.748	53.01
#1	.0002	.0341	-.0001	.0013	.0027	.0027	.0014	-.0004
#2	-.0006	.0328	-.0003	-.0014	.0025	.0025	.0016	-.0002
#3	-.0011	.0330	-.0002	-.0009	.0025	.0021	.0014	-.0002

Zoom In Zoom Out

Sample Name: jd56550-3f Acquired: 12/7/2022 19:06:54 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5534.4**	**55294.**	**4948.3**	**2063.4**
Stddev	43.7	121.	89.5	14.1
%RSD	.78962	.21826	1.8085	.68555
#1	5483.9	55433.	4853.1	2047.0
#2	5558.6	55216.	5030.8	2071.1
#3	5560.5	55232.	4960.9	2071.9

Zoom In Zoom Out

Sample Name: jd56550-4f Acquired: 12/7/2022 19:12:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.1001**	**.0055**	**.0141**	**.0070**	**-.0000**	**-.0007**	**2.613**	**.0019**
Stddev	.0003	.0130	.0004	.0003	.0001	.0001	.0016	.017	.0002
%RSD	474.0	12.96	7.844	1.802	.8508	274.3	238.8	.6353	11.65
#1	-.0002	.0852	.0053	.0139	.0071	.0001	-.0020	2.602	.0020
#2	.0003	.1062	.0060	.0144	.0070	-.0000	.0011	2.604	.0020
#3	.0001	.1089	.0053	.0140	.0070	-.0001	-.0010	2.632	.0016

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0313**	**.0012**	**.0018**	**.0001**	**24.13**	**1.159**	**.0005**	**2.010**	**.1262**
Stddev	.0030	.0001	.0005	.0004	.02	.016	.0023	.006	.0002
%RSD	9.669	9.634	25.94	350.6	.0819	1.403	507.3	.3121	.1794
#1	.0305	.0010	.0023	.0006	24.15	1.167	-.0021	2.003	.1262
#2	.0288	.0012	.0015	-.0002	24.12	1.170	.0024	2.015	.1263
#3	.0347	.0012	.0016	.0000	24.12	1.140	.0010	2.012	.1259

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**18.55**	**.0007**	**.0802**	**.0017**	**.2256**	**.0003**	**-.0000**	**3.242**
Stddev	.0003	.07	.0003	.0006	.0010	.0068	.0006	.0039	.023
%RSD	274.5	.3713	48.15	.7102	59.51	3.037	202.5	18810.	.7060
#1	-.0002	18.63	.0010	.0801	.0029	.2317	-.0001	.0031	3.258
#2	.0002	18.49	.0008	.0798	.0015	.2268	.0010	.0013	3.216
#3	.0004	18.54	.0003	.0809	.0008	.2182	-.0000	-.0044	3.252

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0219**	**.0017**	**-.0000**	**.0064**	**.0028**	**.0012**	**.0008**
Stddev	.0002	.0001	.0004	.0011	.0003	.0005	.0001	.0001
%RSD	127.7	.4227	23.75	13120.	5.084	18.51	10.12	15.99
#1	-.0001	.0219	.0021	-.0003	.0067	.0030	.0013	.0007
#2	-.0005	.0218	.0014	.0012	.0062	.0022	.0012	.0010
#3	.0000	.0220	.0015	-.0009	.0061	.0031	.0010	.0008

Zoom In Zoom Out

Sample Name: jd56550-4f Acquired: 12/7/2022 19:12:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5593.1**	**55553.**	**5041.6**	**2068.4**
Stddev	45.0	183.	21.2	15.1
%RSD	.80447	.32918	.42031	.73085
#1	5562.5	55342.	5060.4	2056.9
#2	5644.7	55669.	5018.7	2085.5
#3	5571.9	55648.	5045.7	2062.8

Zoom In Zoom Out

Sample Name: jd56554-14 Acquired: 12/7/2022 19:17:08 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0214**	**.0002**	**.0036**	**.0015**	**-.0000**	**-.0004**	**.1410**	**.0001**
Stddev	.0004	.0062	.0007	.0005	.0001	.0002	.0001	.0085	.0000
%RSD	113.2	28.91	316.8	13.81	6.475	866.9	39.09	5.997	55.70
#1	-.0008	.0159	.0005	.0039	.0014	-.0002	-.0005	.1498	.0001
#2	-.0001	.0202	.0007	.0030	.0015	.0002	-.0002	.1330	.0001
#3	-.0001	.0281	-.0006	.0039	.0016	-.0001	-.0004	.1403	.0000

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**-.0002**	**-.0001**	**.0004**	**.0262**	**.0064**	**.0003**	**.0048**	**.0006**
Stddev	.0004	.0001	.0001	.0005	.0030	.0089	.0012	.0121	.0000
%RSD	24.92	68.10	114.3	124.7	11.29	138.1	446.4	250.6	1.811
#1	.0011	-.0001	-.0002	-.0001	.0240	.0092	-.0008	.0085	.0006
#2	.0014	-.0003	-.0001	.0009	.0250	.0136	.0001	-.0087	.0006
#3	.0018	-.0001	.0000	.0003	.0296	-.0035	.0015	.0148	.0006

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0152**	**.0008**	**.0023**	**.0017**	**.0076**	**.0011**	**.0023**	**.0771**
Stddev	.0002	.0053	.0004	.0017	.0005	.0028	.0009	.0002	.0012
%RSD	81.03	34.72	54.78	74.34	33.04	36.91	80.20	9.690	1.532
#1	.0002	.0203	.0013	.0015	.0019	.0090	.0017	.0023	.0766
#2	.0004	.0098	.0006	.0043	.0021	.0095	.0015	.0025	.0763
#3	.0000	.0154	.0005	.0012	.0010	.0044	.0001	.0020	.0785

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0018**	**-.0001**	**-.0009**	**.0002**	**-.0002**	**.0052**	**-.0000**
Stddev	.0002	.0000	.0002	.0004	.0002	.0004	.0003	.0001
%RSD	272.5	2.675	357.2	41.90	101.6	229.1	6.475	380.5
#1	-.0002	.0018	-.0004	-.0008	.0001	-.0007	.0050	.0001
#2	.0002	.0017	.0001	-.0006	.0001	.0001	.0051	-.0000
#3	.0001	.0018	.0001	-.0014	.0004	.0000	.0056	-.0001

Zoom In Zoom Out

Sample Name: jd56554-14 Acquired: 12/7/2022 19:17:08 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5787.0**	**56334.**	**4996.1**	**2092.7**
Stddev	1.8	86.	20.0	3.6
%RSD	.03124	.15264	.40081	.17339
#1	5785.1	56287.	5015.1	2091.0
#2	5788.7	56433.	4998.1	2096.9
#3	5787.3	56282.	4975.2	2090.3

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 19:22:22 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2495**	**39.71**	**1.910**	**1.940**	**1.957**	**1.989**	**1.932**	**40.07**	**1.963**
Stddev	.0009	.12	.003	.001	.002	.004	.004	.13	.003
%RSD	.3709	.3035	.1605	.0730	.1032	.1997	.2253	.3162	.1531
#1	.2506	39.82	1.907	1.940	1.958	1.993	1.937	40.14	1.966
#2	.2491	39.74	1.910	1.941	1.954	1.990	1.931	40.15	1.964
#3	.2490	39.58	1.913	1.938	1.958	1.985	1.928	39.92	1.960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.961**	**1.948**	**1.962**	**1.919**	**40.74**	**39.49**	**1.916**	**39.95**	**1.988**
Stddev	.012	.004	.009	.012	.09	.05	.004	.10	.006
%RSD	.6053	.1944	.4690	.6196	.2265	.1356	.2128	.2393	.3225
#1	1.975	1.952	1.971	1.930	40.84	39.51	1.921	40.01	1.992
#2	1.953	1.948	1.953	1.907	40.74	39.42	1.915	39.84	1.980
#3	1.955	1.944	1.963	1.921	40.66	39.52	1.913	40.00	1.990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.943**	**40.21**	**1.959**	**1.832**	**1.966**	**1.865**	**1.922**	**1.890**	**4.709**
Stddev	.004	.11	.002	.006	.003	.003	.004	.003	.011
%RSD	.2190	.2660	.1122	.3189	.1420	.1384	.1805	.1439	.2426
#1	1.947	40.27	1.961	1.839	1.964	1.868	1.926	1.893	4.720
#2	1.942	40.27	1.958	1.828	1.964	1.866	1.921	1.888	4.708
#3	1.939	40.09	1.957	1.829	1.969	1.863	1.919	1.890	4.698
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 19:22:22 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.949**	**1.961**	**1.950**	F **1.791**	**1.951**	**1.942**	**1.957**	**1.947**
Stddev	.003	.002	.007	.014	.008	.006	.004	.006
%RSD	.1571	.0933	.3592	.7720	.4169	.2988	.2207	.3101
#1	1.948	1.962	1.957	1.807	1.960	1.942	1.961	1.953
#2	1.953	1.962	1.943	1.781	1.944	1.947	1.956	1.942
#3	1.947	1.959	1.952	1.785	1.949	1.936	1.953	1.945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000				
Range				-10.00%				

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5197.2**	**54413.**	**5031.1**	**2050.2**
Stddev	4.4	52.	4.6	1.4
%RSD	.08553	.09578	.09186	.06861
#1	5197.1	54452.	5034.1	2049.2
#2	5201.7	54433.	5033.5	2051.8
#3	5192.8	54354.	5025.8	2049.7

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 19:27:10 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**.0112**	**.0008**	**.0033**	**.0005**	F **.0003**	**.0002**	**.0034**	**.0004**
Stddev	.0006	.0076	.0004	.0003	.0004	.0000	.0007	.0039	.0002
%RSD	19460.	67.63	55.03	9.092	79.59	4.238	300.9	112.7	51.21
#1	-.0004	.0190	.0013	.0036	.0001	.0003	.0006	-.0008	.0005
#2	-.0004	.0107	.0008	.0031	.0008	.0003	-.0006	.0069	.0006
#3	.0007	.0039	.0004	.0032	.0004	.0003	.0007	.0043	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.0002			
Low Limit						-.0002			

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0002**	**-.0001**	**-.0000**	**.0071**	**.0181**	**.0005**	**-.0053**	**.0003**
Stddev	.0039	.0002	.0006	.0006	.0026	.0171	.0011	.0290	.0000
%RSD	845.5	95.96	419.2	1734.	36.41	94.19	233.1	541.9	7.651
#1	-.0039	.0004	-.0003	-.0006	.0099	.0378	.0017	-.0028	.0003
#2	.0019	-.0000	.0005	-.0000	.0068	.0094	-.0002	.0223	.0003
#3	.0034	.0003	-.0006	.0006	.0047	.0072	-.0001	-.0355	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0122**	**.0006**	**.0013**	**.0015**	**-.0010**	**.0000**	**-.0007**	**-.0054**
Stddev	.0003	.0102	.0001	.0007	.0009	.0014	.0013	.0012	.0002
%RSD	54.75	83.26	16.56	55.48	59.43	138.3	3412.	169.9	3.073
#1	.0002	-.0193	.0007	.0014	.0020	-.0020	.0000	-.0003	-.0055
#2	.0008	-.0167	.0005	.0018	.0022	-.0017	.0013	.0002	-.0052
#3	.0005	-.0006	.0005	.0005	.0005	.0006	-.0012	-.0020	-.0053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 19:27:10 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0003**	**.0004**	**.0001**	**.0004**	**.0008**	**.0004**	**.0004**
Stddev	.0004	.0001	.0003	.0008	.0002	.0009	.0001	.0001
%RSD	51.23	38.93	90.33	629.5	45.28	113.2	24.40	39.13
#1	.0011	.0003	.0002	.0003	.0002	.0016	.0005	.0002
#2	.0009	.0005	.0002	-.0007	.0005	.0009	.0004	.0005
#3	.0003	.0002	.0008	.0008	.0003	-.0001	.0003	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5787.3**	**56473.**	**4922.9**	**2098.0**
Stddev	6.6	703.	31.4	4.2
%RSD	.11446	1.2442	.63841	.20027
#1	5786.6	57219.	4957.7	2098.3
#2	5794.3	55824.	4896.6	2102.1
#3	5781.1	56376.	4914.4	2093.7

Zoom In Zoom Out

Sample Name: jd56559-1 Acquired: 12/7/2022 19:32:23 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032**	**-.0251**	**.0015**	**.3681**	**.0676**	**.0016**	**-.0026**	F **205.1**
Stddev	.0004	.0113	.0010	.0035	.0001	.0000	.0003	.8
%RSD	11.08	45.26	68.91	.9409	.1152	2.496	10.64	.3965
#1	.0036	-.0382	.0006	.3717	.0676	.0016	-.0026	205.8
#2	.0029	-.0183	.0026	.3678	.0677	.0015	-.0023	205.2
#3	.0032	-.0188	.0012	.3648	.0677	.0016	-.0029	204.2

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089**	**.2440**	**.0001**	**.1236**	**.0039**	**.0387**	**34.66**	**.0142**
Stddev	.0001	.0013	.0003	.0010	.0004	.0010	.11	.0018
%RSD	1.401	.5371	246.9	.8031	10.23	2.669	.3037	12.51
#1	.0090	.2454	-.0002	.1245	.0044	.0375	34.77	.0162
#2	.0087	.2429	.0001	.1226	.0036	.0390	34.64	.0132
#3	.0089	.2436	.0005	.1238	.0038	.0394	34.56	.0131

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.71**	**3.737**	**-.0001**	**196.9**	**.0038**	**.0319**	**.0029**	**64.88**
Stddev	.22	.005	.0002	.5	.0002	.0023	.0015	.58
%RSD	.4597	.1435	142.9	.2701	5.560	7.077	52.27	.8942
#1	48.66	3.743	.0001	197.5	.0037	.0344	.0046	65.55
#2	48.51	3.735	-.0002	196.5	.0041	.0300	.0019	64.62
#3	48.95	3.733	-.0002	196.7	.0037	.0314	.0022	64.48

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0104**	**16.08**	**-.0031**	**.3562**	W **-.0017**	**.0015**	**.0206**
Stddev	.0015	.0041	.15	.0007	.0016	.0000	.0006	.0001
%RSD	241.9	39.44	.9496	23.54	.4575	2.398	40.66	.4058
#1	-.0007	.0151	16.25	-.0031	.3580	-.0018	.0019	.0205
#2	.0003	.0078	16.01	-.0039	.3560	-.0017	.0019	.0206
#3	.0022	.0083	15.97	-.0024	.3547	-.0017	.0008	.0207

Zoom In Zoom Out

Sample Name: jd56559-1 Acquired: 12/7/2022 19:32:23 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0153**	**.0011**	W **-.0014**
Stddev	.0005	.0001	.0001
%RSD	3.530	4.709	8.179
#1	.0153	.0011	-.0014
#2	.0158	.0011	-.0015
#3	.0147	.0012	-.0013

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4780.7**	**51347.**	**4913.0**	**1883.8**
Stddev	38.3	85.	13.2	15.6
%RSD	.80144	.16611	.26878	.83018
#1	4736.8	51292.	4911.6	1865.7
#2	4807.2	51303.	4900.6	1893.1
#3	4798.2	51445.	4926.9	1892.5

Zoom In Zoom Out

Sample Name: jd56559-2 Acquired: 12/7/2022 19:37:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**.0364**	**.0010**	**.4780**	**.0790**	**.0017**	**-.0014**	F **203.1**
Stddev	.0002	.0056	.0009	.0013	.0005	.0000	.0005	.1
%RSD	5.575	15.41	89.83	.2675	.5982	1.450	37.09	.0260
#1	.0042	.0319	.0000	.4767	.0789	.0017	-.0018	203.1
#2	.0043	.0345	.0012	.4792	.0795	.0017	-.0016	203.1
#3	.0039	.0426	.0018	.4781	.0786	.0017	-.0008	203.0

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0091**	**.3974**	**.0005**	**.0177**	**.0059**	**.1012**	**36.70**	**.0113**
Stddev	.0001	.0006	.0002	.0000	.0001	.0032	.12	.0016
%RSD	1.447	.1529	31.62	.2562	2.467	3.192	.3342	14.59
#1	.0091	.3980	.0003	.0177	.0058	.1002	36.73	.0107
#2	.0090	.3968	.0005	.0178	.0057	.0986	36.80	.0131
#3	.0092	.3975	.0006	.0177	.0060	.1048	36.56	.0100

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.20**	**6.313**	**-.0007**	W **282.2**	**.0039**	**.0474**	**.0023**	**47.96**
Stddev	.31	.011	.0001	3.8	.0004	.0011	.0003	.28
%RSD	.7795	.1681	11.12	1.348	10.57	2.218	14.48	.5942
#1	39.02	6.307	-.0007	279.2	.0034	.0463	.0026	47.75
#2	39.56	6.307	-.0007	286.5	.0040	.0474	.0022	48.28
#3	39.03	6.325	-.0006	280.9	.0042	.0484	.0019	47.84

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0047**	**15.69**	**-.0019**	**.5083**	**-.0010**	**.0040**	**.0058**
Stddev	.0005	.0024	.11	.0008	.0016	.0005	.0026	.0021
%RSD	1731.	50.75	.6693	38.73	.3084	52.31	65.18	35.83
#1	-.0003	.0027	15.62	-.0027	.5095	-.0005	.0068	.0078
#2	.0006	.0073	15.81	-.0012	.5089	-.0015	.0034	.0037
#3	-.0002	.0041	15.65	-.0020	.5065	-.0009	.0017	.0061

Zoom In Zoom Out

Sample Name: jd56559-2 Acquired: 12/7/2022 19:37:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0159**	**.0091**	W **-.0013**
Stddev	.0027	.0003	.0001
%RSD	16.68	3.228	5.782
#1	.0139	.0088	-.0012
#2	.0149	.0094	-.0013
#3	.0189	.0090	-.0013

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4733.4**	**51106.**	**4952.8**	**1887.5**
Stddev	21.9	130.	27.7	11.4
%RSD	.46192	.25516	.55861	.60592
#1	4741.1	51253.	4982.2	1897.9
#2	4708.7	51062.	4927.3	1875.2
#3	4750.3	51004.	4948.8	1889.3

Zoom In Zoom Out

Sample Name: jd56564-1 Acquired: 12/7/2022 19:42:53 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0106**	**-.0000**	**.0562**	**.0545**	**.0001**	**-.0011**	**25.61**	**.0023**
Stddev	.0003	.0095	.0004	.0014	.0003	.0001	.0003	.10	.0001
%RSD	51.86	89.86	1126.	2.507	.4658	90.30	27.22	.3740	2.623
#1	.0002	.0202	-.0002	.0568	.0544	.0001	-.0011	25.52	.0023
#2	.0008	.0105	-.0002	.0573	.0542	.0000	-.0014	25.61	.0023
#3	.0005	.0011	.0004	.0546	.0547	.0001	-.0008	25.71	.0022

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0002**	**.0001**	**.0000**	**.1070**	**2.680**	**.0010**	**3.366**	**.0211**
Stddev	.0026	.0002	.0004	.0002	.0041	.020	.0006	.060	.0001
%RSD	288.9	70.25	335.8	542.6	3.857	.7326	62.34	1.778	.6065
#1	-.0004	.0000	.0002	-.0002	.1107	2.702	.0013	3.428	.0210
#2	-.0008	.0003	.0005	.0002	.1077	2.665	.0015	3.362	.0211
#3	.0040	.0003	-.0003	.0001	.1026	2.672	.0003	3.309	.0213

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**82.19**	**-.0001**	**.0251**	**.0022**	**3.591**	**.0017**	**.0009**	**4.473**
Stddev	.0002	.03	.0002	.0002	.0016	.005	.0013	.0002	.008
%RSD	98.32	.0425	153.8	.6826	70.13	.1395	74.63	21.68	.1714
#1	.0004	82.20	.0001	.0252	.0040	3.591	.0005	.0008	4.470
#2	.0001	82.22	-.0002	.0249	.0011	3.586	.0016	.0011	4.467
#3	.0001	82.15	-.0002	.0252	.0015	3.596	.0030	.0008	4.481

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.1352**	**-.0002**	**.0005**	**.0009**	**.0037**	**.0062**	**-.0005**
Stddev	.0005	.0008	.0010	.0015	.0004	.0003	.0001	.0001
%RSD	45.56	.6135	467.5	289.9	45.86	8.251	1.379	21.81
#1	-.0011	.1361	-.0014	-.0011	.0006	.0037	.0063	-.0007
#2	-.0014	.1349	.0003	.0020	.0014	.0034	.0061	-.0005
#3	-.0005	.1345	.0004	.0007	.0007	.0040	.0062	-.0004

Zoom In Zoom Out

Sample Name: jd56564-1 Acquired: 12/7/2022 19:42:53 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5291.2	54280.	4989.8	2022.5
Stddev	8.1	147.	9.7	2.5
%RSD	.15371	.27062	.19498	.12464
#1	5286.7	54137.	4979.0	2023.0
#2	5300.6	54273.	4992.5	2024.8
#3	5286.4	54430.	4997.8	2019.8

Zoom In Zoom Out

Sample Name: jd56564-2 Acquired: 12/7/2022 19:47:57 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0008**	**-.0003**	**.0582**	**.0540**	**.0000**	**-.0009**	**27.08**	**.0025**
Stddev	.0002	.0210	.0012	.0007	.0002	.0001	.0003	.05	.0004
%RSD	75.37	2555.	462.4	1.282	.4220	397.2	33.86	.1708	16.78
#1	.0003	.0210	.0011	.0589	.0542	.0002	-.0011	27.11	.0029
#2	.0000	-.0025	-.0007	.0574	.0537	-.0000	-.0011	27.10	.0021
#3	.0003	-.0210	-.0012	.0584	.0540	-.0001	-.0006	27.03	.0023

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0000**	**.0002**	**.0027**	**.0250**	**2.835**	**.0023**	**3.551**	**.0037**
Stddev	.0014	.0002	.0006	.0001	.0038	.012	.0018	.025	.0000
%RSD	238.7	715.8	248.1	2.525	15.00	.4259	80.73	.6947	.5195
#1	-.0009	-.0002	-.0003	.0026	.0243	2.822	.0028	3.580	.0037
#2	.0009	.0002	.0009	.0028	.0217	2.839	.0038	3.535	.0038
#3	.0019	-.0002	.0001	.0027	.0291	2.845	.0002	3.539	.0037

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**86.82**	**.0006**	**.0265**	**.0024**	**3.808**	**.0008**	**.0015**	**4.647**
Stddev	.0002	.10	.0002	.0006	.0004	.010	.0004	.0012	.011
%RSD	593.9	.1170	40.36	2.402	15.35	.2599	56.53	77.99	.2285
#1	.0002	86.82	.0003	.0270	.0021	3.811	.0011	.0028	4.649
#2	-.0001	86.72	.0008	.0258	.0024	3.797	.0003	.0007	4.636
#3	-.0000	86.92	.0007	.0268	.0028	3.816	.0009	.0009	4.657

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.1426**	**-.0003**	**-.0006**	**.0007**	**.0040**	**.0224**	**-.0004**
Stddev	.0006	.0001	.0003	.0005	.0004	.0008	.0003	.0001
%RSD	514.4	.0595	92.84	80.65	57.54	20.79	1.129	35.71
#1	-.0006	.1427	.0000	-.0009	.0003	.0047	.0226	-.0004
#2	.0005	.1427	-.0006	-.0000	.0008	.0031	.0221	-.0002
#3	-.0002	.1426	-.0004	-.0009	.0011	.0041	.0226	-.0004

Zoom In Zoom Out

Sample Name: jd56564-2 Acquired: 12/7/2022 19:47:57 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5277.1	54308.	4990.9	2020.1
Stddev	15.6	52.	22.0	7.4
%RSD	.29652	.09614	.44158	.36448
#1	5279.5	54354.	4966.4	2019.1
#2	5291.4	54251.	4997.1	2027.9
#3	5260.4	54320.	5009.1	2013.3

Zoom In Zoom Out

Sample Name: jd56564-3 Acquired: 12/7/2022 19:53:04 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**-.0155**	**.0010**	**.0533**	**.0477**	**.0000**	**-.0003**	**29.32**	**.0022**
Stddev	.0008	.0117	.0004	.0011	.0003	.0001	.0006	.04	.0002
%RSD	2452.	75.51	37.39	2.010	.6050	183.6	203.9	.1501	9.185
#1	.0008	-.0253	.0014	.0529	.0478	.0001	-.0005	29.35	.0023
#2	-.0008	-.0186	.0011	.0545	.0473	-.0001	.0004	29.34	.0023
#3	-.0001	-.0026	.0006	.0525	.0478	.0001	-.0008	29.27	.0020

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0002**	**.0006**	**.0018**	**.0143**	**3.006**	**.0009**	**3.883**	**.0001**
Stddev	.0028	.0003	.0003	.0000	.0009	.033	.0014	.075	.0000
%RSD	387.2	141.6	57.34	2.337	6.288	1.087	148.9	1.929	3.869
#1	.0009	.0001	.0007	.0018	.0145	3.021	.0001	3.930	.0002
#2	-.0022	-.0004	.0002	.0018	.0151	3.029	.0001	3.922	.0002
#3	.0034	-.0003	.0008	.0017	.0133	2.969	.0025	3.796	.0001

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**84.15**	**.0013**	**.0272**	**.0019**	**3.767**	**.0018**	**.0024**	**4.633**
Stddev	.0001	.07	.0003	.0017	.0005	.018	.0007	.0017	.009
%RSD	221.0	.0880	25.42	6.257	24.45	.4891	38.86	72.69	.1960
#1	-.0002	84.23	.0010	.0275	.0024	3.746	.0010	.0004	4.623
#2	.0000	84.09	.0016	.0254	.0018	3.780	.0024	.0034	4.641
#3	-.0000	84.13	.0013	.0288	.0015	3.776	.0020	.0034	4.636

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.1506**	**-.0006**	**.0008**	**.0005**	**.0044**	**.0141**	**-.0006**
Stddev	.0007	.0003	.0001	.0002	.0002	.0010	.0002	.0001
%RSD	69.14	.2103	9.960	24.50	39.20	23.56	1.527	9.947
#1	-.0015	.1509	-.0006	.0007	.0003	.0048	.0142	-.0006
#2	-.0013	.1505	-.0006	.0006	.0005	.0032	.0141	-.0006
#3	-.0002	.1503	-.0007	.0010	.0007	.0050	.0138	-.0005

Zoom In Zoom Out

Sample Name: jd56564-3 Acquired: 12/7/2022 19:53:04 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5249.8**	**53847.**	**4983.7**	**2007.0**
Stddev	6.2	10.	33.6	.5
%RSD	.11783	.01945	.67421	.02682
#1	5244.2	53839.	4949.9	2006.8
#2	5256.5	53859.	5017.1	2007.7
#3	5248.8	53843.	4984.1	2006.7

Zoom In Zoom Out

Sample Name: jd56569-1 Acquired: 12/7/2022 19:58:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0173**	**.0012**	**.0290**	**.0299**	**.0000**	**-.0016**	**53.45**
Stddev	.0004	.0203	.0005	.0003	.0003	.0001	.0009	.24
%RSD	334.1	117.4	40.27	1.015	.9826	485.8	55.94	.4413
#1	.0002	-.0393	.0007	.0292	.0300	.0001	-.0010	53.51
#2	.0000	-.0131	.0013	.0287	.0302	-.0001	-.0011	53.65
#3	-.0006	.0006	.0017	.0292	.0296	.0001	-.0026	53.19

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0014**	**-.0002**	**.0019**	**.0000**	**.0165**	**3.090**	**.0044**
Stddev	.0002	.0010	.0003	.0003	.0001	.0013	.013	.0007
%RSD	4.105	75.80	149.3	13.77	265.6	7.905	.4341	15.89
#1	.0047	.0013	-.0003	.0022	.0001	.0167	3.076	.0037
#2	.0044	.0004	.0001	.0019	-.0000	.0151	3.102	.0050
#3	.0047	.0025	-.0004	.0017	.0000	.0177	3.093	.0045

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.33**	**.0003**	**.0003**	**153.4**	**.0016**	**.0054**	**.0020**	**6.437**
Stddev	.07	.0000	.0001	.5	.0004	.0005	.0014	.045
%RSD	.3431	3.589	30.41	.3093	27.87	9.293	70.54	.7029
#1	19.27	.0003	.0003	153.6	.0016	.0050	.0004	6.404
#2	19.40	.0003	.0002	153.6	.0011	.0059	.0028	6.489
#3	19.33	.0003	.0002	152.8	.0020	.0051	.0028	6.418

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0023**	**9.017**	**-.0014**	**.1551**	W **-.0016**	**.0013**	**.0006**
Stddev	.0005	.0019	.034	.0003	.0004	.0003	.0013	.0004
%RSD	103.6	82.26	.3725	22.69	.2365	18.48	97.49	78.46
#1	-.0003	.0027	8.979	-.0018	.1553	-.0018	.0002	.0001
#2	-.0001	.0041	9.034	-.0013	.1554	-.0013	.0027	.0010
#3	-.0011	.0003	9.039	-.0012	.1547	-.0018	.0010	.0006

Zoom In Zoom Out

Sample Name: jd56569-1 Acquired: 12/7/2022 19:58:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0089**	**.0008**	W **-.0010**
Stddev	.0012	.0002	.0002
%RSD	13.47	21.80	19.83
#1	.0075	.0009	-.0009
#2	.0093	.0007	-.0009
#3	.0098	.0010	-.0012

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4996.9**	**52397.**	**4868.4**	**1953.0**
Stddev	10.8	63.	53.0	4.1
%RSD	.21559	.12083	1.0885	.20861
#1	5004.2	52444.	4900.3	1957.0
#2	5002.0	52325.	4807.3	1953.1
#3	4984.5	52423.	4897.7	1948.8

Zoom In Zoom Out

Sample Name: mp36739-mb1conf Acquired: 12/7/2022 20:03:15 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0058**	**.0003**	**.0025**	**-.0001**	**-.0000**	**-.0001**	**.0062**	**.0000**
Stddev	.0003	.0089	.0006	.0003	.0003	.0000	.0010	.0066	.0002
%RSD	126.0	152.9	198.6	11.55	389.4	142.9	1505.	107.2	1842.
#1	.0000	.0084	.0009	.0022	.0002	-.0000	-.0008	-.0011	.0002
#2	-.0002	.0131	-.0003	.0028	-.0003	.0000	.0010	.0079	.0001
#3	-.0005	-.0041	.0003	.0026	-.0000	-.0001	-.0004	.0117	-.0002

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0001**	**-.0004**	**.0007**	**.0121**	**.0083**	**.0003**	**.0076**	**.0001**
Stddev	.0003	.0001	.0001	.0002	.0019	.0157	.0004	.0261	.0000
%RSD	50.60	136.3	22.88	30.73	15.56	189.1	127.9	342.6	43.42
#1	.0009	-.0001	-.0004	.0007	.0119	-.0055	-.0001	.0207	.0001
#2	.0003	.0000	-.0003	.0004	.0140	.0050	.0005	-.0225	.0001
#3	.0007	-.0001	-.0005	.0008	.0103	.0253	.0005	.0247	.0000

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0245**	**.0001**	**.0012**	**.0012**	**.0040**	**.0001**	**.0008**	**-.0008**
Stddev	.0002	.0094	.0002	.0005	.0005	.0014	.0006	.0017	.0004
%RSD	6207.	38.14	235.9	37.71	42.03	34.01	451.5	197.1	42.84
#1	-.0001	.0335	.0000	.0014	.0017	.0027	.0000	.0027	-.0007
#2	-.0001	.0253	-.0001	.0007	.0008	.0054	.0007	-.0005	-.0012
#3	.0002	.0148	.0003	.0016	.0011	.0038	-.0004	.0003	-.0005

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0000**	**-.0001**	**-.0017**	**.0004**	**-.0009**	**.0004**	**.0001**
Stddev	.0005	.0000	.0003	.0008	.0001	.0007	.0002	.0001
%RSD	1314.	235.7	281.2	45.52	19.64	78.80	49.11	134.9
#1	-.0000	.0000	-.0004	-.0009	.0003	-.0002	.0003	-.0000
#2	-.0004	-.0000	.0000	-.0019	.0004	-.0009	.0006	.0001
#3	.0006	.0000	.0001	-.0024	.0004	-.0017	.0003	.0000

Zoom In Zoom Out

Sample Name: mp36739-mb1conf Acquired: 12/7/2022 20:03:15 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5760.6**	**56072.**	**4983.6**	**2084.2**
Stddev	9.8	185.	22.7	2.6
%RSD	.17053	.33045	.45572	.12647
#1	5749.3	56076.	4967.0	2081.2
#2	5765.5	55885.	5009.4	2085.2
#3	5766.9	56256.	4974.3	2086.1

Zoom In Zoom Out

Sample Name: jd56432-1 Acquired: 12/7/2022 20:08:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0142**	**-.0223**	**.0040**	**.5529**	**.0059**	**.0098**	**.0039**	**178.0**	**.0163**
Stddev	.0010	.1431	.0076	.0056	.0029	.0009	.0143	.1	.0006
%RSD	7.182	640.9	188.5	1.012	48.91	9.226	365.6	.0287	3.922
#1	.0142	-.1734	-.0019	.5589	.0026	.0103	-.0093	178.0	.0164
#2	.0153	-.0047	.0126	.5479	.0077	.0088	.0019	178.1	.0168
#3	.0132	.1112	.0014	.5520	.0075	.0103	.0190	178.0	.0156

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.528**	**-.0026**	**.1289**	**.0020**	**.1295**	**199.9**	**.0555**	**51.26**	**25.26**
Stddev	.037	.0006	.0020	.0025	.0122	.6	.0206	.45	.25
%RSD	2.415	22.30	1.589	123.2	9.403	.3122	37.19	.8829	.9900
#1	1.534	-.0019	.1267	.0023	.1225	199.2	.0648	51.08	25.53
#2	1.489	-.0031	.1307	.0043	.1436	200.1	.0319	51.77	25.03
#3	1.562	-.0027	.1294	-.0006	.1225	200.4	.0699	50.92	25.23

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**305.5**	**.0021**	**.0694**	**.0151**	**69.05**	**.0029**	**.0176**	**19.65**
Stddev	.0013	.4	.0016	.0119	.0114	.07	.0159	.0106	.03
%RSD	263.0	.1188	75.40	17.17	75.37	.0985	544.5	60.27	.1767
#1	.0018	305.5	.0025	.0601	.0020	68.97	-.0004	.0249	19.65
#2	.0002	305.9	.0003	.0829	.0223	69.08	-.0110	.0226	19.62
#3	-.0006	305.2	.0034	.0653	.0209	69.10	.0202	.0054	19.69

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0044**	**.6464**	**-.0066**	**-.0032**	**.1849**	**.0180**	**.0287**	**-.0010**
Stddev	.0111	.0007	.0055	.0073	.0085	.0039	.0008	.0017
%RSD	251.2	.1025	83.31	229.2	4.583	21.66	2.746	163.9
#1	.0076	.6457	-.0130	-.0054	.1920	.0143	.0292	-.0003
#2	-.0143	.6466	-.0040	.0050	.1871	.0176	.0290	.0002
#3	-.0065	.6469	-.0029	-.0091	.1755	.0220	.0278	-.0029

Zoom In Zoom Out

Sample Name: jd56432-1 Acquired: 12/7/2022 20:08:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5415.4**	**54200.**	**4978.0**	**2037.3**
Stddev	7.0	512.	20.6	1.8
%RSD	.12895	.94444	.41482	.08926
#1	5412.1	53729.	4965.6	2035.3
#2	5410.6	54745.	5001.8	2037.6
#3	5423.4	54125.	4966.5	2038.9

Zoom In Zoom Out

Sample Name: jd56432-5 Acquired: 12/7/2022 20:13:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088**	**.1449**	**.0051**	**.5974**	**.1256**	**.0067**	**-.0057**	**275.9**	**.0191**
Stddev	.0056	.1051	.0086	.0047	.0005	.0006	.0124	.6	.0020
%RSD	63.25	72.54	166.7	.7920	.3760	9.485	217.3	.2243	10.28
#1	.0091	.2591	-.0018	.5920	.1251	.0061	-.0127	275.5	.0177
#2	.0031	.1232	.0147	.5998	.1255	.0074	-.0131	275.6	.0183
#3	.0142	.0523	.0025	.6005	.1260	.0066	.0086	276.6	.0214

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.498**	**.0000**	**.1801**	**-.0023**	**.1892**	**133.4**	**.0174**	**61.16**	**57.62**
Stddev	.019	.0020	.0040	.0025	.0128	.3	.0054	.50	.03
%RSD	.5441	4944.	2.194	112.1	6.740	.2040	31.29	.8138	.0554
#1	3.488	-.0022	.1836	-.0035	.1924	133.4	.0215	60.61	57.62
#2	3.520	.0012	.1758	-.0040	.2001	133.2	.0112	61.29	57.65
#3	3.486	.0012	.1809	.0007	.1752	133.7	.0194	61.58	57.59

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**259.3**	**.0102**	**.1244**	**.0167**	**78.10**	**.0036**	**.0649**	**17.89**
Stddev	.0008	.5	.0051	.0118	.0081	.69	.0063	.0273	.11
%RSD	68.10	.1763	49.97	9.513	48.72	.8847	175.4	42.06	.6229
#1	-.0003	258.9	.0051	.1193	.0086	77.56	.0068	.0577	17.82
#2	-.0019	259.1	.0102	.1160	.0248	77.87	-.0037	.0419	17.83
#3	-.0013	259.8	.0152	.1379	.0166	78.88	.0077	.0951	18.02

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0068**	**.6101**	**-.0064**	**-.0026**	**.0667**	**.0147**	**.0229**	**-.0024**
Stddev	.0049	.0023	.0030	.0135	.0295	.0063	.0025	.0008
%RSD	71.84	.3793	47.38	512.4	44.24	42.75	10.94	32.83
#1	-.0013	.6075	-.0045	-.0014	.0762	.0126	.0249	-.0025
#2	-.0086	.6108	-.0047	-.0168	.0336	.0218	.0239	-.0016
#3	-.0105	.6119	-.0099	.0102	.0903	.0097	.0201	-.0031

Zoom In Zoom Out

Sample Name: jd56432-5 Acquired: 12/7/2022 20:13:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5460.6**	**54783.**	**4993.8**	**2047.2**
Stddev	8.3	368.	22.8	2.8
%RSD	.15211	.67157	.45587	.13665
#1	5453.5	54642.	5006.6	2044.8
#2	5458.5	54506.	5007.2	2050.3
#3	5469.7	55200.	4967.5	2046.6

Zoom In Zoom Out

Sample Name: jd56479-5f Acquired: 12/7/2022 20:18:45 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0072**	**.0060**	**.0413**	**.0366**	**.0240**	**-.0008**	**-.0017**	**19.18**	**.0075**
Stddev	.0061	.0128	.0068	.0053	.0013	.0004	.0076	.15	.0021
%RSD	84.26	211.4	16.48	14.41	5.229	55.03	454.5	.8030	27.70
#1	.0007	.0208	.0432	.0339	.0230	-.0010	.0064	19.27	.0086
#2	.0128	-.0002	.0471	.0427	.0236	-.0003	-.0088	19.00	.0087
#3	.0081	-.0024	.0338	.0333	.0254	-.0010	-.0026	19.27	.0051

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7246**	**.0129**	**-.0061**	**-.0042**	**36.30**	**5.623**	**.0054**	**6.968**	**11.48**
Stddev	.0123	.0011	.0064	.0036	.10	.145	.0081	.220	.01
%RSD	1.703	8.543	105.9	84.16	.2864	2.583	149.1	3.160	.0919
#1	.7388	.0131	.0002	-.0037	36.42	5.553	-.0032	7.168	11.49
#2	.7161	.0139	-.0058	-.0081	36.23	5.525	.0067	7.003	11.48
#3	.7190	.0117	-.0127	-.0010	36.26	5.790	.0128	6.732	11.47

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0067**	**25.76**	**.0030**	**.5271**	**.0117**	**.5526**	**.0024**	**.0448**	**7.224**
Stddev	.0022	.13	.0019	.0176	.0032	.0363	.0033	.0227	.028
%RSD	32.73	.5146	63.98	3.348	27.83	6.574	139.0	50.68	.3921
#1	.0074	25.60	.0050	.5270	.0124	.5944	.0017	.0663	7.200
#2	.0084	25.83	.0027	.5448	.0145	.5337	.0060	.0211	7.255
#3	.0042	25.84	.0012	.5095	.0081	.5295	-.0005	.0471	7.216

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.2818**	**-.0022**	**.0059**	**.0940**	**.0014**	**.0041**	**-.0015**
Stddev	.0073	.0022	.0004	.0212	.0068	.0079	.0019	.0006
%RSD	131.2	.7826	17.56	362.2	7.178	568.6	46.75	41.16
#1	-.0028	.2841	-.0026	-.0173	.1012	.0099	.0063	-.0023
#2	.0103	.2798	-.0020	.0242	.0878	-.0001	.0037	-.0012
#3	.0092	.2814	-.0020	.0107	.0931	-.0056	.0024	-.0012

Zoom In Zoom Out

Sample Name: jd56479-5f Acquired: 12/7/2022 20:18:45 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5708.1**	**55608.**	**4989.3**	**2075.2**
Stddev	5.1	147.	39.8	4.7
%RSD	.08911	.26442	.79725	.22771
#1	5705.7	55777.	4943.5	2072.1
#2	5704.6	55516.	5009.7	2072.9
#3	5713.9	55530.	5014.8	2080.7

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 20:23:55 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2549**	**40.18**	**1.942**	**1.972**	**1.984**	**2.003**	**1.961**	**40.76**	**2.008**
Stddev	.0007	.12	.004	.003	.007	.003	.002	.16	.001
%RSD	.2846	.3061	.1926	.1298	.3645	.1537	.1083	.4031	.0542
#1	.2552	40.27	1.946	1.972	1.989	2.006	1.963	40.88	2.009
#2	.2555	40.23	1.940	1.969	1.988	2.002	1.962	40.84	2.007
#3	.2541	40.04	1.939	1.974	1.976	2.000	1.959	40.58	2.009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.995**	**1.972**	**1.977**	**1.947**	**41.03**	**40.16**	**1.939**	**40.58**	**2.004**
Stddev	.011	.005	.011	.004	.07	.21	.003	.12	.004
%RSD	.5652	.2393	.5363	.2218	.1630	.5260	.1725	.2944	.2080
#1	2.003	1.972	1.988	1.950	41.10	40.32	1.941	40.64	2.009
#2	2.000	1.968	1.975	1.950	41.02	40.24	1.941	40.65	2.001
#3	1.982	1.977	1.967	1.942	40.97	39.92	1.935	40.44	2.003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.986**	**40.67**	**1.998**	**1.836**	**1.997**	**1.914**	**1.947**	**1.933**	**4.804**
Stddev	.006	.07	.002	.004	.003	.006	.008	.003	.007
%RSD	.3136	.1806	.0762	.2447	.1382	.3170	.4028	.1522	.1408
#1	1.992	40.74	1.999	1.831	2.000	1.921	1.956	1.935	4.810
#2	1.987	40.67	1.996	1.840	1.994	1.910	1.943	1.934	4.797
#3	1.980	40.60	1.999	1.836	1.997	1.911	1.941	1.929	4.807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 20:23:55 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.979**	**1.992**	**1.981**	**1.917**	**1.976**	**1.987**	**1.987**	**1.970**
Stddev	.004	.007	.002	.051	.005	.002	.001	.004
%RSD	.2253	.3419	.1072	2.682	.2365	.1034	.0594	.1862
#1	1.984	1.999	1.979	1.965	1.981	1.989	1.985	1.973
#2	1.980	1.993	1.982	1.923	1.972	1.987	1.987	1.971
#3	1.975	1.985	1.984	1.863	1.976	1.985	1.988	1.966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5171.8**	**54519.**	**5063.1**	**2038.3**
Stddev	5.7	148.	15.1	1.9
%RSD	.11095	.27089	.29811	.09206
#1	5177.5	54472.	5049.2	2040.3
#2	5172.0	54684.	5079.2	2038.0
#3	5166.0	54400.	5061.0	2036.5

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 20:28:42 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0032**	**.0011**	**.0029**	**-.0000**	**-.0001**	**.0008**	**.0038**	**.0003**
Stddev	.0005	.0031	.0005	.0007	.0003	.0000	.0006	.0058	.0002
%RSD	360.9	96.20	45.42	24.24	843.9	47.56	80.25	149.6	72.32
#1	-.0004	-.0003	.0015	.0033	-.0003	-.0001	.0011	-.0006	.0001
#2	.0002	.0057	.0014	.0021	.0001	-.0000	.0012	.0103	.0002
#3	.0007	.0043	.0005	.0034	.0001	-.0001	.0001	.0018	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0034**	**-.0002**	**-.0003**	**-.0002**	**.0031**	**.0061**	**-.0008**	**-.0210**	**-.0000**
Stddev	.0032	.0001	.0003	.0002	.0029	.0115	.0003	.0318	.0001
%RSD	92.39	60.99	99.63	159.7	92.41	187.0	35.95	151.3	2192.
#1	-.0035	-.0003	-.0005	.0000	.0063	.0132	-.0010	.0154	-.0000
#2	-.0065	-.0001	-.0005	-.0001	.0023	-.0071	-.0005	-.0352	.0001
#3	-.0002	-.0002	.0000	-.0004	.0007	.0124	-.0010	-.0433	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0055**	**-.0000**	**-.0002**	**.0017**	**.0015**	**-.0007**	**.0026**	**-.0070**
Stddev	.0002	.0056	.0003	.0004	.0002	.0027	.0008	.0007	.0012
%RSD	53.19	101.7	1290.	170.6	14.50	174.4	117.1	27.56	17.35
#1	.0006	-.0100	.0003	-.0003	.0019	.0014	-.0014	.0023	-.0066
#2	.0002	-.0071	-.0002	.0002	.0014	.0043	-.0006	.0021	-.0083
#3	.0003	.0007	-.0002	-.0006	.0018	-.0011	.0001	.0034	-.0060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 20:28:42 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0000**	**.0002**	**-.0003**	**.0003**	**.0005**	**-.0004**	**.0000**
Stddev	.0005	.0000	.0003	.0009	.0002	.0012	.0001	.0001
%RSD	98.94	161.6	113.7	306.5	68.69	259.6	21.07	496.6
#1	.0005	.0000	.0001	.0002	.0001	.0017	-.0003	-.0001
#2	-.0000	-.0000	.0005	-.0013	.0004	-.0007	-.0005	.0001
#3	.0009	-.0000	.0001	.0002	.0005	.0004	-.0004	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5744.8**	**55741.**	**4944.7**	**2077.5**
Stddev	7.5	263.	26.7	2.0
%RSD	.13126	.47206	.53902	.09790
#1	5748.9	55788.	4973.1	2077.2
#2	5749.3	55978.	4920.3	2079.6
#3	5736.1	55458.	4940.7	2075.6

Zoom In Zoom Out

Sample Name: mp36754-mb1conf Acquired: 12/7/2022 20:33:56 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0419**	**.0001**	**.0021**	**.0003**	**-.0002**	**.0006**	**.1153**	**.0001**
Stddev	.0006	.0032	.0004	.0001	.0000	.0001	.0013	.0019	.0002
%RSD	160.9	7.602	645.2	4.124	16.46	36.05	208.9	1.655	304.3
#1	-.0003	.0397	.0006	.0020	.0002	-.0002	-.0007	.1139	.0003
#2	.0006	.0405	-.0001	.0022	.0003	-.0002	.0006	.1144	-.0001
#3	.0007	.0456	-.0002	.0022	.0003	-.0001	.0019	.1174	.0001

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0000**	**.0010**	**.0020**	**.0731**	**.0341**	**.0003**	**.0410**	**.0010**
Stddev	.0018	.0004	.0002	.0005	.0014	.0132	.0009	.0226	.0000
%RSD	548.1	1058.	20.15	26.30	1.877	38.72	268.8	55.15	4.891
#1	.0017	-.0004	.0011	.0024	.0733	.0493	.0013	.0496	.0010
#2	-.0010	.0003	.0012	.0021	.0743	.0261	-.0004	.0581	.0010
#3	-.0017	.0001	.0008	.0014	.0716	.0268	.0000	.0154	.0009

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0708**	**.0002**	**.0196**	**.0016**	**.0114**	**.0003**	**.0007**	**.0330**
Stddev	.0001	.0036	.0006	.0017	.0013	.0019	.0008	.0016	.0014
%RSD	10.08	5.059	279.2	8.446	79.34	17.06	264.7	223.0	4.288
#1	.0007	.0688	.0001	.0214	.0016	.0102	.0011	-.0010	.0314
#2	.0006	.0749	.0008	.0182	.0029	.0137	-.0005	.0010	.0341
#3	.0005	.0687	-.0003	.0193	.0004	.0104	.0003	.0021	.0335

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0208**	**.0005**	**.0024**	**.0010**	**.0002**	**-.0009**	**.0035**	**.0003**
Stddev	.0006	.0001	.0003	.0017	.0003	.0007	.0001	.0004
%RSD	3.041	17.09	14.07	179.6	178.5	79.97	3.066	145.5
#1	.0211	.0004	.0020	.0026	.0001	-.0016	.0034	.0001
#2	.0201	.0005	.0024	.0011	.0005	-.0005	.0034	.0008
#3	.0212	.0006	.0026	-.0009	-.0001	-.0004	.0036	-.0000

Zoom In Zoom Out

Sample Name: mp36754-mb1conf Acquired: 12/7/2022 20:33:56 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5749.2**	**56054.**	**5100.8**	**2069.5**
Stddev	20.5	125.	6.4	9.3
%RSD	.35700	.22323	.12579	.45163
#1	5772.8	55911.	5095.3	2080.2
#2	5739.2	56141.	5107.8	2065.9
#3	5735.6	56111.	5099.3	2062.6

Zoom In Zoom Out

Sample Name: jd56513-4 Acquired: 12/7/2022 20:39:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0073**	**11.19**	**.3142**	**.0109**	**.1863**	**.0026**	**.0058**	**8.766**	**.0032**
Stddev	.0007	.04	.0022	.0025	.0006	.0002	.0027	.009	.0003
%RSD	9.346	.3415	.6997	22.93	.3149	8.467	46.81	.1010	10.64
#1	.0074	11.15	.3158	.0132	.1860	.0024	.0073	8.757	.0036
#2	.0067	11.19	.3152	.0110	.1860	.0028	.0075	8.774	.0030
#3	.0080	11.22	.3117	.0083	.1870	.0025	.0027	8.767	.0030

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2254**	**.0175**	**.0650**	**.1028**	**224.7**	**2.727**	**.0090**	**1.101**	**.1557**
Stddev	.0056	.0005	.0011	.0011	.1	.027	.0005	.077	.0001
%RSD	2.500	3.038	1.669	1.096	.0340	.9982	5.492	7.011	.0430
#1	.2202	.0177	.0638	.1017	224.8	2.758	.0086	1.082	.1558
#2	.2314	.0169	.0653	.1040	224.6	2.715	.0095	1.186	.1556
#3	.2246	.0180	.0659	.1027	224.7	2.707	.0088	1.035	.1557

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0218**	**.3903**	**.0513**	**.7949**	**.0635**	**9.078**	**.0008**	**.0456**	**1.223**
Stddev	.0003	.0101	.0011	.0023	.0017	.026	.0018	.0038	.003
%RSD	1.433	2.587	2.176	.2901	2.629	.2885	238.9	8.235	.2660
#1	.0220	.3923	.0525	.7972	.0646	9.107	-.0011	.0487	1.227
#2	.0214	.3794	.0503	.7926	.0615	9.056	.0009	.0467	1.222
#3	.0218	.3993	.0510	.7948	.0643	9.072	.0025	.0414	1.221

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0286**	**.1302**	**1.913**	**.0089**	**.1192**	**.0040**	**.0857**	**.0488**
Stddev	.0006	.0002	.007	.0023	.0012	.0007	.0003	.0003
%RSD	2.174	.1165	.3870	26.03	.9838	18.01	.3881	.5552
#1	.0290	.1302	1.908	.0115	.1181	.0040	.0858	.0488
#2	.0289	.1301	1.921	.0070	.1205	.0034	.0854	.0485
#3	.0279	.1304	1.909	.0083	.1191	.0048	.0860	.0490

Zoom In Zoom Out

Sample Name: jd56513-4 Acquired: 12/7/2022 20:39:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5641.3**	**56017.**	**5078.4**	**2072.4**
Stddev	24.7	159.	3.2	12.1
%RSD	.43764	.28436	.06231	.58464
#1	5638.1	55836.	5082.0	2070.9
#2	5667.5	56137.	5077.1	2085.2
#3	5618.4	56077.	5076.0	2061.1

Zoom In Zoom Out

Sample Name: jd56513-7 Acquired: 12/7/2022 20:44:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081**	**28.38**	**.2903**	**.0280**	**.3128**	**.0043**	**.0043**	**13.15**	**.0031**
Stddev	.0004	.30	.0007	.0005	.0046	.0003	.0014	.23	.0004
%RSD	5.364	1.062	.2320	1.848	1.458	6.068	32.79	1.716	12.08
#1	.0078	28.20	.2903	.0277	.3101	.0042	.0027	13.04	.0033
#2	.0079	28.21	.2896	.0277	.3102	.0041	.0046	13.01	.0027
#3	.0086	28.73	.2909	.0286	.3180	.0046	.0055	13.41	.0034

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3343**	**.0396**	**.3316**	**.1948**	**270.1**	**5.201**	**.0322**	**4.335**	**.5140**
Stddev	.0046	.0002	.0013	.0004	3.3	.073	.0008	.120	.0011
%RSD	1.390	.5355	.3940	.1823	1.239	1.412	2.418	2.769	.2134
#1	.3289	.0398	.3310	.1951	268.5	5.179	.0313	4.278	.5129
#2	.3375	.0396	.3307	.1944	267.9	5.141	.0325	4.254	.5139
#3	.3364	.0394	.3331	.1949	273.9	5.283	.0328	4.473	.5151

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0706**	**.7186**	**.1377**	**1.173**	**.0947**	**8.725**	**.0036**	**.0238**	**1.357**
Stddev	.0002	.0193	.0006	.010	.0015	.051	.0044	.0020	.008
%RSD	.2333	2.692	.4030	.8384	1.551	.5844	121.3	8.592	.5953
#1	.0707	.7002	.1374	1.162	.0935	8.678	.0086	.0257	1.353
#2	.0705	.7167	.1384	1.180	.0942	8.719	.0005	.0216	1.352
#3	.0708	.7388	.1374	1.178	.0963	8.779	.0017	.0241	1.366

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0287**	**.2225**	**2.969**	**.0154**	**.2534**	**.0036**	**.3349**	**.0817**
Stddev	.0011	.0032	.013	.0011	.0009	.0014	.0011	.0002
%RSD	3.842	1.448	.4259	7.309	.3433	38.68	.3298	.1886
#1	.0275	.2207	2.959	.0149	.2541	.0027	.3346	.0818
#2	.0296	.2206	2.964	.0146	.2536	.0029	.3339	.0819
#3	.0292	.2262	2.983	.0167	.2524	.0052	.3361	.0816

Zoom In Zoom Out

Sample Name: jd56513-7 Acquired: 12/7/2022 20:44:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5625.1**	**56296.**	**5117.7**	**2100.0**
Stddev	16.2	55.	35.5	7.4
%RSD	.28868	.09684	.69431	.35038
#1	5617.6	56358.	5114.9	2096.1
#2	5643.7	56278.	5154.5	2108.5
#3	5613.9	56253.	5083.6	2095.4

Zoom In Zoom Out

Sample Name: jd56513-9 Acquired: 12/7/2022 20:49:11 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0202**	**92.72**	**.2758**	**.0861**	**.9337**	**.0075**	**.0031**	**37.20**	**.0135**
Stddev	.0034	.23	.0018	.0021	.0020	.0002	.0022	.16	.0008
%RSD	16.66	.2433	.6588	2.441	.2184	2.709	71.84	.4266	5.637
#1	.0171	92.98	.2779	.0846	.9361	.0074	.0031	37.02	.0134
#2	.0198	92.62	.2747	.0885	.9327	.0077	.0052	37.30	.0143
#3	.0238	92.57	.2748	.0851	.9324	.0074	.0008	37.29	.0128

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7938**	**.1081**	**.7969**	**.5237**	**653.6**	**8.685**	**.1015**	**21.33**	**3.590**
Stddev	.0003	.0004	.0048	.0047	.8	.163	.0037	.25	.010
%RSD	.0341	.4085	.6047	.8964	.1238	1.874	3.634	1.186	.2893
#1	.7935	.1083	.7954	.5217	654.4	8.844	.1056	21.18	3.579
#2	.7941	.1076	.8023	.5291	653.5	8.694	.0983	21.18	3.594
#3	.7937	.1083	.7931	.5204	652.8	8.519	.1007	21.62	3.599

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0249**	**1.948**	**.4919**	**2.713**	**1.196**	**6.638**	**.0184**	**.0427**	**2.837**
Stddev	.0008	.033	.0080	.031	.022	.087	.0056	.0038	.040
%RSD	3.198	1.697	1.631	1.128	1.878	1.309	30.23	8.881	1.406
#1	.0245	1.981	.5011	2.741	1.222	6.738	.0123	.0389	2.883
#2	.0258	1.915	.4868	2.680	1.181	6.577	.0196	.0465	2.811
#3	.0243	1.947	.4877	2.716	1.184	6.600	.0233	.0429	2.818

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1624**	**.5911**	**3.659**	**.0190**	**1.409**	**.0146**	**1.103**	**.1120**
Stddev	.0013	.0009	.012	.0062	.009	.0075	.014	.0010
%RSD	.7816	.1596	.3302	32.61	.6278	51.55	1.288	.9193
#1	.1639	.5921	3.647	.0134	1.403	.0079	1.117	.1129
#2	.1614	.5908	3.658	.0179	1.419	.0131	1.089	.1122
#3	.1621	.5903	3.671	.0256	1.404	.0227	1.101	.1109

Zoom In Zoom Out

Sample Name: jd56513-9 Acquired: 12/7/2022 20:49:11 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5575.7**	**56037.**	**5097.3**	**2085.4**
Stddev	44.0	170.	15.8	19.8
%RSD	.78944	.30413	.31033	.94790
#1	5525.0	56048.	5089.6	2062.6
#2	5604.4	56202.	5086.8	2098.3
#3	5597.6	55861.	5115.5	2095.2

Zoom In Zoom Out

Sample Name: jd56513-15 Acquired: 12/7/2022 20:54:12 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068**	**82.18**	**.3775**	**.0494**	**1.711**	**.0064**	**.0024**	**22.20**	**.0076**
Stddev	.0029	3.09	.0027	.0014	.065	.0004	.0019	.84	.0009
%RSD	42.00	3.764	.7153	2.794	3.777	5.920	75.99	3.769	12.23
#1	.0058	81.18	.3779	.0498	1.685	.0060	.0007	22.00	.0072
#2	.0100	85.65	.3747	.0505	1.785	.0067	.0044	23.12	.0087
#3	.0046	79.72	.3800	.0479	1.663	.0063	.0023	21.48	.0070

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4780**	**.0434**	**.5515**	**.2523**	**216.7**	**6.044**	**.0375**	**7.103**	**2.240**
Stddev	.0068	.0003	.0011	.0013	8.0	.218	.0021	.254	.009
%RSD	1.429	.7797	.1914	.5074	3.691	3.605	5.698	3.575	.4073
#1	.4716	.0435	.5512	.2518	213.9	5.973	.0400	7.011	2.251
#2	.4852	.0436	.5507	.2514	225.7	6.289	.0364	7.390	2.234
#3	.4773	.0430	.5527	.2538	210.4	5.871	.0362	6.908	2.236

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0161**	**.3729**	**.1693**	**7.991**	**.5889**	**6.687**	**.0104**	**.0204**	**2.249**
Stddev	.0009	.0192	.0015	.052	.0032	.061	.0035	.0016	.013
%RSD	5.492	5.153	.8622	.6535	.5481	.9182	33.46	7.737	.5815
#1	.0162	.3751	.1681	7.945	.5853	6.648	.0075	.0189	2.249
#2	.0152	.3527	.1689	7.981	.5898	6.654	.0094	.0220	2.236
#3	.0170	.3910	.1709	8.048	.5916	6.757	.0142	.0201	2.262

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0415**	**.1958**	**1.469**	**.0074**	**.4291**	**.0204**	**4.077**	**.0485**
Stddev	.0014	.0077	.006	.0019	.0007	.0007	.023	.0003
%RSD	3.410	3.946	.4071	25.15	.1542	3.245	.5588	.6270
#1	.0399	.1929	1.475	.0066	.4297	.0206	4.051	.0484
#2	.0425	.2045	1.463	.0095	.4292	.0209	4.087	.0483
#3	.0422	.1899	1.469	.0060	.4283	.0197	4.093	.0489

Zoom In Zoom Out

Sample Name: jd56513-15 Acquired: 12/7/2022 20:54:12 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5486.8**	**55277.**	**5114.5**	**2082.2**
Stddev	14.7	351.	178.3	4.4
%RSD	.26712	.63571	3.4865	.21363
#1	5474.3	54872.	5155.5	2078.5
#2	5503.0	55462.	4919.3	2087.2
#3	5483.2	55497.	5268.8	2081.1

Zoom In Zoom Out

Sample Name: jd56513-16 Acquired: 12/7/2022 20:59:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088**	**95.57**	**.3454**	**.0564**	**1.930**	**.0083**	**-.0016**	**31.22**	**.0085**
Stddev	.0008	.43	.0048	.0017	.008	.0000	.0029	.20	.0009
%RSD	8.997	.4519	1.396	2.931	.3956	.2193	180.6	.6268	10.38
#1	.0079	95.14	.3455	.0582	1.921	.0083	-.0046	31.01	.0075
#2	.0095	95.58	.3502	.0560	1.935	.0084	-.0013	31.28	.0089
#3	.0090	96.00	.3405	.0549	1.933	.0083	.0011	31.38	.0092

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5898**	**.0424**	**.7452**	**.4068**	**245.2**	**5.884**	**.0520**	**7.848**	**3.039**
Stddev	.0039	.0006	.0038	.0006	1.0	.055	.0015	.144	.008
%RSD	.6650	1.382	.5103	.1481	.4093	.9403	2.859	1.834	.2647
#1	.5856	.0425	.7417	.4063	244.3	5.876	.0517	7.963	3.036
#2	.5933	.0430	.7446	.4068	245.0	5.833	.0536	7.687	3.033
#3	.5905	.0418	.7492	.4075	246.3	5.943	.0507	7.895	3.049

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0155**	**.5404**	**.2053**	**8.801**	**.6909**	**8.413**	**.0077**	**.0235**	**2.358**
Stddev	.0007	.0297	.0024	.118	.0063	.129	.0021	.0034	.039
%RSD	4.359	5.489	1.165	1.340	.9093	1.532	26.69	14.48	1.642
#1	.0155	.5725	.2062	8.830	.6918	8.433	.0064	.0216	2.381
#2	.0162	.5346	.2072	8.902	.6967	8.531	.0101	.0214	2.379
#3	.0149	.5140	.2026	8.672	.6843	8.275	.0066	.0274	2.313

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0393**	**.2378**	**1.718**	**.0097**	**.5655**	**.0216**	**4.426**	**.0744**
Stddev	.0016	.0012	.004	.0036	.0022	.0004	.075	.0002
%RSD	3.990	.4846	.2282	37.47	.3914	2.055	1.685	.3053
#1	.0409	.2367	1.717	.0065	.5630	.0217	4.450	.0743
#2	.0393	.2375	1.714	.0137	.5671	.0220	4.487	.0746
#3	.0378	.2390	1.722	.0090	.5664	.0211	4.343	.0742

Zoom In Zoom Out

Sample Name: jd56513-16 Acquired: 12/7/2022 20:59:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5475.9**	**56313.**	**5201.7**	**2090.9**
Stddev	59.7	183.	14.0	27.8
%RSD	1.0901	.32422	.26993	1.3316
#1	5448.3	56362.	5195.6	2078.7
#2	5435.0	56466.	5217.7	2071.3
#3	5544.4	56111.	5191.7	2122.8

Zoom In Zoom Out

Sample Name: jd56513-18 Acquired: 12/7/2022 21:04:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064**	**90.61**	**.1575**	**.1362**	**.8897**	**.0085**	**.0030**	**49.83**	**.0042**
Stddev	.0019	1.10	.0005	.0013	.0111	.0005	.0012	.48	.0004
%RSD	29.65	1.213	.3278	.9789	1.243	5.759	38.50	.9546	10.50
#1	.0070	89.39	.1571	.1353	.8783	.0079	.0033	49.28	.0042
#2	.0043	90.94	.1574	.1377	.8903	.0088	.0040	50.09	.0038
#3	.0080	91.51	.1581	.1356	.9004	.0087	.0018	50.11	.0047

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5159**	**.0583**	**.2220**	**.4379**	**236.5**	**10.66**	**.0828**	**24.04**	**1.965**
Stddev	.0049	.0008	.0019	.0044	2.5	.12	.0021	.21	.007
%RSD	.9494	1.452	.8685	1.012	1.039	1.148	2.582	.8795	.3635
#1	.5146	.0573	.2198	.4329	233.8	10.53	.0852	23.85	1.957
#2	.5119	.0590	.2229	.4394	237.1	10.76	.0810	23.99	1.967
#3	.5214	.0585	.2233	.4414	238.7	10.70	.0823	24.27	1.971

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0163**	**1.407**	**.1783**	**3.644**	**.3347**	**4.730**	**.0063**	**.0159**	**1.812**
Stddev	.0006	.016	.0017	.025	.0038	.048	.0013	.0020	.009
%RSD	3.714	1.151	.9816	.6954	1.145	1.019	20.65	12.40	.5251
#1	.0156	1.392	.1764	3.621	.3306	4.675	.0049	.0159	1.813
#2	.0166	1.424	.1786	3.671	.3381	4.767	.0075	.0139	1.820
#3	.0166	1.404	.1798	3.641	.3356	4.747	.0065	.0178	1.802

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0379**	**.4012**	**2.868**	**.0022**	**.5934**	**.0045**	**.8406**	**.0706**
Stddev	.0016	.0046	.013	.0061	.0047	.0018	.0093	.0003
%RSD	4.340	1.139	.4566	279.2	.7852	39.16	1.106	.4231
#1	.0381	.3961	2.857	.0088	.5890	.0025	.8301	.0704
#2	.0362	.4027	2.865	-.0031	.5929	.0053	.8477	.0706
#3	.0394	.4048	2.882	.0009	.5982	.0057	.8441	.0710

Zoom In Zoom Out

Sample Name: jd56513-18 Acquired: 12/7/2022 21:04:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5395.7**	**55371.**	**5078.9**	**2083.3**
Stddev	21.7	77.	16.8	4.9
%RSD	.40142	.13995	.33019	.23654
#1	5391.3	55282.	5069.4	2080.6
#2	5376.5	55418.	5069.0	2080.3
#3	5419.2	55413.	5098.3	2089.0

Zoom In Zoom Out

Sample Name: jd56513-19 Acquired: 12/7/2022 21:09:06 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**107.5**	**.2175**	**.1215**	**1.085**	**.0118**	**.0029**	**91.65**	**.0050**
Stddev	.0005	.3	.0022	.0019	.004	.0001	.0012	.28	.0002
%RSD	12.38	.2463	.9962	1.569	.3399	.7879	41.93	.3040	4.664
#1	.0046	107.5	.2199	.1237	1.085	.0118	.0030	91.76	.0047
#2	.0048	107.8	.2168	.1204	1.089	.0118	.0016	91.87	.0050
#3	.0038	107.3	.2157	.1204	1.082	.0117	.0040	91.34	.0051

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5844**	**.0526**	**.2234**	**.4121**	F **274.1**	**11.17**	**.0918**	**33.67**	**2.157**
Stddev	.0040	.0005	.0007	.0011	.6	.04	.0006	.14	.004
%RSD	.6893	.9610	.3194	.2603	.2267	.3167	.6952	.4216	.1990
#1	.5879	.0532	.2226	.4116	274.0	11.19	.0920	33.69	2.162
#2	.5800	.0524	.2234	.4114	274.8	11.20	.0923	33.81	2.157
#3	.5852	.0522	.2241	.4134	273.6	11.13	.0911	33.52	2.153

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0145**	**2.091**	**.2093**	**3.687**	**.3312**	**5.315**	**.0058**	**.0125**	**2.036**
Stddev	.0002	.014	.0010	.034	.0028	.065	.0011	.0018	.014
%RSD	1.362	.6731	.4943	.9089	.8436	1.213	19.13	14.19	.6961
#1	.0147	2.083	.2105	3.723	.3344	5.389	.0060	.0109	2.052
#2	.0143	2.108	.2087	3.657	.3296	5.287	.0046	.0122	2.030
#3	.0145	2.084	.2088	3.681	.3295	5.269	.0068	.0144	2.026

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0324**	**.5819**	**3.063**	**.0026**	**.6094**	**.0088**	**.8180**	**.0972**
Stddev	.0004	.0011	.005	.0029	.0008	.0007	.0161	.0008
%RSD	1.274	.1942	.1532	112.8	.1286	8.362	1.970	.7909
#1	.0328	.5823	3.067	-.0002	.6088	.0081	.8365	.0965
#2	.0320	.5828	3.063	.0023	.6092	.0088	.8072	.0980
#3	.0325	.5806	3.058	.0056	.6103	.0095	.8103	.0969

Zoom In Zoom Out

Sample Name: jd56513-19 Acquired: 12/7/2022 21:09:06 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5169.7**	**55934.**	**5298.4**	**2066.8**
Stddev	69.9	142.	32.4	28.5
%RSD	1.3525	.25452	.61075	1.3777
#1	5090.4	55775.	5328.1	2034.6
#2	5222.5	55981.	5263.9	2088.7
#3	5196.2	56048.	5303.3	2077.1

Zoom In Zoom Out

Sample Name: jd56513-19 Acquired: 12/7/2022 21:14:03 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**118.1**	**.2607**	**.1533**	**1.230**	**.0133**	**.0045**	**102.1**	**.0055**
Stddev	.0025	.8	.0043	.0022	.009	.0001	.0073	.8	.0021
%RSD	68.86	.7076	1.659	1.441	.7194	.3874	161.2	.8147	38.30
#1	.0008	117.3	.2602	.1558	1.222	.0133	.0052	101.2	.0057
#2	.0054	118.2	.2566	.1517	1.230	.0133	.0114	102.3	.0033
#3	.0048	118.9	.2652	.1523	1.239	.0132	-.0031	102.9	.0074

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6902**	**.0633**	**.2674**	**.4763**	**323.7**	**12.44**	**.1019**	**38.51**	**2.612**
Stddev	.0094	.0016	.0050	.0057	2.7	.08	.0104	.42	.034
%RSD	1.366	2.543	1.862	1.194	.8340	.6685	10.23	1.091	1.311
#1	.6882	.0639	.2616	.4703	321.4	12.51	.0922	38.05	2.583
#2	.6820	.0615	.2700	.4769	323.0	12.35	.1129	38.62	2.603
#3	.7005	.0645	.2705	.4816	326.6	12.47	.1006	38.87	2.650

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0178**	**2.331**	**.2502**	**4.476**	**.4012**	**6.253**	**.0075**	**.0063**	**2.358**
Stddev	.0004	.056	.0046	.049	.0049	.064	.0076	.0019	.016
%RSD	2.533	2.385	1.850	1.091	1.218	1.019	101.1	30.56	.6708
#1	.0176	2.294	.2479	4.427	.4021	6.193	.0047	.0077	2.347
#2	.0183	2.303	.2472	4.477	.3960	6.246	.0017	.0041	2.351
#3	.0174	2.394	.2555	4.524	.4057	6.320	.0160	.0071	2.376

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0405**	**.6586**	**3.630**	**.0048**	**.7316**	**.0062**	**1.042**	**.1135**
Stddev	.0015	.0025	.052	.0159	.0050	.0046	.012	.0008
%RSD	3.676	.3789	1.424	330.5	.6841	74.26	1.108	.6713
#1	.0412	.6574	3.590	.0173	.7272	.0009	1.034	.1127
#2	.0388	.6569	3.612	.0101	.7305	.0095	1.036	.1142
#3	.0415	.6615	3.688	-.0130	.7370	.0081	1.055	.1137

Zoom In Zoom Out

Sample Name: jd56513-19 Acquired: 12/7/2022 21:14:03 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5438.6**	**55328.**	**5051.7**	**2067.2**
Stddev	40.3	134.	29.4	13.7
%RSD	.74073	.24170	.58149	.66173
#1	5455.9	55338.	5039.5	2073.1
#2	5467.2	55456.	5030.3	2076.9
#3	5392.5	55189.	5085.2	2051.6

Zoom In Zoom Out

Sample Name: jd56513-20 Acquired: 12/7/2022 21:19:06 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0059**	**113.0**	**.3098**	**.1537**	**1.319**	**.0118**	**.0066**	**34.80**	**.0044**
Stddev	.0012	.2	.0021	.0014	.003	.0003	.0034	.11	.0002
%RSD	20.06	.1631	.6739	.9073	.2169	2.728	51.93	.3251	5.515
#1	.0072	112.9	.3099	.1531	1.317	.0114	.0055	34.67	.0046
#2	.0055	112.8	.3118	.1527	1.318	.0120	.0039	34.86	.0041
#3	.0050	113.2	.3076	.1553	1.322	.0119	.0105	34.88	.0045

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5120**	**.0705**	**.3238**	**.3032**	**259.5**	**12.58**	**.0949**	**12.37**	**1.165**
Stddev	.0078	.0015	.0008	.0011	.3	.09	.0023	.16	.004
%RSD	1.515	2.177	.2591	.3547	.1113	.7258	2.400	1.274	.3006
#1	.5032	.0688	.3238	.3030	259.2	12.55	.0923	12.19	1.161
#2	.5181	.0708	.3247	.3022	259.4	12.68	.0957	12.48	1.168
#3	.5146	.0718	.3230	.3043	259.8	12.50	.0966	12.45	1.167

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0140**	**1.973**	**.2968**	**3.780**	**.2147**	**3.148**	**.0047**	**.0138**	**1.604**
Stddev	.0005	.027	.0031	.054	.0037	.023	.0006	.0052	.018
%RSD	3.748	1.357	1.047	1.435	1.742	.7343	13.22	37.79	1.091
#1	.0134	1.980	.2946	3.730	.2126	3.124	.0041	.0082	1.597
#2	.0144	1.996	.2955	3.772	.2126	3.151	.0054	.0146	1.591
#3	.0142	1.944	.3004	3.838	.2191	3.170	.0047	.0185	1.624

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0307**	**.9571**	**3.739**	**.0058**	**1.120**	**.0064**	**.6324**	**.0386**
Stddev	.0022	.0032	.019	.0035	.004	.0029	.0090	.0006
%RSD	7.127	.3337	.5031	60.49	.3729	44.80	1.423	1.595
#1	.0302	.9536	3.718	.0026	1.115	.0043	.6248	.0381
#2	.0288	.9579	3.747	.0095	1.122	.0052	.6301	.0392
#3	.0331	.9598	3.753	.0053	1.122	.0096	.6424	.0383

Zoom In Zoom Out

Sample Name: jd56513-20 Acquired: 12/7/2022 21:19:06 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5451.7**	**56543.**	**5197.6**	**2119.5**
Stddev	2.1	44.	29.1	3.9
%RSD	.03779	.07740	.55955	.18232
#1	5450.8	56494.	5171.1	2122.2
#2	5450.3	56555.	5193.1	2115.1
#3	5454.1	56580.	5228.7	2121.2

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 21:24:07 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2496**	**39.58**	**1.929**	**1.948**	**1.946**	**1.979**	**1.945**	**39.78**	**1.947**
Stddev	.0011	.38	.005	.002	.017	.014	.004	.32	.006
%RSD	.4572	.9666	.2678	.1113	.8710	.7188	.2245	.7978	.2966
#1	.2493	39.71	1.935	1.949	1.954	1.986	1.950	39.98	1.953
#2	.2509	39.15	1.928	1.945	1.926	1.962	1.944	39.41	1.943
#3	.2486	39.88	1.925	1.949	1.957	1.988	1.941	39.94	1.944
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.960**	**1.944**	**1.962**	**1.922**	**40.49**	**39.29**	**1.918**	**39.65**	**1.985**
Stddev	.002	.005	.007	.004	.32	.35	.015	.29	.005
%RSD	.1053	.2788	.3557	.2076	.7954	.9033	.7877	.7214	.2358
#1	1.962	1.950	1.966	1.923	40.67	39.42	1.925	39.92	1.987
#2	1.958	1.942	1.954	1.925	40.11	38.89	1.901	39.35	1.979
#3	1.960	1.939	1.966	1.917	40.67	39.56	1.929	39.69	1.988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.961**	**40.13**	**1.940**	F **1.765**	**1.957**	**1.885**	**1.942**	**1.919**	**4.738**
Stddev	.004	.27	.004	.001	.006	.006	.002	.003	.012
%RSD	.2126	.6721	.2089	.0743	.2905	.3224	.1134	.1559	.2442
#1	1.966	40.26	1.945	1.766	1.961	1.890	1.942	1.917	4.751
#2	1.960	39.82	1.938	1.765	1.960	1.886	1.944	1.923	4.732
#3	1.958	40.31	1.938	1.763	1.951	1.878	1.939	1.918	4.730
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000					
Range				-10.00%					

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 21:24:07 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.971**	**1.949**	**1.940**	**2.031**	**1.947**	**1.936**	**1.952**	**1.946**
Stddev	.002	.017	.001	.013	.003	.004	.005	.002
%RSD	.0790	.8460	.0699	.6491	.1682	.1973	.2359	.0798
#1	1.972	1.957	1.940	2.046	1.950	1.935	1.956	1.948
#2	1.973	1.930	1.942	2.021	1.944	1.941	1.947	1.945
#3	1.970	1.960	1.939	2.027	1.949	1.933	1.954	1.946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5201.9**	**54224.**	**5053.6**	**2050.8**
Stddev	12.7	153.	50.5	4.0
%RSD	.24500	.28146	.99844	.19538
#1	5187.5	54075.	5031.2	2046.5
#2	5206.5	54380.	5111.4	2051.4
#3	5211.8	54216.	5018.2	2054.4

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 21:28:54 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0079**	**-.0004**	**.0026**	**-.0000**	**-.0000**	**.0005**	**-.0028**	**-.0000**
Stddev	.0005	.0077	.0004	.0007	.0002	.0001	.0007	.0041	.0002
%RSD	410.3	98.23	90.92	27.42	556.9	192.1	125.3	144.3	410.6
#1	-.0004	-.0009	-.0001	.0018	-.0002	-.0001	.0013	-.0064	.0000
#2	.0002	.0136	-.0009	.0029	.0002	-.0001	.0001	-.0037	-.0002
#3	.0005	.0110	-.0003	.0032	-.0001	.0000	.0002	.0016	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0001**	**-.0003**	**-.0004**	**.0026**	**-.0025**	**.0002**	**-.0168**	**.0001**
Stddev	.0014	.0002	.0002	.0003	.0009	.0270	.0015	.0324	.0000
%RSD	66.65	238.3	72.19	90.42	36.74	1082.	985.9	193.0	34.39
#1	.0025	.0003	-.0001	-.0007	.0022	-.0181	.0010	-.0225	.0001
#2	.0034	-.0001	-.0006	-.0001	.0019	-.0180	-.0016	-.0459	.0001
#3	.0006	.0001	-.0003	-.0004	.0036	.0286	.0011	.0181	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0049**	**.0004**	**.0003**	**.0010**	**-.0016**	**.0002**	**.0010**	**-.0066**
Stddev	.0003	.0049	.0006	.0010	.0010	.0041	.0006	.0028	.0021
%RSD	77.13	100.5	134.9	398.0	99.35	253.1	290.8	269.9	31.19
#1	.0006	-.0066	.0006	-.0001	.0001	.0029	-.0004	.0001	-.0043
#2	.0002	.0007	.0010	-.0005	.0009	-.0052	.0007	.0041	-.0073
#3	.0002	-.0088	-.0002	.0014	.0021	-.0026	.0003	-.0011	-.0081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 21:28:54 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0001**	**.0003**	**-.0007**	**.0006**	**-.0002**	**-.0002**	**.0003**
Stddev	.0002	.0001	.0002	.0008	.0002	.0001	.0002	.0002
%RSD	101.3	111.8	58.83	112.3	33.20	42.92	102.0	53.25
#1	-.0003	-.0000	.0002	.0002	.0005	-.0003	-.0002	.0004
#2	-.0001	.0001	.0005	-.0012	.0008	-.0001	.0000	.0004
#3	-.0000	.0002	.0002	-.0012	.0005	-.0002	-.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5796.8**	**56799.**	**5011.7**	**2100.3**
Stddev	39.4	480.	43.0	16.7
%RSD	.67923	.84595	.85888	.79561
#1	5841.0	56961.	5050.8	2119.5
#2	5783.7	56259.	4965.5	2091.6
#3	5765.6	57179.	5018.7	2089.6

Zoom In Zoom Out

Sample Name: mp36755-mb1conf Acquired: 12/7/2022 21:34:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0258**	**.0006**	**.0048**	**.0003**	**-.0001**	**-.0009**	**.1431**	**.0002**
Stddev	.0004	.0082	.0013	.0002	.0001	.0000	.0001	.0011	.0003
%RSD	311.0	31.65	198.5	5.142	28.72	20.73	10.75	.7897	121.2
#1	-.0003	.0338	-.0003	.0048	.0002	-.0001	-.0008	.1441	.0003
#2	.0002	.0261	.0021	.0046	.0003	-.0001	-.0010	.1419	.0004
#3	.0005	.0175	.0001	.0051	.0004	-.0001	-.0009	.1434	-.0001

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**.0001**	**.0008**	**.0015**	**.0335**	**.0189**	**.0009**	**.0233**	**.0004**
Stddev	.0025	.0002	.0005	.0003	.0009	.0240	.0008	.0365	.0000
%RSD	80.33	237.6	61.11	23.06	2.793	126.8	90.30	156.8	3.817
#1	.0050	.0003	.0003	.0011	.0329	.0027	.0000	.0626	.0005
#2	.0003	-.0000	.0013	.0016	.0346	.0465	.0011	-.0095	.0004
#3	.0040	-.0000	.0008	.0017	.0330	.0076	.0016	.0168	.0004

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0649**	**.0002**	**.0198**	**.0015**	**.0099**	**-.0002**	**.0017**	**.0184**
Stddev	.0002	.0030	.0004	.0004	.0005	.0020	.0007	.0028	.0007
%RSD	33.47	4.618	236.5	1.834	30.58	20.14	308.2	168.3	3.983
#1	.0006	.0626	.0005	.0194	.0017	.0089	.0005	.0048	.0179
#2	.0007	.0639	-.0003	.0201	.0010	.0087	-.0009	-.0006	.0182
#3	.0003	.0683	.0003	.0200	.0019	.0122	-.0004	.0008	.0193

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0217**	**.0007**	**.0005**	**-.0018**	**.0000**	**-.0006**	**.0036**	**.0001**
Stddev	.0005	.0000	.0002	.0013	.0005	.0007	.0002	.0001
%RSD	2.307	4.514	35.11	72.83	12710.	105.5	6.390	81.46
#1	.0218	.0007	.0005	-.0031	-.0005	-.0001	.0037	.0001
#2	.0222	.0008	.0007	-.0006	.0005	-.0014	.0038	.0001
#3	.0212	.0007	.0003	-.0015	-.0000	-.0004	.0034	.0000

Zoom In Zoom Out

Sample Name: mp36755-mb1conf Acquired: 12/7/2022 21:34:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5785.3**	**56445.**	**5080.7**	**2082.6**
Stddev	4.6	341.	12.6	2.1
%RSD	.07984	.60334	.24836	.10142
#1	5790.5	56735.	5085.8	2084.6
#2	5783.6	56070.	5066.3	2082.9
#3	5781.8	56531.	5090.0	2080.4

Zoom In Zoom Out

Sample Name: jd56513-21 Acquired: 12/7/2022 21:39:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050**	**98.78**	**.3618**	**.0495**	**.6412**	**.0067**	**.0018**	**18.44**	**.0067**
Stddev	.0012	.40	.0034	.0018	.0024	.0003	.0005	.09	.0005
%RSD	24.05	.4054	.9534	3.606	.3698	4.380	27.12	.4923	8.089
#1	.0049	98.50	.3657	.0489	.6410	.0068	.0022	18.38	.0071
#2	.0063	98.60	.3607	.0481	.6389	.0064	.0013	18.39	.0070
#3	.0039	99.24	.3590	.0515	.6436	.0069	.0019	18.54	.0061

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5301**	**.0619**	**.2152**	**.3882**	**219.6**	**6.817**	**.0803**	**10.68**	**2.138**
Stddev	.0062	.0003	.0014	.0006	1.1	.028	.0027	.10	.007
%RSD	1.174	.4943	.6472	.1515	.4995	.4058	3.357	.9453	.3453
#1	.5230	.0622	.2149	.3878	219.1	6.793	.0827	10.57	2.133
#2	.5346	.0616	.2141	.3880	218.9	6.847	.0807	10.72	2.134
#3	.5327	.0619	.2168	.3889	220.9	6.810	.0774	10.76	2.146

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0087**	**.5712**	**.2547**	**3.071**	**.5838**	**4.572**	**.0045**	**.0095**	**1.853**
Stddev	.0003	.0244	.0027	.017	.0106	.034	.0038	.0022	.013
%RSD	3.785	4.280	1.047	.5434	1.811	.7532	83.30	23.57	.6879
#1	.0085	.5566	.2578	3.089	.5950	4.611	.0084	.0084	1.867
#2	.0091	.5576	.2534	3.068	.5821	4.559	.0043	.0121	1.845
#3	.0085	.5994	.2531	3.056	.5741	4.545	.0009	.0080	1.846

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0376**	**.1392**	**1.705**	**.0044**	**.4907**	**.0100**	**2.106**	**.0485**
Stddev	.0010	.0004	.005	.0026	.0026	.0021	.016	.0005
%RSD	2.642	.3223	.2922	59.42	.5334	20.89	.7472	1.032
#1	.0388	.1390	1.701	.0014	.4889	.0079	2.124	.0482
#2	.0370	.1388	1.705	.0052	.4894	.0100	2.102	.0491
#3	.0371	.1397	1.710	.0064	.4937	.0120	2.093	.0482

Zoom In Zoom Out

Sample Name: jd56513-21 Acquired: 12/7/2022 21:39:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5496.0**	**55817.**	**5096.1**	**2117.3**
Stddev	37.0	63.	40.2	16.6
%RSD	.67351	.11272	.78912	.78480
#1	5457.6	55843.	5068.6	2099.3
#2	5498.8	55862.	5142.3	2120.5
#3	5531.5	55745.	5077.5	2132.0

Zoom In Zoom Out

Sample Name: jd56513-24 Acquired: 12/7/2022 21:44:17 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055**	**91.77**	**.2364**	**.1197**	**1.059**	**.0097**	**.0045**	**29.16**	**.0041**
Stddev	.0004	.61	.0040	.0020	.008	.0003	.0005	.22	.0008
%RSD	8.021	.6600	1.688	1.668	.7441	2.911	11.60	.7373	18.60
#1	.0050	91.29	.2392	.1213	1.053	.0099	.0039	28.93	.0045
#2	.0057	91.58	.2318	.1174	1.057	.0094	.0048	29.20	.0046
#3	.0059	92.45	.2382	.1203	1.068	.0098	.0049	29.35	.0032

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4595**	**.0622**	**.2818**	**.3098**	**237.9**	**10.76**	**.0803**	**12.22**	**1.093**
Stddev	.0046	.0007	.0017	.0006	1.6	.07	.0022	.20	.001
%RSD	.9933	1.074	.5919	.1935	.6860	.6234	2.787	1.671	.0976
#1	.4544	.0614	.2816	.3096	236.3	10.68	.0785	12.10	1.094
#2	.4607	.0626	.2836	.3105	237.8	10.78	.0795	12.10	1.092
#3	.4633	.0626	.2803	.3093	239.6	10.81	.0828	12.46	1.093

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0133**	**1.533**	**.2861**	**2.899**	**.3062**	**2.801**	**.0070**	**.0141**	**1.793**
Stddev	.0009	.028	.0023	.026	.0046	.029	.0034	.0036	.017
%RSD	6.972	1.804	.8043	.9103	1.487	1.044	48.23	25.78	.9733
#1	.0134	1.501	.2878	2.917	.3080	2.807	.0109	.0140	1.808
#2	.0124	1.553	.2835	2.869	.3010	2.769	.0053	.0178	1.774
#3	.0142	1.545	.2869	2.912	.3096	2.826	.0048	.0105	1.796

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0355**	**.6800**	**3.177**	**.0040**	**.9621**	**.0070**	**1.177**	**.0522**
Stddev	.0012	.0051	.005	.0016	.0019	.0017	.011	.0002
%RSD	3.504	.7495	.1707	40.38	.1945	23.88	.8941	.4623
#1	.0355	.6755	3.176	.0051	.9626	.0053	1.183	.0520
#2	.0342	.6791	3.183	.0022	.9600	.0070	1.165	.0525
#3	.0367	.6855	3.172	.0048	.9636	.0086	1.183	.0521

Zoom In Zoom Out

Sample Name: jd56513-24 Acquired: 12/7/2022 21:44:17 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5473.9**	**56118.**	**5172.5**	**2108.7**
Stddev	25.3	160.	27.0	8.3
%RSD	.46200	.28496	.52283	.39242
#1	5464.9	55933.	5198.2	2103.8
#2	5502.5	56205.	5175.0	2118.3
#3	5454.4	56215.	5144.3	2104.1

Zoom In Zoom Out

Sample Name: jd56513-25 Acquired: 12/7/2022 21:49:17 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**122.5**	**.3372**	**.1780**	**1.367**	**.0119**	**.0021**	**41.64**	**.0038**
Stddev	.0015	1.1	.0083	.0058	.017	.0003	.0057	.47	.0008
%RSD	38.37	.8799	2.456	3.274	1.229	2.183	266.6	1.135	19.84
#1	.0046	121.3	.3277	.1713	1.351	.0121	.0035	41.11	.0046
#2	.0021	122.7	.3415	.1803	1.366	.0116	.0071	41.79	.0031
#3	.0047	123.4	.3424	.1822	1.385	.0120	-.0041	42.02	.0039

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5782**	**.0869**	**.3719**	**.4111**	**310.6**	**13.52**	**.1047**	**18.22**	**1.265**
Stddev	.0173	.0024	.0035	.0067	3.2	.14	.0053	.37	.014
%RSD	2.990	2.732	.9281	1.630	1.017	1.027	5.081	2.026	1.068
#1	.5785	.0842	.3683	.4035	307.5	13.41	.1042	17.87	1.252
#2	.5608	.0886	.3722	.4139	310.4	13.68	.1103	18.19	1.263
#3	.5954	.0878	.3752	.4160	313.8	13.47	.0997	18.61	1.279

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0169**	**2.232**	**.3619**	**3.503**	**.3439**	**2.856**	**.0028**	**.0078**	**2.046**
Stddev	.0010	.034	.0084	.079	.0034	.074	.0022	.0098	.056
%RSD	6.122	1.514	2.316	2.253	.9743	2.601	77.93	125.3	2.735
#1	.0177	2.270	.3523	3.416	.3402	2.801	.0054	.0183	1.982
#2	.0173	2.221	.3678	3.570	.3449	2.826	.0013	.0062	2.088
#3	.0157	2.205	.3656	3.524	.3467	2.941	.0018	-.0011	2.067

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0406**	**.9352**	**4.351**	**.0057**	**1.267**	**.0042**	**1.004**	**.1131**
Stddev	.0044	.0108	.055	.0063	.018	.0076	.026	.0010
%RSD	10.89	1.154	1.269	110.3	1.377	181.6	2.639	.8458
#1	.0367	.9247	4.297	.0128	1.248	-.0035	.9736	.1128
#2	.0396	.9346	4.349	.0007	1.272	.0116	1.023	.1142
#3	.0454	.9463	4.408	.0037	1.282	.0044	1.014	.1123

Zoom In Zoom Out

Sample Name: jd56513-25 Acquired: 12/7/2022 21:49:17 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5569.8**	**56002.**	**5008.0**	**2117.0**
Stddev	71.2	240.	26.2	27.6
%RSD	1.2786	.42774	.52337	1.3047
#1	5640.2	55771.	5035.8	2144.3
#2	5497.8	56249.	4983.8	2089.0
#3	5571.2	55987.	5004.5	2117.8

Zoom In Zoom Out

Sample Name: jd56534-5 Acquired: 12/7/2022 21:54:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**90.67**	**.0576**	**.0343**	**.3347**	**.0039**	**-.0014**	**340.0**	**.0017**
Stddev	.0017	1.18	.0072	.0059	.0052	.0005	.0032	5.3	.0003
%RSD	96.87	1.302	12.42	17.24	1.546	13.94	223.4	1.562	19.78
#1	.0002	89.57	.0562	.0275	.3300	.0045	-.0038	334.9	.0020
#2	-.0032	90.52	.0512	.0368	.3340	.0040	.0022	339.4	.0014
#3	-.0023	91.92	.0654	.0385	.3402	.0034	-.0028	345.5	.0019

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7757**	**.0865**	**.1336**	**.2169**	**197.1**	**11.72**	**.1622**	**52.79**	**4.643**
Stddev	.0168	.0010	.0025	.0037	2.5	.28	.0046	.72	.094
%RSD	2.160	1.137	1.848	1.724	1.276	2.397	2.833	1.369	2.031
#1	.7801	.0855	.1309	.2128	194.6	11.52	.1604	51.96	4.540
#2	.7898	.0875	.1342	.2181	197.0	11.60	.1675	53.27	4.667
#3	.7572	.0866	.1358	.2200	199.7	12.04	.1588	53.15	4.724

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**1.078**	**.1974**	**3.710**	**.0978**	**2.194**	**.0038**	**.0031**	**1.740**
Stddev	.0009	.107	.0011	.012	.0055	.021	.0046	.0049	.019
%RSD	31.40	9.917	.5677	.3120	5.597	.9762	120.8	158.8	1.076
#1	.0028	.9572	.1963	3.699	.1024	2.171	.0078	.0077	1.746
#2	.0038	1.161	.1974	3.708	.0917	2.212	-.0012	.0036	1.755
#3	.0020	1.114	.1986	3.722	.0992	2.200	.0049	-.0020	1.719

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0245**	**.6948**	**.4760**	**.0013**	**.1892**	**.0042**	**.6321**	**.1056**
Stddev	.0022	.0107	.0106	.0042	.0044	.0034	.0010	.0017
%RSD	9.115	1.535	2.227	323.5	2.325	81.60	.1509	1.593
#1	.0220	.6846	.4644	-.0002	.1850	.0003	.6332	.1039
#2	.0261	.6941	.4852	-.0020	.1888	.0058	.6317	.1057
#3	.0255	.7058	.4784	.0061	.1938	.0065	.6315	.1072

Zoom In Zoom Out

Sample Name: jd56534-5 Acquired: 12/7/2022 21:54:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5401.3**	**55266.**	**5021.2**	**2090.8**
Stddev	28.3	103.	30.2	13.7
%RSD	.52470	.18706	.60227	.65443
#1	5377.5	55311.	5024.7	2078.1
#2	5393.8	55148.	4989.3	2088.9
#3	5432.7	55339.	5049.5	2105.3

Zoom In Zoom Out

Sample Name: jd56534-8 Acquired: 12/7/2022 21:59:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**63.00**	**.0328**	**.0326**	**.3414**	**.0038**	**-.0035**	**112.8**	**.0022**
Stddev	.0013	1.03	.0022	.0015	.0060	.0001	.0007	1.7	.0004
%RSD	47.84	1.641	6.676	4.606	1.753	1.750	21.55	1.517	16.05
#1	.0024	62.88	.0349	.0336	.3400	.0037	-.0039	112.8	.0019
#2	.0017	62.02	.0330	.0333	.3362	.0038	-.0039	111.1	.0021
#3	.0042	64.08	.0305	.0309	.3480	.0038	-.0026	114.5	.0026

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5923**	**.0542**	**.1148**	**.1498**	**142.2**	**9.470**	**.0988**	**33.01**	**3.155**
Stddev	.0023	.0010	.0006	.0009	2.3	.124	.0025	.51	.015
%RSD	.3912	1.766	.4905	.5937	1.639	1.314	2.570	1.540	.4757
#1	.5946	.0551	.1146	.1498	141.9	9.406	.0983	32.98	3.161
#2	.5900	.0545	.1145	.1489	140.1	9.392	.0965	32.52	3.138
#3	.5922	.0532	.1155	.1507	144.7	9.614	.1015	33.54	3.165

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0067**	**1.001**	**.1153**	**2.609**	**.1189**	**2.249**	**.0019**	**.0013**	**1.617**
Stddev	.0002	.017	.0021	.034	.0023	.031	.0011	.0041	.027
%RSD	3.352	1.683	1.825	1.308	1.927	1.359	56.36	320.9	1.677
#1	.0064	1.006	.1174	2.643	.1200	2.279	.0024	-.0017	1.643
#2	.0066	.9826	.1154	2.608	.1205	2.251	.0007	-.0004	1.619
#3	.0069	1.015	.1131	2.575	.1163	2.218	.0027	.0060	1.589

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0240**	**.3735**	**1.420**	**.0019**	**.1860**	**.0039**	**.3517**	**.0693**
Stddev	.0014	.0060	.010	.0014	.0008	.0016	.0040	.0005
%RSD	5.717	1.601	.7342	73.29	.4182	41.76	1.150	.7124
#1	.0250	.3714	1.420	.0018	.1861	.0044	.3557	.0689
#2	.0225	.3689	1.410	.0034	.1852	.0021	.3518	.0693
#3	.0246	.3803	1.431	.0006	.1868	.0052	.3476	.0699

Zoom In Zoom Out

Sample Name: jd56534-8 Acquired: 12/7/2022 21:59:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5136.0**	**54809.**	**5219.3**	**2061.2**
Stddev	68.9	149.	73.3	27.2
%RSD	1.3418	.27121	1.4043	1.3187
#1	5069.5	54695.	5221.1	2034.4
#2	5131.5	54977.	5291.6	2060.5
#3	5207.1	54754.	5145.1	2088.8

Zoom In Zoom Out

Sample Name: jd56534-13 Acquired: 12/7/2022 22:04:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035**	**102.3**	**.0464**	**.0454**	**.5305**	**.0063**	**-.0081**	**19.05**	**.0022**
Stddev	.0008	1.2	.0010	.0019	.0070	.0002	.0017	.25	.0006
%RSD	23.74	1.168	2.231	4.093	1.319	2.575	21.52	1.309	28.70
#1	.0036	101.1	.0454	.0471	.5235	.0064	-.0086	18.78	.0018
#2	.0026	102.2	.0474	.0434	.5303	.0062	-.0094	19.08	.0018
#3	.0042	103.5	.0465	.0457	.5375	.0065	-.0061	19.28	.0029

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8129**	**.0937**	**.1813**	**.1729**	**224.4**	**16.45**	**.1700**	**42.58**	**2.246**
Stddev	.0053	.0007	.0030	.0017	2.8	.23	.0037	.50	.011
%RSD	.6495	.7128	1.659	.9665	1.256	1.382	2.160	1.183	.4925
#1	.8077	.0942	.1785	.1712	221.8	16.22	.1658	42.05	2.236
#2	.8127	.0939	.1845	.1746	223.9	16.46	.1719	42.64	2.258
#3	.8183	.0929	.1809	.1729	227.4	16.67	.1724	43.05	2.245

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**1.196**	**.2030**	**4.326**	**.0967**	**.2274**	**.0048**	**.0041**	**1.616**
Stddev	.0010	.016	.0002	.007	.0037	.0061	.0028	.0022	.012
%RSD	33.63	1.353	.1055	.1583	3.847	2.683	59.23	55.31	.7366
#1	.0038	1.178	.2032	4.333	.0996	.2211	.0015	.0015	1.628
#2	.0019	1.207	.2029	4.319	.0981	.2332	.0068	.0055	1.615
#3	.0031	1.204	.2028	4.324	.0925	.2278	.0059	.0052	1.604

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0233**	**.1087**	**2.641**	**.0042**	**.2849**	**.0009**	**.4629**	**.1110**
Stddev	.0015	.0012	.010	.0014	.0015	.0002	.0028	.0010
%RSD	6.406	1.099	.3948	32.14	.5255	24.50	.5955	.8896
#1	.0233	.1074	2.631	.0053	.2832	.0008	.4657	.1100
#2	.0218	.1089	2.652	.0046	.2862	.0012	.4602	.1119
#3	.0248	.1098	2.641	.0027	.2853	.0007	.4628	.1112

Zoom In Zoom Out

Sample Name: jd56534-13 Acquired: 12/7/2022 22:04:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5421.3**	**56496.**	**5154.6**	**2132.1**
Stddev	5.2	285.	20.6	.8
%RSD	.09569	.50428	.39891	.03849
#1	5422.2	56480.	5140.9	2131.4
#2	5415.7	56220.	5178.2	2131.8
#3	5425.9	56789.	5144.7	2133.0

Zoom In Zoom Out

Sample Name: jd56534-15 Acquired: 12/7/2022 22:09:23 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**92.81**	**.0448**	**.0391**	**.5152**	**.0069**	**-.0052**	**17.64**	**.0032**
Stddev	.0011	.90	.0011	.0014	.0053	.0003	.0004	.21	.0003
%RSD	34.14	.9674	2.375	3.699	1.019	3.943	8.008	1.211	8.876
#1	.0042	92.22	.0450	.0384	.5119	.0066	-.0049	17.56	.0032
#2	.0021	92.35	.0437	.0381	.5125	.0068	-.0057	17.49	.0030
#3	.0038	93.84	.0457	.0407	.5213	.0072	-.0052	17.89	.0035

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8171**	**.0904**	**.1762**	**.1540**	**215.5**	**15.10**	**.1338**	**32.60**	**2.396**
Stddev	.0022	.0015	.0011	.0011	2.1	.22	.0027	.44	.001
%RSD	.2653	1.674	.6240	.7456	.9963	1.484	2.047	1.336	.0350
#1	.8149	.0910	.1752	.1528	214.4	14.93	.1314	32.27	2.397
#2	.8172	.0886	.1760	.1540	214.1	15.02	.1332	32.44	2.397
#3	.8193	.0915	.1774	.1551	218.0	15.35	.1368	33.10	2.395

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**2.026**	**.1852**	**4.060**	**.0861**	**.2596**	**.0030**	**.0055**	**1.622**
Stddev	.0007	.040	.0029	.058	.0016	.0116	.0019	.0010	.025
%RSD	21.04	1.960	1.557	1.417	1.852	4.478	63.10	18.01	1.519
#1	.0024	2.008	.1853	4.054	.0879	.2660	.0009	.0057	1.630
#2	.0035	1.997	.1823	4.006	.0855	.2462	.0046	.0064	1.594
#3	.0035	2.071	.1880	4.121	.0848	.2665	.0035	.0045	1.641

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0231**	**.1153**	**2.473**	**.0040**	**.3008**	**.0031**	**.4535**	**.1030**
Stddev	.0013	.0012	.001	.0043	.0025	.0028	.0052	.0001
%RSD	5.426	1.083	.0233	108.6	.8242	88.40	1.150	.1174
#1	.0241	.1146	2.472	.0052	.2983	.0056	.4538	.1029
#2	.0236	.1145	2.473	-.0008	.3033	.0001	.4481	.1031
#3	.0217	.1167	2.472	.0076	.3007	.0036	.4585	.1031

Zoom In Zoom Out

Sample Name: jd56534-15 Acquired: 12/7/2022 22:09:23 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5418.2**	**56934.**	**5218.4**	**2127.4**
Stddev	57.2	166.	53.4	22.7
%RSD	1.0562	.29218	1.0229	1.0665
#1	5409.6	56952.	5172.6	2122.9
#2	5479.3	57091.	5277.0	2151.9
#3	5365.8	56759.	5205.5	2107.2

Zoom In Zoom Out

Sample Name: jd56534-18 Acquired: 12/7/2022 22:14:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0073**	**102.0**	**.0532**	**.0515**	**.5653**	**.0062**	**-.0040**	**53.63**	**.0030**
Stddev	.0001	.3	.0015	.0031	.0015	.0001	.0001	.11	.0004
%RSD	1.748	.2659	2.828	5.933	.2697	1.669	2.269	.2117	14.48
#1	.0074	102.3	.0532	.0534	.5665	.0061	-.0041	53.57	.0034
#2	.0072	101.7	.0547	.0480	.5636	.0063	-.0041	53.56	.0026
#3	.0072	101.9	.0517	.0531	.5658	.0063	-.0039	53.76	.0031

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7688**	**.0885**	**.1695**	**.2066**	**221.3**	**16.47**	**.1680**	**46.86**	**3.912**
Stddev	.0054	.0007	.0035	.0024	.4	.04	.0014	.23	.018
%RSD	.7070	.7928	2.053	1.175	.1885	.2598	.8078	.4852	.4640
#1	.7702	.0877	.1655	.2053	221.6	16.50	.1672	46.83	3.891
#2	.7628	.0890	.1712	.2050	220.8	16.42	.1673	46.64	3.921
#3	.7734	.0888	.1719	.2094	221.5	16.50	.1696	47.10	3.923

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**3.157**	**.1798**	**3.632**	**.1223**	**3.414**	**.0037**	**.0095**	**1.822**
Stddev	.0007	.021	.0004	.008	.0019	.009	.0007	.0032	.004
%RSD	18.25	.6655	.2039	.2185	1.544	.2637	17.99	33.93	.2435
#1	.0046	3.173	.1797	3.625	.1214	3.407	.0045	.0058	1.819
#2	.0037	3.133	.1801	3.630	.1211	3.412	.0036	.0108	1.827
#3	.0032	3.165	.1794	3.640	.1245	3.424	.0031	.0118	1.820

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0253**	**.1905**	**2.067**	**.0013**	**.2493**	**.0030**	**.4957**	**.1011**
Stddev	.0027	.0002	.012	.0036	.0021	.0031	.0035	.0009
%RSD	10.74	.0805	.5570	274.9	.8598	102.3	.7028	.8484
#1	.0280	.1906	2.054	.0029	.2468	.0029	.4933	.1001
#2	.0226	.1906	2.073	-.0028	.2509	.0061	.4941	.1015
#3	.0253	.1904	2.075	.0038	.2501	-.0000	.4997	.1017

Zoom In Zoom Out

Sample Name: jd56534-18 Acquired: 12/7/2022 22:14:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5401.6**	**56875.**	**5105.8**	**2112.0**
Stddev	9.2	351.	18.2	2.3
%RSD	.17060	.61788	.35600	.10715
#1	5400.3	57280.	5090.2	2114.6
#2	5393.1	56689.	5125.8	2110.7
#3	5411.4	56655.	5101.5	2110.7

Zoom In Zoom Out

Sample Name: jd56534-19 Acquired: 12/7/2022 22:19:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045**	**111.1**	**.0659**	**.0547**	**.5570**	**.0063**	**.0029**	**87.48**	**.0038**
Stddev	.0018	1.0	.0014	.0024	.0048	.0001	.0019	.91	.0003
%RSD	40.56	.9079	2.117	4.415	.8688	1.231	63.56	1.035	7.321
#1	.0033	110.0	.0673	.0530	.5518	.0062	.0013	86.50	.0040
#2	.0066	111.2	.0645	.0575	.5578	.0063	.0025	87.66	.0040
#3	.0035	112.1	.0658	.0537	.5614	.0063	.0050	88.28	.0035

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9552**	**.1204**	**.1854**	**.3237**	**219.0**	**20.89**	**.2029**	**56.45**	**7.303**
Stddev	.0054	.0012	.0008	.0013	2.4	.15	.0040	.79	.016
%RSD	.5646	1.037	.4129	.4106	1.076	.7170	1.976	1.405	.2173
#1	.9600	.1196	.1848	.3222	216.7	20.74	.1988	55.57	7.295
#2	.9493	.1197	.1852	.3244	219.1	20.88	.2068	57.12	7.293
#3	.9562	.1218	.1863	.3245	221.4	21.04	.2032	56.66	7.322

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0069**	**10.28**	**.2081**	**5.803**	**.2397**	**3.495**	**.0094**	**.0087**	**1.607**
Stddev	.0001	.11	.0007	.003	.0029	.022	.0012	.0024	.007
%RSD	.8515	1.024	.3574	.0452	1.193	.6277	13.17	27.30	.4699
#1	.0069	10.17	.2072	5.801	.2370	3.514	.0104	.0080	1.615
#2	.0069	10.29	.2085	5.802	.2427	3.471	.0098	.0113	1.601
#3	.0068	10.38	.2085	5.806	.2395	3.499	.0080	.0067	1.604

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0343**	**.3850**	**4.631**	**.0061**	**.3681**	**.0051**	**.5966**	**.0933**
Stddev	.0016	.0039	.009	.0032	.0024	.0036	.0005	.0004
%RSD	4.586	1.014	.2009	52.13	.6457	71.30	.0845	.4472
#1	.0343	.3812	4.630	.0026	.3699	.0061	.5961	.0936
#2	.0358	.3846	4.623	.0069	.3690	.0081	.5971	.0928
#3	.0327	.3890	4.641	.0087	.3654	.0011	.5967	.0934

Zoom In Zoom Out

Sample Name: jd56534-19 Acquired: 12/7/2022 22:19:21 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5250.7**	**55288.**	**5089.2**	**2074.0**
Stddev	8.5	53.	31.2	3.5
%RSD	.16105	.09662	.61337	.17057
#1	5258.5	55349.	5111.6	2077.2
#2	5241.7	55257.	5102.4	2070.2
#3	5251.8	55257.	5053.5	2074.7

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 22:24:22 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2502**	**39.98**	**1.909**	**1.927**	**1.970**	**1.999**	**1.921**	**40.22**	**1.932**
Stddev	.0013	.03	.007	.003	.006	.002	.004	.07	.002
%RSD	.5078	.0676	.3802	.1779	.3064	.1069	.2340	.1853	.1254
#1	.2515	39.99	1.915	1.931	1.976	2.001	1.920	40.14	1.933
#2	.2490	39.94	1.910	1.926	1.967	1.997	1.926	40.29	1.933
#3	.2500	39.99	1.901	1.925	1.965	1.999	1.917	40.21	1.929
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.957**	**1.927**	**1.950**	**1.920**	**40.89**	**39.68**	**1.929**	**40.11**	**1.975**
Stddev	.010	.002	.012	.008	.02	.07	.001	.13	.013
%RSD	.5137	.0806	.6009	.4386	.0606	.1818	.0594	.3356	.6769
#1	1.967	1.928	1.963	1.930	40.90	39.73	1.929	39.97	1.990
#2	1.957	1.927	1.945	1.918	40.90	39.71	1.930	40.23	1.973
#3	1.947	1.925	1.941	1.913	40.86	39.60	1.928	40.12	1.963
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.945**	**40.43**	**1.932**	F **1.757**	**1.948**	**1.870**	**1.933**	**1.926**	**4.697**
Stddev	.004	.02	.002	.004	.002	.008	.006	.007	.014
%RSD	.1969	.0559	.0812	.2054	.1179	.4137	.3135	.3715	.3060
#1	1.948	40.44	1.934	1.759	1.950	1.878	1.928	1.917	4.696
#2	1.946	40.41	1.932	1.753	1.949	1.869	1.939	1.930	4.711
#3	1.941	40.45	1.931	1.759	1.945	1.862	1.931	1.930	4.683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000					
Range				-10.00%					

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 22:24:22 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.970**	**1.975**	**1.938**	**2.030**	**1.940**	**1.930**	**1.943**	**1.942**
Stddev	.008	.004	.012	.002	.012	.004	.005	.013
%RSD	.3940	.2187	.6322	.1119	.6074	.2148	.2345	.6512
#1	1.962	1.980	1.951	2.031	1.953	1.935	1.948	1.955
#2	1.977	1.972	1.936	2.032	1.937	1.928	1.940	1.939
#3	1.971	1.974	1.926	2.028	1.930	1.927	1.940	1.930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5255.1**	**54823.**	**5044.6**	**2073.6**
Stddev	2.4	327.	9.7	3.1
%RSD	.04572	.59724	.19183	.14851
#1	5257.4	54469.	5046.7	2074.6
#2	5252.6	54884.	5053.1	2070.2
#3	5255.3	55116.	5034.1	2076.2

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 22:29:09 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0090**	**-.0001**	**.0034**	**-.0000**	**-.0000**	**.0002**	**-.0017**	**.0002**
Stddev	.0001	.0123	.0004	.0001	.0002	.0001	.0012	.0049	.0000
%RSD	36.48	136.9	785.7	3.482	3247.	214.2	584.4	284.6	19.63
#1	-.0003	-.0224	-.0005	.0035	.0002	.0000	-.0002	-.0061	.0002
#2	-.0002	.0017	.0004	.0033	-.0003	-.0000	.0015	-.0027	.0002
#3	-.0004	-.0062	-.0000	.0034	.0000	-.0001	-.0008	.0036	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0000**	**-.0003**	**-.0005**	**.0011**	**.0136**	**.0005**	**.0139**	**.0000**
Stddev	.0030	.0003	.0002	.0001	.0010	.0013	.0011	.0124	.0000
%RSD	1071.	676.8	52.90	18.14	96.10	9.346	236.6	89.72	968.5
#1	-.0032	-.0002	-.0002	-.0004	-.0001	.0124	.0011	.0033	-.0000
#2	.0017	-.0002	-.0005	-.0006	.0013	.0149	-.0008	.0275	.0000
#3	.0024	.0003	-.0003	-.0006	.0020	.0136	.0012	.0108	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0076**	**.0003**	**.0011**	**.0019**	**-.0012**	**.0007**	**.0001**	**-.0064**
Stddev	.0002	.0049	.0003	.0005	.0012	.0037	.0008	.0032	.0005
%RSD	143.9	63.87	108.7	47.76	62.98	312.0	115.7	6206.	8.209
#1	.0001	-.0022	.0002	.0012	.0032	.0019	-.0002	.0037	-.0059
#2	-.0000	-.0092	.0007	.0014	.0015	-.0053	.0010	-.0013	-.0070
#3	.0004	-.0115	.0001	.0005	.0010	-.0002	.0013	-.0022	-.0063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 22:29:09 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0000**	**.0003**	**-.0011**	**.0004**	**-.0017**	**-.0005**	**.0002**
Stddev	.0011	.0000	.0004	.0009	.0003	.0004	.0001	.0001
%RSD	1260.	215.0	108.4	87.41	72.26	25.12	12.63	66.22
#1	-.0010	.0000	.0006	-.0016	.0002	-.0019	-.0005	.0002
#2	.0001	.0000	.0005	-.0016	.0008	-.0020	-.0006	.0000
#3	.0012	-.0000	-.0001	.0000	.0004	-.0012	-.0006	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5789.3**	**55911.**	**4943.4**	**2091.7**
Stddev	23.2	221.	36.5	12.6
%RSD	.40042	.39605	.73884	.60276
#1	5776.2	55701.	4950.5	2083.8
#2	5816.1	56143.	4975.9	2106.3
#3	5775.6	55889.	4903.9	2085.1

Zoom In Zoom Out

Sample Name: mp36760-mb1conf Acquired: 12/7/2022 22:34:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0097**	**.0009**	**.0016**	**-.0002**	**-.0001**	**-.0002**	**.0030**	**.0002**
Stddev	.0004	.0076	.0014	.0007	.0000	.0000	.0011	.0008	.0003
%RSD	138.4	78.25	156.0	47.29	19.80	25.76	451.9	27.91	124.5
#1	.0003	-.0179	-.0003	.0022	-.0002	-.0001	.0005	.0021	.0005
#2	.0006	-.0030	.0024	.0017	-.0002	-.0001	.0003	.0031	.0002
#3	-.0001	-.0081	.0005	.0008	-.0003	-.0001	-.0015	.0037	-.0000

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**-.0001**	**.0002**	**-.0004**	**.0048**	**-.0241**	**-.0003**	**-.0382**	**.0000**
Stddev	.0012	.0003	.0006	.0003	.0028	.0320	.0012	.0146	.0000
%RSD	78.66	231.3	364.6	72.47	57.50	132.4	396.4	38.30	39.15
#1	.0013	.0002	.0004	-.0006	.0065	-.0368	-.0000	-.0413	.0000
#2	.0029	-.0002	-.0005	-.0005	.0063	.0122	-.0016	-.0511	.0001
#3	.0005	-.0003	.0006	-.0001	.0016	-.0478	.0007	-.0223	.0000

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0050**	**.0000**	**.0014**	**.0018**	**.0023**	**.0003**	**-.0000**	**-.0018**
Stddev	.0003	.0072	.0003	.0008	.0001	.0051	.0010	.0006	.0005
%RSD	87.28	145.4	8979.	61.51	5.391	223.8	358.7	1661.	25.87
#1	.0006	-.0054	.0001	.0021	.0019	.0068	.0011	-.0008	-.0018
#2	.0001	-.0120	.0002	.0005	.0017	.0032	-.0009	.0003	-.0023
#3	.0002	.0024	-.0003	.0015	.0018	-.0032	.0006	.0003	-.0014

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0000**	**-.0002**	**-.0010**	**.0005**	**.0002**	**.0009**	**-.0001**
Stddev	.0005	.0000	.0005	.0013	.0003	.0006	.0001	.0001
%RSD	77.34	115.5	307.1	130.1	68.02	372.1	14.26	117.6
#1	.0001	-.0000	-.0003	.0005	.0005	.0000	.0010	.0000
#2	.0010	-.0001	.0004	-.0022	.0008	-.0004	.0009	-.0002
#3	.0010	-.0000	-.0006	-.0014	.0001	.0008	.0008	-.0001

Zoom In Zoom Out

Sample Name: mp36760-mb1conf Acquired: 12/7/2022 22:34:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5845.6**	**56799.**	**5046.2**	**2114.3**
Stddev	17.4	93.	84.0	6.4
%RSD	.29767	.16320	1.6647	.30059
#1	5825.8	56693.	4951.0	2107.8
#2	5852.7	56842.	5077.6	2114.6
#3	5858.3	56862.	5109.9	2120.5

Zoom In Zoom Out

Sample Name: jd56418-5 Acquired: 12/7/2022 22:39:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0038**	**.1096**	**.0107**	**.0606**	**.6428**	**-.0005**	**-.0005**	**784.8**
Stddev	.0017	.0559	.0025	.0021	.0116	.0006	.0021	12.7
%RSD	45.70	51.04	23.52	3.513	1.803	126.4	469.1	1.619
#1	.0058	.1729	.0131	.0626	.6496	.0001	-.0013	791.9
#2	.0025	.0893	.0081	.0608	.6493	-.0012	-.0020	792.3
#3	.0032	.0667	.0109	.0584	.6294	-.0004	.0020	770.1

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**.2194**	**.0191**	**.0019**	**.0100**	**.0643**	**3.613**	**.0022**
Stddev	.0017	.0180	.0018	.0010	.0021	.0104	.137	.0009
%RSD	50.00	8.223	9.492	50.50	21.28	16.19	3.798	43.80
#1	.0048	.2391	.0170	.0028	.0076	.0601	3.462	.0011
#2	.0039	.2038	.0202	.0020	.0117	.0567	3.650	.0027
#3	.0015	.2152	.0200	.0009	.0108	.0762	3.729	.0027

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**35.29**	**2.478**	**.0147**	F **1505.**	**.1077**	**.1131**	**.0167**	**6.845**
Stddev	.76	.017	.0009	22.	.0017	.0045	.0013	.023
%RSD	2.142	.6719	6.458	1.456	1.560	3.960	7.965	.3340
#1	35.71	2.498	.0137	1506.	.1065	.1147	.0178	6.868
#2	35.74	2.470	.0148	1526.	.1096	.1080	.0171	6.845
#3	34.42	2.468	.0156	1482.	.1069	.1165	.0152	6.822

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0019**	**.0080**	**2.464**	**-.0030**	**2.032**	**-.0047**	F **-.0118**	**.0300**
Stddev	.0031	.0042	.003	.0023	.034	.0023	.0093	.0007
%RSD	163.8	52.38	.1375	76.00	1.672	48.60	79.02	2.483
#1	-.0047	.0063	2.460	-.0048	2.052	-.0021	-.0169	.0303
#2	-.0024	.0127	2.467	-.0004	2.052	-.0058	-.0010	.0291
#3	.0014	.0049	2.465	-.0039	1.993	-.0063	-.0175	.0305

Zoom In Zoom Out

Sample Name: jd56418-5 Acquired: 12/7/2022 22:39:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.0008**	**.3956**	**.0006**
Stddev	.0006	.0019	.0005
%RSD	79.82	.4798	83.00
#1	-.0014	.3978	.0001
#2	-.0001	.3943	.0010
#3	-.0009	.3948	.0005

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4829.7**	**52126.**	**4973.9**	**1935.0**
Stddev	4.2	363.	51.6	2.5
%RSD	.08594	.69648	1.0379	.13004
#1	4825.5	51708.	4982.1	1935.4
#2	4829.8	52320.	4918.6	1932.3
#3	4833.8	52351.	5020.9	1937.3

Zoom In Zoom Out

Sample Name: jd56418-7 Acquired: 12/7/2022 22:44:50 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0015**	**.4392**	**.1155**	**.0822**	**.3055**	**.0002**	**.0030**	**312.1**
Stddev	.0027	.0496	.0055	.0040	.0020	.0004	.0088	1.9
%RSD	184.4	11.28	4.786	4.805	.6388	160.5	290.4	.6071
#1	-.0020	.4683	.1152	.0850	.3042	.0001	-.0036	310.1
#2	-.0039	.3820	.1211	.0777	.3046	.0006	-.0003	313.8
#3	.0015	.4674	.1101	.0840	.3078	-.0000	.0131	312.5

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0124**	**.1999**	**.0369**	**.0012**	**.0172**	**.1805**	**6.880**	**.0142**
Stddev	.0008	.0233	.0007	.0012	.0007	.0043	.128	.0041
%RSD	6.493	11.67	1.979	103.2	4.189	2.360	1.853	29.09
#1	.0131	.2263	.0377	-.0002	.0164	.1758	6.832	.0161
#2	.0115	.1823	.0368	.0015	.0179	.1815	7.024	.0094
#3	.0126	.1909	.0362	.0021	.0172	.1841	6.782	.0170

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.15**	**2.643**	**.0012**	W **1384.**	**.0437**	**.0408**	**.2350**	**9.234**
Stddev	.44	.005	.0007	25.	.0004	.0066	.0061	.037
%RSD	1.147	.1738	55.09	1.827	1.013	16.18	2.611	.4063
#1	37.66	2.645	.0014	1362.	.0441	.0451	.2373	9.221
#2	38.50	2.647	.0004	1379.	.0432	.0442	.2396	9.204
#3	38.30	2.638	.0017	1411.	.0437	.0332	.2280	9.276

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0139**	**.0198**	**13.50**	**.0014**	**1.036**	**-.0019**	F **-.0115**	**.0247**
Stddev	.0049	.0238	.06	.0018	.001	.0009	.0100	.0012
%RSD	35.55	120.2	.4102	125.1	.0786	46.68	87.11	5.016
#1	.0087	-.0027	13.46	.0035	1.036	-.0009	-.0070	.0255
#2	.0185	.0448	13.49	-.0000	1.037	-.0021	-.0045	.0233
#3	.0146	.0173	13.57	.0009	1.037	-.0026	-.0230	.0254

Zoom In Zoom Out

Sample Name: jd56418-7 Acquired: 12/7/2022 22:44:50 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0230**	**2.466**	**-.0015**
Stddev	.0011	.006	.0002
%RSD	4.759	.2433	14.55
#1	.0242	2.465	-.0013
#2	.0227	2.460	-.0017
#3	.0221	2.472	-.0014

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4909.3**	**52565.**	**4991.4**	**1965.4**
Stddev	13.9	89.	19.9	6.4
%RSD	.28222	.16864	.39784	.32773
#1	4915.2	52630.	5011.3	1968.7
#2	4919.2	52464.	4991.3	1969.6
#3	4893.5	52601.	4971.6	1958.0

Zoom In Zoom Out

Sample Name: jd56439-1a Acquired: 12/7/2022 22:50:05 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**.0050**	**.0175**	**.1717**	**1.140**	**-.0002**	**.0007**	**549.7**	**.0147**
Stddev	.0039	.1587	.0004	.0044	.013	.0006	.0040	8.7	.0020
%RSD	172.5	3192.	2.494	2.541	1.167	304.1	562.1	1.575	13.67
#1	.0019	-.1291	.0177	.1761	1.154	.0002	-.0033	559.4	.0125
#2	-.0015	.1803	.0170	.1673	1.139	.0001	.0007	547.0	.0154
#3	.0064	-.0363	.0178	.1717	1.127	-.0008	.0047	542.7	.0163

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1350**	**.0201**	**-.0022**	**1.596**	**.0397**	**2.549**	**.0226**	**4.046**	**1.693**
Stddev	.0458	.0008	.0060	.024	.0203	.106	.0126	.289	.008
%RSD	33.96	3.787	272.9	1.511	51.15	4.167	55.86	7.135	.4705
#1	.1121	.0206	.0019	1.622	.0240	2.491	.0141	3.987	1.702
#2	.1878	.0204	.0006	1.576	.0627	2.671	.0370	3.792	1.692
#3	.1051	.0192	-.0091	1.589	.0326	2.483	.0166	4.360	1.686

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**1476.**	**.0558**	**.1387**	**68.38**	**2.951**	**.0081**	**.0338**	**4.504**
Stddev	.0020	18.	.0020	.0079	.87	.047	.0037	.0033	.078
%RSD	138.2	1.244	3.632	5.680	1.275	1.607	45.78	9.750	1.734
#1	-.0028	1496.	.0567	.1297	68.26	2.956	.0118	.0373	4.503
#2	.0008	1472.	.0535	.1445	67.57	2.902	.0044	.0308	4.427
#3	-.0022	1460.	.0573	.1420	69.30	2.996	.0081	.0333	4.583

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0075**	**.5218**	**-.0074**	**-.0011**	**.0176**	**.0750**	**19.42**	**-.0028**
Stddev	.0026	.0059	.0019	.0107	.0001	.0190	.32	.0013
%RSD	34.26	1.138	26.17	1006.	.5811	25.40	1.645	46.25
#1	-.0056	.5281	-.0088	-.0055	.0175	.0531	19.43	-.0016
#2	-.0065	.5209	-.0052	-.0088	.0177	.0840	19.10	-.0026
#3	-.0104	.5163	-.0083	.0111	.0175	.0877	19.74	-.0042

Zoom In Zoom Out

Sample Name: jd56439-1a Acquired: 12/7/2022 22:50:05 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5112.4**	**53351.**	**4919.1**	**2001.0**
Stddev	52.0	60.	12.7	20.9
%RSD	1.0178	.11170	.25835	1.0450
#1	5123.9	53348.	4910.9	2003.9
#2	5157.6	53293.	4933.8	2020.4
#3	5055.5	53412.	4912.8	1978.8

Zoom In Zoom Out

Sample Name: jd37736-8c Acquired: 12/7/2022 22:55:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0056**	**.2142**	**.0075**	**.0969**	**.2049**	**.0021**	**.0183**	**5.193**	**.0035**
Stddev	.0002	.0048	.0001	.0008	.0010	.0000	.0001	.010	.0003
%RSD	3.136	2.242	1.104	.8380	.5059	1.356	.4651	.1965	8.474
#1	.0058	.2197	.0075	.0975	.2060	.0021	.0184	5.198	.0032
#2	.0056	.2117	.0075	.0960	.2047	.0022	.0182	5.181	.0038
#3	.0054	.2112	.0074	.0973	.2040	.0021	.0183	5.200	.0035

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0486**	**.0120**	**.1935**	**1.296**	**5.016**	**.0515**	**5.141**	**.0336**
Stddev	.0022	.0007	.0002	.0011	.011	.012	.0005	.058	.0001
%RSD	93.39	1.426	1.992	.5876	.8178	.2463	.9231	1.126	.2718
#1	.0001	.0492	.0120	.1927	1.301	5.006	.0510	5.155	.0336
#2	.0026	.0487	.0123	.1931	1.284	5.030	.0515	5.077	.0336
#3	.0045	.0478	.0118	.1948	1.303	5.013	.0520	5.191	.0337

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0210**	**4.992**	**.0099**	**.0557**	**.0040**	**.0564**	**.0081**	**.0104**	**.2036**
Stddev	.0005	.011	.0002	.0012	.0005	.0005	.0005	.0019	.0011
%RSD	2.430	.2145	2.063	2.082	11.33	.9437	6.572	18.44	.5531
#1	.0216	4.999	.0101	.0570	.0045	.0564	.0080	.0082	.2049
#2	.0208	4.997	.0098	.0555	.0036	.0559	.0087	.0111	.2033
#3	.0207	4.980	.0097	.0547	.0040	.0570	.0076	.0119	.2027

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0118**	**.0101**	**.0099**	**.0058**	**.0500**	**.0499**	**.0227**	**.0100**
Stddev	.0004	.0000	.0003	.0015	.0001	.0002	.0001	.0001
%RSD	3.391	.2809	3.178	25.18	.1335	.3762	.4058	1.351
#1	.0114	.0101	.0102	.0042	.0500	.0497	.0228	.0102
#2	.0119	.0101	.0096	.0069	.0499	.0501	.0228	.0099
#3	.0122	.0101	.0100	.0064	.0500	.0498	.0226	.0101

Zoom In Zoom Out

Sample Name: jd37736-8c Acquired: 12/7/2022 22:55:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5625.7**	**56134.**	**5065.5**	**2061.3**
Stddev	64.2	155.	5.9	21.3
%RSD	1.1414	.27693	.11617	1.0356
#1	5552.5	56065.	5060.5	2036.8
#2	5652.5	56024.	5072.0	2072.1
#3	5672.2	56312.	5064.1	2075.1

Zoom In Zoom Out

Sample Name: jd37757-8c Acquired: 12/7/2022 23:00:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.1080**	**.0021**	**.0020**	**.0039**	**.0010**	**-.0026**	**1.053**	**.0012**
Stddev	.0002	.0089	.0007	.0003	.0002	.0001	.0006	.014	.0001
%RSD	108.4	8.201	32.48	16.97	6.153	5.225	23.60	1.297	6.052
#1	.0002	.0983	.0020	.0022	.0041	.0011	-.0033	1.040	.0013
#2	.0003	.1102	.0015	.0016	.0038	.0010	-.0024	1.052	.0011
#3	-.0000	.1157	.0028	.0023	.0036	.0011	-.0021	1.068	.0012

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029**	**.0028**	**.0023**	**-.0005**	**.0063**	**2.051**	**.0011**	**.1212**	**.0032**
Stddev	.0017	.0000	.0001	.0004	.0018	.015	.0019	.0432	.0000
%RSD	60.68	1.291	4.829	81.32	28.03	.7050	179.1	35.64	1.163
#1	.0025	.0028	.0024	-.0002	.0050	2.041	-.0010	.1005	.0032
#2	.0048	.0029	.0022	-.0009	.0084	2.044	.0014	.0923	.0032
#3	.0014	.0028	.0023	-.0004	.0056	2.067	.0028	.1708	.0031

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**1.028**	**.0040**	**.0010**	**.0005**	**.0007**	**.0017**	**.0032**	**.0031**
Stddev	.0002	.009	.0002	.0010	.0009	.0016	.0006	.0027	.0004
%RSD	33.59	.9121	6.056	98.92	183.4	227.5	33.58	86.47	11.43
#1	.0004	1.038	.0040	.0011	.0010	.0021	.0012	.0023	.0029
#2	.0004	1.020	.0042	-.0000	-.0006	.0011	.0015	.0010	.0035
#3	.0006	1.026	.0038	.0019	.0010	-.0011	.0023	.0062	.0028

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**-.0000**	**-.0002**	**.0006**	**.0025**	**-.0010**	**.0115**	**-.0001**
Stddev	.0004	.0001	.0006	.0017	.0001	.0013	.0001	.0001
%RSD	39.10	448.4	243.8	297.4	4.031	131.1	1.157	90.58
#1	.0009	.0000	-.0009	-.0012	.0024	.0004	.0115	-.0001
#2	.0007	-.0000	-.0002	.0022	.0026	-.0012	.0116	-.0000
#3	.0014	-.0001	.0003	.0007	.0026	-.0021	.0113	-.0003

Zoom In Zoom Out

Sample Name: jd37757-8c Acquired: 12/7/2022 23:00:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5753.1**	**56511.**	**5058.3**	**2085.0**
Stddev	27.3	211.	29.9	11.3
%RSD	.47464	.37316	.59079	.54181
#1	5724.8	56604.	5030.3	2073.8
#2	5755.1	56270.	5054.9	2084.8
#3	5779.3	56660.	5089.8	2096.4

Zoom In Zoom Out

Sample Name: jd37758-8c Acquired: 12/7/2022 23:05:31 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0135**	**.0231**	**.0016**	**.0003**	**.0001**	**.0008**	**.0797**	**.0003**
Stddev	.0003	.0086	.0008	.0007	.0001	.0001	.0014	.0023	.0001
%RSD	228.4	63.82	3.392	46.28	50.87	41.94	185.5	2.949	28.97
#1	.0005	.0214	.0226	.0009	.0003	.0002	-.0005	.0770	.0003
#2	-.0001	.0150	.0240	.0024	.0002	.0001	.0006	.0809	.0003
#3	-.0000	.0043	.0227	.0015	.0004	.0001	.0023	.0812	.0004

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0001**	**.0003**	**.0014**	**.0151**	**.0233**	**-.0001**	**.0285**	**.0004**
Stddev	.0043	.0003	.0005	.0002	.0033	.0195	.0017	.0148	.0000
%RSD	199.2	249.1	175.2	17.85	21.58	83.55	1998.	51.88	12.78
#1	.0029	.0002	.0002	.0015	.0157	.0026	.0016	.0115	.0004
#2	.0062	-.0002	.0007	.0015	.0179	.0412	-.0001	.0387	.0003
#3	-.0025	.0005	-.0001	.0011	.0115	.0260	-.0017	.0351	.0003

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0485**	**.0006**	**.0258**	**.0238**	**.0095**	**.0213**	**.0220**	**.0040**
Stddev	.0002	.0131	.0005	.0016	.0012	.0032	.0005	.0023	.0009
%RSD	60.01	27.00	79.44	6.229	4.880	33.98	2.300	10.41	21.64
#1	.0001	.0555	.0011	.0243	.0237	.0070	.0207	.0233	.0040
#2	.0004	.0334	.0005	.0275	.0250	.0084	.0216	.0233	.0048
#3	.0006	.0565	.0002	.0255	.0227	.0132	.0215	.0194	.0031

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2480**	**.0004**	**.0001**	**.0007**	**.0004**	**-.0009**	**.0046**	**.0004**
Stddev	.0086	.0001	.0002	.0003	.0001	.0013	.0001	.0001
%RSD	3.471	15.93	143.2	41.72	16.60	141.9	1.547	27.39
#1	.2527	.0005	.0003	.0010	.0004	-.0013	.0047	.0003
#2	.2533	.0004	.0002	.0004	.0004	.0005	.0045	.0003
#3	.2381	.0004	-.0001	.0007	.0005	-.0020	.0046	.0005

Zoom In Zoom Out

Sample Name: jd37758-8c Acquired: 12/7/2022 23:05:31 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5803.6**	**54207.**	**4934.7**	**2077.9**
Stddev	146.1	1213.	2.6	56.8
%RSD	2.5168	2.2375	.05209	2.7334
#1	5710.5	52813.	4937.7	2042.6
#2	5728.5	55027.	4933.0	2047.6
#3	5972.0	54780.	4933.6	2143.4

Zoom In Zoom Out

Sample Name: jd37737-8c Acquired: 12/7/2022 23:10:43 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057**	**.2123**	**.0090**	**.0987**	**.2000**	**.0025**	**.0212**	**5.239**	**.0037**
Stddev	.0002	.0097	.0007	.0004	.0006	.0001	.0011	.032	.0001
%RSD	2.859	4.564	7.380	.4431	.2973	3.387	5.041	.6178	3.381
#1	.0055	.2130	.0087	.0982	.2007	.0026	.0222	5.276	.0036
#2	.0057	.2216	.0084	.0991	.1997	.0025	.0201	5.223	.0036
#3	.0058	.2022	.0097	.0987	.1996	.0025	.0212	5.217	.0038

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**.0485**	**.0109**	**.0112**	**.1412**	**5.043**	**.0501**	**5.116**	**.0162**
Stddev	.0058	.0001	.0003	.0001	.0044	.015	.0011	.048	.0001
%RSD	213.7	.1632	2.596	1.002	3.113	.3006	2.290	.9433	.4516
#1	-.0039	.0486	.0110	.0111	.1461	5.040	.0489	5.160	.0162
#2	.0049	.0485	.0105	.0113	.1376	5.060	.0511	5.065	.0162
#3	.0071	.0485	.0110	.0113	.1400	5.030	.0503	5.123	.0161

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0210**	**4.977**	**.0118**	**.0700**	**.0052**	**.0607**	**.0074**	**.0117**	**.1928**
Stddev	.0002	.020	.0003	.0006	.0012	.0003	.0006	.0001	.0006
%RSD	.7707	.3969	2.888	.8572	23.89	.4489	8.425	.9320	.3220
#1	.0210	4.999	.0122	.0706	.0063	.0610	.0080	.0117	.1928
#2	.0212	4.968	.0115	.0694	.0038	.0605	.0068	.0118	.1922
#3	.0209	4.963	.0118	.0701	.0055	.0607	.0076	.0116	.1934

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0411**	**.0107**	**.0107**	**.0101**	**.0485**	**.0492**	**.0397**	**.0085**
Stddev	.0004	.0002	.0005	.0008	.0005	.0007	.0000	.0002
%RSD	.9391	1.741	4.207	7.752	1.106	1.352	.0425	1.849
#1	.0415	.0108	.0103	.0094	.0487	.0484	.0397	.0084
#2	.0408	.0105	.0111	.0110	.0490	.0496	.0397	.0086
#3	.0409	.0108	.0108	.0100	.0479	.0494	.0397	.0083

Zoom In Zoom Out

Sample Name: jd37737-8c Acquired: 12/7/2022 23:10:43 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5549.4**	**54659.**	**4956.4**	**2023.5**
Stddev	3.9	47.	12.2	4.0
%RSD	.07012	.08602	.24621	.19538
#1	5553.6	54682.	4967.6	2025.0
#2	5545.9	54605.	4958.2	2019.0
#3	5548.7	54691.	4943.4	2026.4

Zoom In Zoom Out

Sample Name: mp36376-mb1conf Acquired: 12/7/2022 23:15:51 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0528**	**.0036**	**.0024**	**.0027**	**.0024**	**.0045**	**.0996**	**.0026**
Stddev	.0002	.0216	.0005	.0005	.0002	.0000	.0010	.0007	.0002
%RSD	27.98	40.98	14.57	18.55	8.401	1.568	23.31	.6816	7.607
#1	.0005	.0765	.0041	.0024	.0027	.0024	.0055	.0989	.0028
#2	.0006	.0480	.0031	.0020	.0030	.0024	.0045	.1002	.0025
#3	.0008	.0340	.0036	.0029	.0025	.0023	.0034	.0998	.0025

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0024**	**.0029**	**.0037**	**.0448**	**.0564**	**.0016**	**.0499**	**.0027**
Stddev	.0003	.0004	.0001	.0002	.0019	.0224	.0015	.0228	.0001
%RSD	32.17	18.24	2.657	4.255	4.315	39.67	97.91	45.65	3.262
#1	.0010	.0019	.0029	.0039	.0452	.0734	.0024	.0289	.0027
#2	.0008	.0027	.0030	.0037	.0427	.0648	-.0002	.0742	.0026
#3	.0005	.0026	.0029	.0036	.0465	.0311	.0025	.0466	.0028

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0729**	**.0029**	**.0286**	**.0033**	**.0082**	**.0021**	**.0030**	**.0082**
Stddev	.0001	.0022	.0002	.0014	.0009	.0045	.0009	.0022	.0002
%RSD	5.037	2.984	8.579	4.748	28.24	54.60	43.62	74.12	2.596
#1	.0025	.0710	.0031	.0286	.0024	.0121	.0032	.0051	.0079
#2	.0026	.0725	.0026	.0273	.0043	.0033	.0016	.0032	.0084
#3	.0024	.0753	.0029	.0300	.0034	.0092	.0016	.0007	.0082

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0339**	**.0027**	**.0030**	**.0045**	**.0024**	**.0015**	**.0045**	**.0023**
Stddev	.0009	.0001	.0003	.0005	.0004	.0007	.0001	.0000
%RSD	2.591	2.955	10.38	11.17	18.49	50.72	1.919	.3199
#1	.0348	.0028	.0027	.0050	.0023	.0012	.0044	.0023
#2	.0339	.0028	.0030	.0047	.0028	.0023	.0046	.0023
#3	.0331	.0026	.0033	.0040	.0020	.0009	.0045	.0023

Zoom In Zoom Out

Sample Name: mp36376-mb1conf Acquired: 12/7/2022 23:15:51 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5651.6**	**53834.**	**4914.4**	**2018.7**
Stddev	10.8	1194.	30.6	5.0
%RSD	.19035	2.2179	.62217	.24818
#1	5640.1	54575.	4911.9	2012.9
#2	5653.4	54471.	4946.2	2021.2
#3	5661.4	52457.	4885.2	2021.9

Zoom In Zoom Out

Sample Name: mp36376-b1 Acquired: 12/7/2022 23:21:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2299**	**23.95**	**1.810**	**1.783**	**1.860**	**1.891**	**2.113**	**24.09**	**1.841**
Stddev	.0019	.08	.001	.004	.002	.006	.001	.04	.004
%RSD	.8096	.3285	.0335	.1944	.1006	.3110	.0431	.1724	.2343
#1	.2320	24.02	1.810	1.786	1.861	1.894	2.113	24.13	1.840
#2	.2293	23.97	1.811	1.779	1.861	1.894	2.112	24.09	1.837
#3	.2284	23.87	1.810	1.785	1.858	1.884	2.114	24.05	1.845

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1756**	**1.826**	**1.851**	**1.826**	**24.73**	**23.70**	**1.819**	**23.95**	**1.882**
Stddev	.0035	.003	.005	.004	.06	.04	.005	.16	.005
%RSD	1.969	.1515	.2710	.2037	.2389	.1690	.2845	.6876	.2512
#1	.1760	1.829	1.855	1.829	24.77	23.67	1.824	24.09	1.886
#2	.1720	1.826	1.851	1.822	24.75	23.75	1.819	24.00	1.884
#3	.1789	1.824	1.845	1.828	24.66	23.68	1.814	23.77	1.877

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.897**	**23.98**	**1.833**	**1.676**	**1.834**	**1.770**	**1.835**	**1.787**	**4.275**
Stddev	.003	.06	.004	.001	.003	.005	.002	.003	.008
%RSD	.1513	.2551	.1922	.0503	.1560	.3078	.1334	.1607	.1928
#1	1.898	24.03	1.837	1.675	1.837	1.770	1.837	1.791	4.274
#2	1.894	24.01	1.832	1.677	1.834	1.775	1.835	1.785	4.267
#3	1.900	23.91	1.830	1.676	1.831	1.764	1.832	1.786	4.283

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.916**	**1.863**	**1.850**	**1.909**	**1.845**	**1.871**	**1.862**	**1.846**
Stddev	.004	.002	.005	.016	.001	.007	.005	.002
%RSD	.1814	.0964	.2521	.8143	.0781	.3584	.2697	.0827
#1	1.919	1.863	1.853	1.927	1.847	1.866	1.868	1.847
#2	1.916	1.864	1.853	1.902	1.844	1.867	1.858	1.844
#3	1.912	1.861	1.845	1.898	1.844	1.878	1.861	1.846

Zoom In Zoom Out

Sample Name: mp36376-b1 Acquired: 12/7/2022 23:21:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5269.9**	**54484.**	**5040.9**	**2028.0**
Stddev	8.5	204.	20.2	1.9
%RSD	.16141	.37418	.40051	.09331
#1	5260.8	54509.	5041.9	2026.2
#2	5271.5	54268.	5020.3	2029.9
#3	5277.6	54674.	5060.6	2027.8

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 23:25:48 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2504**	**39.99**	**1.955**	**1.970**	**1.967**	**2.001**	**1.965**	**40.27**	**1.978**
Stddev	.0008	.15	.006	.003	.009	.006	.005	.20	.001
%RSD	.3211	.3723	.3296	.1506	.4506	.2851	.2365	.5010	.0612
#1	.2509	40.09	1.948	1.967	1.971	2.005	1.960	40.49	1.977
#2	.2509	39.82	1.956	1.973	1.957	1.994	1.967	40.10	1.979
#3	.2495	40.05	1.961	1.971	1.973	2.002	1.968	40.22	1.979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.965**	**1.969**	**1.967**	**1.923**	**41.03**	**39.73**	**1.925**	**40.31**	**1.997**
Stddev	.008	.004	.007	.006	.07	.12	.004	.16	.006
%RSD	.3992	.2248	.3741	.2897	.1695	.2938	.2253	.3996	.3031
#1	1.971	1.969	1.976	1.929	41.10	39.77	1.928	40.48	2.004
#2	1.956	1.964	1.962	1.917	40.96	39.60	1.920	40.16	1.993
#3	1.968	1.973	1.965	1.923	41.03	39.82	1.927	40.28	1.994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.993**	**40.36**	**1.973**	**1.811**	**1.993**	**1.917**	**1.963**	**1.951**	**4.800**
Stddev	.002	.06	.007	.003	.004	.013	.002	.001	.008
%RSD	.1163	.1428	.3445	.1358	.2186	.6662	.0866	.0459	.1661
#1	1.991	40.41	1.976	1.811	1.996	1.930	1.965	1.951	4.791
#2	1.992	40.30	1.966	1.809	1.988	1.905	1.961	1.950	4.805
#3	1.995	40.38	1.979	1.814	1.996	1.914	1.962	1.952	4.804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/7/2022 23:25:48 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.007**	**1.970**	**1.950**	**2.082**	**1.956**	**1.969**	**1.994**	**1.952**
Stddev	.003	.007	.005	.014	.006	.011	.005	.005
%RSD	.1280	.3643	.2804	.6584	.3109	.5312	.2312	.2612
#1	2.009	1.974	1.956	2.083	1.963	1.966	1.997	1.956
#2	2.004	1.961	1.946	2.068	1.951	1.960	1.989	1.947
#3	2.009	1.974	1.947	2.095	1.954	1.981	1.997	1.954
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5161.0**	**54058.**	**4966.0**	**2033.0**
Stddev	10.8	110.	4.3	2.7
%RSD	.20865	.20284	.08599	.13300
#1	5165.8	53956.	4961.1	2036.1
#2	5168.5	54044.	4969.3	2031.9
#3	5148.6	54174.	4967.5	2031.0

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 23:30:35 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0087**	**.0006**	**.0036**	**-.0001**	**-.0000**	**.0001**	**.0011**	**.0002**
Stddev	.0008	.0063	.0013	.0007	.0003	.0000	.0008	.0039	.0001
%RSD	386.1	72.55	223.7	18.57	371.5	69.19	1111.	360.7	79.19
#1	-.0006	.0116	-.0002	.0043	.0001	-.0000	-.0000	-.0021	.0000
#2	.0007	.0130	.0021	.0035	-.0004	-.0001	.0009	.0055	.0002
#3	-.0007	.0015	-.0002	.0030	.0001	-.0000	-.0006	-.0001	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.0002**	**.0000**	**-.0002**	**.0021**	**-.0053**	**.0000**	**-.0085**	**-.0000**
Stddev	.0006	.0001	.0002	.0002	.0012	.0258	.0006	.0309	.0000
%RSD	100.5	57.05	1804.	127.7	54.70	483.0	3121.	361.8	76.38
#1	-.0013	-.0002	.0001	-.0001	.0012	-.0289	.0001	-.0425	-.0001
#2	-.0006	-.0004	.0001	-.0004	.0017	.0222	.0005	-.0009	-.0000
#3	-.0000	-.0002	-.0002	.0000	.0034	-.0093	-.0006	.0179	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0041**	**-.0000**	**.0001**	**.0012**	**-.0004**	**.0002**	**-.0006**	**-.0071**
Stddev	.0001	.0085	.0004	.0008	.0007	.0040	.0007	.0025	.0013
%RSD	21.48	207.3	2336.	901.9	58.54	970.5	323.3	448.5	18.81
#1	.0004	.0064	-.0004	.0008	.0014	.0040	-.0002	.0016	-.0086
#2	.0006	.0112	.0005	-.0007	.0018	-.0038	-.0002	-.0033	-.0059
#3	.0004	-.0053	-.0001	.0001	.0004	-.0014	.0011	.0001	-.0068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/7/2022 23:30:35 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0000**	**.0000**	**-.0000**	**.0002**	**-.0005**	**-.0002**	**.0001**
Stddev	.0005	.0001	.0000	.0016	.0002	.0013	.0002	.0000
%RSD	197.5	267.3	60.60	28730.	76.13	243.4	79.50	16.49
#1	-.0002	-.0001	.0000	.0014	.0001	.0009	-.0004	.0001
#2	.0001	-.0000	.0000	.0003	.0002	-.0007	-.0003	.0001
#3	.0007	.0000	.0000	-.0017	.0004	-.0017	-.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5783.6**	**56217.**	**4967.3**	**2096.6**
Stddev	11.8	61.	47.1	3.9
%RSD	.20421	.10939	.94874	.18677
#1	5770.0	56154.	4912.9	2092.1
#2	5789.8	56222.	4993.5	2098.8
#3	5791.0	56276.	4995.6	2098.8

Zoom In Zoom Out

Sample Name: mp36779-mb1conf Acquired: 12/7/2022 23:35:48 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0097**	**-.0002**	**.0023**	**.0003**	**-.0001**	**.0003**	**.1362**	**.0002**
Stddev	.0002	.0165	.0007	.0004	.0001	.0001	.0003	.0123	.0002
%RSD	66.39	170.3	281.3	19.73	44.61	86.82	98.03	9.054	68.26
#1	.0001	-.0092	-.0004	.0018	.0005	-.0000	.0002	.1407	.0004
#2	.0005	.0171	-.0008	.0027	.0003	-.0002	.0001	.1457	.0001
#3	.0003	.0213	.0005	.0023	.0002	-.0001	.0007	.1223	.0002

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**-.0000**	**.0004**	**.0017**	**.0261**	**.0409**	**.0002**	**.0308**	**.0006**
Stddev	.0013	.0001	.0002	.0000	.0015	.0097	.0004	.0285	.0000
%RSD	95.12	261.1	37.84	1.633	5.690	23.71	239.9	92.60	2.091
#1	-.0001	-.0001	.0002	.0018	.0278	.0297	-.0001	.0157	.0006
#2	.0024	.0001	.0005	.0017	.0256	.0464	.0007	.0637	.0006
#3	.0018	-.0001	.0004	.0017	.0249	.0467	.0000	.0130	.0006

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0560**	**.0010**	**.0198**	**.0013**	**.0126**	**.0000**	**.0007**	**.0011**
Stddev	.0003	.0155	.0004	.0017	.0003	.0015	.0010	.0009	.0017
%RSD	59.01	27.79	35.76	8.598	25.39	11.77	2488.	138.1	151.4
#1	.0002	.0712	.0011	.0218	.0011	.0140	-.0007	-.0001	.0021
#2	.0008	.0401	.0006	.0187	.0016	.0110	.0012	.0017	.0021
#3	.0007	.0566	.0013	.0190	.0011	.0127	-.0003	.0004	-.0009

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0218**	**.0005**	**.0002**	**.0014**	**.0003**	**-.0006**	**.0148**	**.0002**
Stddev	.0003	.0000	.0005	.0017	.0002	.0013	.0000	.0001
%RSD	1.176	1.928	270.3	121.2	48.70	214.4	.2273	43.26
#1	.0216	.0005	-.0002	.0026	.0005	-.0002	.0149	.0002
#2	.0217	.0005	.0008	.0020	.0003	.0004	.0148	.0001
#3	.0221	.0005	.0000	-.0005	.0002	-.0020	.0148	.0002

Zoom In Zoom Out

Sample Name: mp36779-mb1conf Acquired: 12/7/2022 23:35:48 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5807.9**	**56670.**	**5144.8**	**2093.6**
Stddev	7.8	79.	39.8	5.5
%RSD	.13447	.13940	.77432	.26371
#1	5798.9	56732.	5169.6	2087.3
#2	5812.7	56581.	5098.9	2096.0
#3	5812.0	56697.	5166.0	2097.6

Zoom In Zoom Out

Sample Name: mp36779-b1conf Acquired: 12/7/2022 23:40:59 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2383**	**24.38**	**1.848**	**1.877**	**1.910**	**1.947**	F **-.0289**	**24.56**
Stddev	.0009	.19	.013	.009	.013	.010	.0003	.17
%RSD	.3901	.7711	.7196	.4642	.6807	.5286	1.160	.6936
#1	.2381	24.27	1.842	1.868	1.899	1.941	-.0289	24.49
#2	.2393	24.59	1.839	1.877	1.924	1.959	-.0292	24.76
#3	.2375	24.27	1.863	1.885	1.906	1.941	-.0286	24.44

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.922**	**.1876**	**1.897**	**1.898**	**1.880**	**25.21**	**24.26**	**.0009**
Stddev	.011	.0009	.015	.004	.007	.17	.22	.0001
%RSD	.5669	.4635	.7641	.2309	.3909	.6793	.8886	12.90
#1	1.917	.1875	1.890	1.901	1.888	25.13	24.09	.0009
#2	1.915	.1868	1.887	1.900	1.878	25.41	24.50	.0007
#3	1.935	.1886	1.914	1.893	1.874	25.10	24.20	.0009

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.61**	**1.930**	**1.884**	**24.55**	**1.899**	**1.744**	**1.920**	W **-.0351**
Stddev	.30	.005	.010	.11	.013	.015	.013	.0027
%RSD	1.213	.2715	.5195	.4504	.6982	.8364	.6970	7.705
#1	24.39	1.933	1.877	24.51	1.892	1.734	1.913	-.0323
#2	24.95	1.933	1.880	24.67	1.892	1.738	1.912	-.0354
#3	24.50	1.924	1.895	24.46	1.915	1.761	1.936	-.0377

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.864**	**1.891**	**.0742**	**1.919**	**1.913**	**1.826**	**2.067**	**1.883**
Stddev	.012	.012	.0019	.012	.012	.005	.007	.006
%RSD	.6158	.6478	2.579	.6094	.6137	.2583	.3239	.3461
#1	1.855	1.881	.0730	1.910	1.904	1.829	2.060	1.889
#2	1.859	1.887	.0731	1.916	1.926	1.828	2.073	1.886
#3	1.877	1.905	.0764	1.932	1.908	1.821	2.067	1.876

Zoom In Zoom Out

Sample Name: mp36779-b1conf Acquired: 12/7/2022 23:40:59 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.526**	**1.932**	**1.828**
Stddev	.010	.009	.008
%RSD	.6666	.4770	.4215
#1	1.516	1.926	1.834
#2	1.526	1.927	1.830
#3	1.537	1.943	1.820

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5271.1**	**55131.**	**5079.3**	**2030.8**
Stddev	33.6	166.	55.8	11.3
%RSD	.63752	.30189	1.0994	.55403
#1	5290.4	55250.	5086.2	2036.6
#2	5290.6	54941.	5020.3	2038.0
#3	5232.3	55203.	5131.3	2017.8

Zoom In Zoom Out

Sample Name: mp36779-s1 Acquired: 12/7/2022 23:45:47 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2451**	**141.4**	**1.827**	**2.009**	**2.397**	**1.912**	**-.0085**	**141.8**	**1.936**
Stddev	.0013	1.8	.002	.002	.027	.023	.0019	1.5	.003
%RSD	.5299	1.273	.1080	.1125	1.114	1.219	22.13	1.080	.1460
#1	.2459	142.5	1.826	2.009	2.412	1.929	-.0098	142.8	1.939
#2	.2459	142.5	1.829	2.007	2.413	1.923	-.0063	142.7	1.936
#3	.2436	139.3	1.826	2.011	2.367	1.886	-.0093	140.1	1.934

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8332**	**2.006**	**1.941**	**2.857**	**272.5**	**42.32**	**.0858**	**79.96**	**4.510**
Stddev	.0100	.000	.005	.006	3.0	.48	.0014	.82	.009
%RSD	1.196	.0218	.2459	.2063	1.090	1.138	1.672	1.027	.1881
#1	.8436	2.006	1.947	2.864	274.5	42.57	.0873	80.26	4.520
#2	.8237	2.005	1.938	2.855	273.9	42.62	.0857	80.59	4.504
#3	.8323	2.006	1.939	2.853	269.1	41.76	.0844	79.03	4.508

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.794**	**33.39**	**2.028**	**7.718**	**2.383**	**2.277**	**1.024**	**1.858**	**3.862**
Stddev	.005	.47	.005	.045	.011	.007	.012	.014	.023
%RSD	.2646	1.413	.2413	.5796	.4399	.3173	1.136	.7718	.5851
#1	1.792	33.68	2.032	7.680	2.376	2.276	1.013	1.849	3.842
#2	1.800	33.65	2.023	7.706	2.379	2.270	1.024	1.850	3.857
#3	1.791	32.85	2.030	7.767	2.395	2.285	1.036	1.875	3.886

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.794**	**2.185**	**7.167**	**2.072**	**2.273**	**.9941**	**2.624**	**1.864**
Stddev	.020	.025	.022	.021	.007	.0091	.007	.007
%RSD	1.098	1.145	.3010	1.003	.3195	.9184	.2533	.3787
#1	1.780	2.199	7.187	2.052	2.282	.9839	2.626	1.872
#2	1.785	2.201	7.144	2.093	2.270	.9972	2.617	1.858
#3	1.817	2.157	7.171	2.070	2.269	1.001	2.630	1.862

Zoom In Zoom Out

Sample Name: mp36779-s1 Acquired: 12/7/2022 23:45:47 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5172.5**	**55427.**	**5139.5**	**2068.1**
Stddev	2.9	179.	26.1	1.0
%RSD	.05515	.32269	.50796	.04718
#1	5175.1	55358.	5117.9	2069.0
#2	5172.8	55630.	5132.2	2068.3
#3	5169.5	55292.	5168.5	2067.1

Zoom In Zoom Out

Sample Name: mp36779-s2 Acquired: 12/7/2022 23:50:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2482**	**156.2**	**1.847**	**1.964**	**2.974**	**1.938**	**-.0090**	**172.3**	**1.962**
Stddev	.0016	.3	.014	.013	.012	.003	.0018	.3	.008
%RSD	.6513	.1662	.7670	.6385	.4120	.1496	19.55	.1843	.4147
#1	.2501	156.0	1.864	1.978	2.960	1.935	-.0105	172.2	1.971
#2	.2470	156.1	1.838	1.955	2.983	1.938	-.0094	172.1	1.961
#3	.2476	156.5	1.840	1.959	2.980	1.941	-.0070	172.7	1.955

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8255**	**2.014**	**1.983**	**2.560**	**253.6**	**42.34**	**.1069**	**87.38**	**4.875**
Stddev	.0128	.008	.005	.008	.4	.16	.0024	.58	.013
%RSD	1.547	.3782	.2704	.2970	.1712	.3778	2.291	.6627	.2661
#1	.8205	2.023	1.989	2.569	253.1	42.16	.1093	87.24	4.889
#2	.8160	2.009	1.979	2.557	253.6	42.38	.1045	86.88	4.866
#3	.8400	2.011	1.983	2.554	254.0	42.47	.1068	88.01	4.869

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.811**	**35.60**	**2.071**	**6.257**	**2.398**	**2.570**	**.9960**	**1.865**	**4.002**
Stddev	.006	.05	.010	.024	.009	.015	.0059	.009	.023
%RSD	.3215	.1507	.4702	.3853	.3567	.5636	.5901	.4874	.5708
#1	1.817	35.60	2.082	6.285	2.408	2.583	1.003	1.876	4.027
#2	1.805	35.55	2.066	6.243	2.395	2.573	.9920	1.861	3.997
#3	1.811	35.66	2.065	6.243	2.392	2.555	.9932	1.860	3.982

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.787**	**2.281**	**7.184**	**2.056**	**2.283**	**.9826**	**2.637**	**1.879**
Stddev	.008	.005	.021	.007	.003	.0059	.011	.005
%RSD	.4406	.2201	.2914	.3382	.1365	.5977	.4304	.2695
#1	1.795	2.275	7.205	2.060	2.287	.9886	2.648	1.884
#2	1.785	2.284	7.163	2.060	2.282	.9823	2.625	1.875
#3	1.779	2.283	7.183	2.048	2.281	.9769	2.636	1.876

Zoom In Zoom Out

Sample Name: mp36779-s2 Acquired: 12/7/2022 23:50:33 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5124.0**	**55404.**	**5194.8**	**2051.3**
Stddev	21.1	79.	37.6	10.4
%RSD	.41139	.14348	.72317	.50613
#1	5100.2	55321.	5237.0	2039.7
#2	5140.4	55412.	5182.5	2059.6
#3	5131.4	55480.	5164.9	2054.7

Zoom In Zoom Out

Sample Name: jd56619-14 Acquired: 12/7/2022 23:55:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**99.79**	**.0373**	**.2640**	**.5215**	**.0042**	**.0069**	**128.7**	**.0036**
Stddev	.0005	.67	.0015	.0023	.0029	.0002	.0015	.6	.0006
%RSD	11.32	.6717	3.898	.8633	.5654	4.144	22.01	.4826	16.34
#1	.0040	99.05	.0376	.2643	.5185	.0044	.0059	128.2	.0037
#2	.0050	99.96	.0386	.2661	.5215	.0040	.0063	128.6	.0029
#3	.0044	100.4	.0357	.2615	.5244	.0042	.0087	129.4	.0041

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6342**	**.0966**	**.1122**	**.7965**	**233.8**	**15.04**	**.0960**	**49.75**	**2.893**
Stddev	.0105	.0007	.0012	.0030	1.7	.13	.0011	.33	.009
%RSD	1.657	.7071	1.044	.3779	.7240	.8661	1.110	.6649	.3186
#1	.6276	.0972	.1111	.7931	232.1	14.94	.0966	49.50	2.895
#2	.6288	.0968	.1121	.7976	233.8	14.99	.0948	49.63	2.883
#3	.6464	.0959	.1135	.7987	235.5	15.19	.0966	50.13	2.901

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060**	**7.850**	**.1357**	**6.382**	**.4087**	**3.209**	**.0071**	**.0046**	**1.887**
Stddev	.0002	.059	.0005	.022	.0026	.008	.0019	.0056	.010
%RSD	3.857	.7526	.3524	.3508	.6348	.2548	27.00	122.0	.5407
#1	.0062	7.785	.1353	6.375	.4092	3.213	.0061	-.0008	1.897
#2	.0057	7.866	.1355	6.365	.4111	3.214	.0094	.0105	1.876
#3	.0061	7.900	.1362	6.408	.4059	3.199	.0060	.0042	1.889

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0381**	**.3790**	**5.512**	**.0026**	**.4684**	**.0143**	**.7203**	**.0998**
Stddev	.0015	.0030	.021	.0024	.0020	.0020	.0028	.0003
%RSD	3.971	.8005	.3869	92.99	.4297	13.96	.3922	.2587
#1	.0398	.3762	5.502	.0014	.4669	.0121	.7215	.0996
#2	.0368	.3786	5.499	.0054	.4677	.0158	.7171	.1001
#3	.0378	.3823	5.537	.0010	.4707	.0152	.7224	.0999

Zoom In Zoom Out

Sample Name: jd56619-14 Acquired: 12/7/2022 23:55:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5234.5**	**55393.**	**5130.3**	**2063.3**
Stddev	7.2	153.	6.6	2.5
%RSD	.13792	.27702	.12930	.12265
#1	5242.8	55262.	5137.3	2065.9
#2	5229.6	55562.	5124.0	2063.1
#3	5231.1	55356.	5129.7	2060.8

Zoom In Zoom Out

Sample Name: mp36779-sd1 Acquired: 12/8/2022 0:00:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**93.61**	**.0424**	**.3025**	**.4898**	**.0040**	**.0223**	**120.5**	**.0018**
Stddev	.0016	1.90	.0068	.0035	.0080	.0007	.0042	2.3	.0033
%RSD	185.7	2.024	16.11	1.147	1.642	18.07	18.84	1.941	183.2
#1	-.0012	91.44	.0468	.2985	.4812	.0032	.0193	117.8	.0030
#2	-.0022	94.96	.0458	.3043	.4971	.0045	.0271	122.2	.0044
#3	.0009	94.43	.0345	.3046	.4913	.0044	.0205	121.4	-.0020

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6689**	**.1022**	**.1163**	**.8312**	**224.8**	**13.78**	**.0915**	**47.21**	**3.070**
Stddev	.0350	.0021	.0036	.0061	4.8	.24	.0023	1.11	.022
%RSD	5.240	2.034	3.075	.7364	2.120	1.767	2.468	2.359	.7193
#1	.6464	.1021	.1168	.8243	219.3	13.52	.0926	46.00	3.048
#2	.6509	.1044	.1195	.8333	228.1	13.99	.0930	47.43	3.070
#3	.7092	.1002	.1124	.8360	227.0	13.83	.0889	48.19	3.092

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061**	**7.270**	**.1437**	**6.877**	**.4498**	**3.382**	**.0031**	**-.0006**	**1.827**
Stddev	.0020	.046	.0021	.024	.0067	.051	.0096	.0059	.018
%RSD	33.35	.6338	1.426	.3463	1.481	1.505	309.1	1032.	1.008
#1	.0076	7.223	.1448	6.852	.4473	3.386	.0034	-.0071	1.836
#2	.0038	7.272	.1450	6.900	.4574	3.430	.0126	.0043	1.838
#3	.0068	7.315	.1414	6.878	.4448	3.329	-.0066	.0011	1.805

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0434**	**.3575**	**5.832**	**-.0071**	**.5015**	**.0213**	**.8170**	**.1061**
Stddev	.0035	.0074	.047	.0205	.0010	.0113	.0035	.0002
%RSD	8.075	2.077	.8023	288.2	.1982	53.24	.4270	.2066
#1	.0454	.3490	5.789	-.0306	.5004	.0343	.8180	.1063
#2	.0454	.3622	5.826	.0027	.5020	.0156	.8131	.1060
#3	.0393	.3615	5.882	.0066	.5022	.0139	.8199	.1059

Zoom In Zoom Out

Sample Name: mp36779-sd1 Acquired: 12/8/2022 0:00:18 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 10.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5584.8**	**55912.**	**5122.0**	**2099.1**
Stddev	13.9	603.	98.6	3.2
%RSD	.24852	1.0783	1.9245	.15195
#1	5568.8	55224.	5072.4	2095.6
#2	5593.7	56344.	5058.1	2100.0
#3	5591.9	56169.	5235.5	2101.8

Zoom In Zoom Out

Sample Name: jd56619-12 Acquired: 12/8/2022 0:05:23 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0072**	**120.4**	**.0371**	**.1856**	**.5311**	**.0044**	**.0136**	**194.5**	**.0040**
Stddev	.0003	.2	.0031	.0002	.0022	.0002	.0004	.6	.0005
%RSD	4.757	.1964	8.271	.0861	.4189	3.433	2.695	.3121	12.91
#1	.0076	120.7	.0399	.1856	.5336	.0045	.0132	195.2	.0039
#2	.0069	120.3	.0376	.1857	.5296	.0045	.0136	194.5	.0046
#3	.0071	120.3	.0338	.1854	.5299	.0042	.0139	193.9	.0036

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7001**	**.1147**	**.1104**	**1.078**	**283.3**	**22.08**	**.0978**	**83.68**	**2.662**
Stddev	.0048	.0003	.0001	.003	.5	.07	.0039	.15	.003
%RSD	.6878	.2448	.0970	.2768	.1880	.3175	3.942	.1822	.1199
#1	.6965	.1144	.1105	1.075	283.9	22.16	.0935	83.76	2.662
#2	.7055	.1148	.1103	1.081	282.9	22.06	.0989	83.77	2.658
#3	.6981	.1149	.1104	1.079	283.0	22.03	.1010	83.50	2.664

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0053**	**10.76**	**.1301**	**7.361**	**.2737**	**3.590**	**.0081**	**.0099**	**2.168**
Stddev	.0007	.04	.0012	.032	.0021	.016	.0022	.0040	.012
%RSD	12.20	.3731	.8861	.4345	.7563	.4326	26.86	40.35	.5429
#1	.0053	10.76	.1310	7.396	.2715	3.573	.0067	.0146	2.181
#2	.0060	10.72	.1288	7.353	.2756	3.595	.0106	.0077	2.160
#3	.0047	10.80	.1305	7.334	.2739	3.603	.0069	.0076	2.162

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0375**	**.4163**	**7.007**	**.0040**	**.5574**	**.0116**	**.6414**	**.1244**
Stddev	.0012	.0009	.006	.0031	.0002	.0024	.0018	.0007
%RSD	3.156	.2188	.0856	76.34	.0389	20.54	.2802	.5744
#1	.0379	.4173	7.007	.0053	.5573	.0134	.6434	.1235
#2	.0385	.4160	7.001	.0005	.5574	.0125	.6406	.1247
#3	.0362	.4156	7.013	.0063	.5577	.0089	.6401	.1248

Zoom In Zoom Out

Sample Name: jd56619-12 Acquired: 12/8/2022 0:05:23 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5145.5**	**55271.**	**5111.6**	**2054.3**
Stddev	4.7	81.	15.1	4.5
%RSD	.09067	.14575	.29571	.21850
#1	5141.7	55184.	5097.9	2050.6
#2	5150.7	55344.	5109.1	2059.3
#3	5144.1	55285.	5127.8	2052.9

Zoom In Zoom Out

Sample Name: jd56619-13 Acquired: 12/8/2022 0:10:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064**	**112.1**	**.0325**	**.1972**	**.5278**	**.0044**	**.0130**	**130.7**	**.0043**
Stddev	.0003	.1	.0022	.0012	.0019	.0002	.0013	.6	.0006
%RSD	5.408	.1214	6.825	.6135	.3597	5.367	9.915	.4938	12.95
#1	.0068	112.2	.0350	.1964	.5285	.0041	.0126	130.6	.0043
#2	.0061	112.2	.0313	.1966	.5257	.0043	.0145	131.4	.0049
#3	.0064	112.0	.0311	.1986	.5293	.0046	.0120	130.1	.0037

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6401**	**.0987**	**.1117**	**.8610**	**244.2**	**16.43**	**.0849**	**56.46**	**2.644**
Stddev	.0076	.0007	.0001	.0025	.4	.05	.0003	.20	.005
%RSD	1.184	.7473	.0992	.2914	.1578	.3151	.3167	.3573	.1915
#1	.6342	.0994	.1118	.8620	244.5	16.49	.0852	56.26	2.650
#2	.6486	.0979	.1117	.8629	244.3	16.39	.0847	56.46	2.643
#3	.6375	.0987	.1115	.8582	243.8	16.41	.0848	56.66	2.640

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047**	**9.645**	**.1349**	**5.480**	**.3169**	**2.701**	**.0064**	**.0041**	**2.050**
Stddev	.0005	.006	.0002	.024	.0036	.007	.0026	.0032	.018
%RSD	10.27	.0639	.1230	.4417	1.142	.2456	41.15	78.12	.8894
#1	.0049	9.642	.1349	5.507	.3209	2.709	.0047	.0041	2.067
#2	.0050	9.641	.1351	5.472	.3140	2.700	.0051	.0009	2.052
#3	.0042	9.652	.1348	5.460	.3156	2.696	.0095	.0072	2.031

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0387**	**.3465**	**6.889**	**.0033**	**.4711**	**.0086**	**.7938**	**.1028**
Stddev	.0014	.0008	.013	.0021	.0016	.0012	.0055	.0002
%RSD	3.741	.2243	.1938	64.37	.3352	14.22	.6927	.2236
#1	.0399	.3470	6.904	.0037	.4718	.0079	.7999	.1028
#2	.0390	.3470	6.884	.0010	.4693	.0100	.7891	.1025
#3	.0371	.3456	6.878	.0051	.4722	.0079	.7924	.1030

Zoom In Zoom Out

Sample Name: jd56619-13 Acquired: 12/8/2022 0:10:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5230.1**	**55323.**	**5076.3**	**2062.9**
Stddev	4.8	51.	13.0	2.2
%RSD	.09206	.09167	.25646	.10424
#1	5232.4	55307.	5064.7	2064.5
#2	5233.2	55380.	5073.9	2060.4
#3	5224.5	55282.	5090.4	2063.7

Zoom In Zoom Out

Sample Name: jd56619-15 Acquired: 12/8/2022 0:15:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**107.5**	**.0514**	**.1933**	**.5131**	**.0039**	**.0150**	**234.9**
Stddev	.0032	5.2	.0017	.0012	.0258	.0000	.0018	10.9
%RSD	70.67	4.847	3.361	.6260	5.024	1.112	11.98	4.625
#1	.0009	101.5	.0502	.1928	.4834	.0039	.0136	222.4
#2	.0069	110.6	.0507	.1947	.5266	.0040	.0143	241.8
#3	.0058	110.4	.0534	.1924	.5294	.0039	.0170	240.4

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0072**	**.6265**	**.0991**	**.1106**	**.8288**	**240.4**	**14.79**	**.0841**
Stddev	.0005	.0042	.0005	.0004	.0012	11.4	.68	.0062
%RSD	6.684	.6628	.4999	.3623	.1489	4.726	4.568	7.389
#1	.0067	.6313	.0986	.1101	.8278	227.3	14.01	.0775
#2	.0074	.6240	.0992	.1109	.8302	247.3	15.17	.0898
#3	.0076	.6242	.0995	.1107	.8285	246.6	15.20	.0850

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**112.9**	**2.654**	**.0049**	**8.372**	**.1343**	**4.864**	**.3093**	**3.489**
Stddev	4.9	.007	.0007	.371	.0008	.002	.0028	.005
%RSD	4.311	.2584	15.23	4.431	.5588	.0314	.9208	.1395
#1	107.3	2.658	.0045	7.946	.1336	4.863	.3116	3.486
#2	116.1	2.647	.0045	8.547	.1351	4.865	.3061	3.494
#3	115.3	2.659	.0057	8.623	.1341	4.862	.3102	3.486

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0048**	**-.0131**	**1.909**	**.0355**	**.3896**	**6.475**	F **-.0128**	**.4834**
Stddev	.0015	.0082	.011	.0014	.0183	.007	.0044	.0008
%RSD	30.78	62.29	.5597	4.070	4.689	.1089	34.12	.1624
#1	.0059	-.0223	1.905	.0361	.3686	6.482	-.0096	.4833
#2	.0053	-.0104	1.921	.0366	.3988	6.468	-.0178	.4827
#3	.0031	-.0067	1.902	.0339	.4015	6.474	-.0111	.4842

Zoom In Zoom Out

Sample Name: jd56619-15 Acquired: 12/8/2022 0:15:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 2.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0086**	**.9610**	**.1035**
Stddev	.0016	.0002	.0001
%RSD	18.94	.0184	.1290
#1	.0068	.9611	.1036
#2	.0095	.9611	.1033
#3	.0097	.9608	.1035

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5125.5**	**54652.**	**5214.5**	**2035.6**
Stddev	8.8	214.	200.5	2.1
%RSD	.17110	.39230	3.8459	.10212
#1	5131.1	54554.	5446.0	2036.6
#2	5115.4	54898.	5092.2	2033.3
#3	5130.0	54505.	5105.4	2037.1

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 0:20:26 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2495**	**39.83**	**1.941**	**1.961**	**1.962**	**1.994**	**1.952**	**40.04**	**1.958**
Stddev	.0009	.18	.004	.002	.006	.008	.004	.19	.009
%RSD	.3661	.4402	.1957	.1002	.3238	.4085	.1820	.4709	.4403
#1	.2504	39.90	1.945	1.960	1.965	1.992	1.953	40.01	1.951
#2	.2495	39.96	1.938	1.960	1.966	2.003	1.948	40.24	1.954
#3	.2486	39.63	1.939	1.963	1.954	1.986	1.955	39.87	1.967
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.958**	**1.955**	**1.961**	**1.922**	**40.86**	**39.46**	**1.928**	**39.93**	**1.983**
Stddev	.002	.004	.005	.004	.24	.10	.006	.23	.004
%RSD	.1006	.2016	.2646	.1878	.5992	.2490	.3364	.5828	.2286
#1	1.960	1.956	1.967	1.926	40.84	39.47	1.930	39.93	1.988
#2	1.959	1.950	1.958	1.920	41.11	39.55	1.933	40.17	1.982
#3	1.956	1.958	1.958	1.920	40.62	39.35	1.921	39.70	1.979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.976**	**40.41**	**1.955**	F **1.795**	**1.979**	**1.894**	**1.953**	**1.936**	**4.771**
Stddev	.007	.18	.006	.006	.008	.013	.003	.006	.012
%RSD	.3789	.4541	.3009	.3557	.3833	.7075	.1549	.3264	.2428
#1	1.974	40.42	1.955	1.790	1.976	1.893	1.949	1.930	4.768
#2	1.970	40.59	1.949	1.792	1.973	1.882	1.955	1.935	4.760
#3	1.984	40.23	1.961	1.802	1.988	1.908	1.955	1.943	4.783
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				2.000					
Range				-10.00%					

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 0:20:26 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.992**	**1.965**	**1.934**	**2.066**	**1.945**	**1.954**	**1.975**	**1.944**
Stddev	.002	.008	.004	.015	.005	.005	.006	.004
%RSD	.1047	.4023	.2232	.6997	.2548	.2464	.3019	.1893
#1	1.990	1.969	1.939	2.081	1.950	1.949	1.975	1.948
#2	1.994	1.969	1.933	2.053	1.946	1.953	1.969	1.942
#3	1.993	1.956	1.930	2.065	1.940	1.958	1.981	1.942
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5182.2**	**54500.**	**5045.2**	**2042.0**
Stddev	8.3	196.	34.1	1.5
%RSD	.16002	.35988	.67567	.07518
#1	5172.7	54315.	5068.9	2040.5
#2	5188.2	54706.	5006.2	2043.6
#3	5185.6	54479.	5060.6	2041.8

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 0:25:12 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0095**	**.0004**	**.0035**	**-.0001**	**-.0000**	**-.0001**	**-.0069**	**-.0001**
Stddev	.0004	.0092	.0016	.0009	.0001	.0001	.0009	.0035	.0001
%RSD	357.0	96.42	441.9	26.12	154.3	125.3	677.2	50.84	81.19
#1	.0005	-.0001	-.0012	.0044	-.0002	-.0001	-.0011	-.0060	-.0002
#2	-.0003	.0182	.0020	.0033	-.0000	.0000	.0004	-.0040	-.0002
#3	.0002	.0104	.0002	.0027	.0000	-.0001	.0004	-.0108	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0001**	**-.0005**	**-.0006**	**-.0003**	**-.0061**	**.0010**	**-.0386**	**.0000**
Stddev	.0030	.0001	.0002	.0000	.0015	.0248	.0008	.0383	.0000
%RSD	899.8	148.6	52.20	4.321	423.2	407.7	87.00	99.24	43.16
#1	.0038	-.0003	-.0007	-.0006	-.0012	-.0342	.0001	.0033	.0000
#2	-.0016	.0000	-.0002	-.0006	.0014	.0033	.0010	-.0719	.0000
#3	-.0011	-.0001	-.0004	-.0005	-.0012	.0127	.0018	-.0473	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0038**	**-.0000**	**.0018**	**.0006**	**-.0037**	**-.0007**	**.0001**	**-.0059**
Stddev	.0002	.0063	.0001	.0004	.0003	.0014	.0004	.0022	.0005
%RSD	36.78	166.4	2390.	24.46	55.06	38.66	53.86	1575.	8.770
#1	.0007	.0017	.0001	.0016	.0010	-.0044	-.0007	.0015	-.0053
#2	.0005	.0110	-.0000	.0016	.0003	-.0046	-.0010	.0014	-.0063
#3	.0003	-.0012	-.0001	.0024	.0006	-.0020	-.0003	-.0024	-.0062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 0:25:12 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0000**	**-.0002**	**-.0000**	**.0002**	**.0005**	**-.0005**	**.0001**
Stddev	.0005	.0000	.0003	.0006	.0003	.0023	.0001	.0001
%RSD	90.21	72.34	163.6	1671.	156.5	463.4	26.38	82.18
#1	-.0000	.0000	.0001	-.0004	.0004	.0003	-.0005	.0002
#2	.0009	.0000	-.0005	.0007	-.0001	.0029	-.0006	.0001
#3	.0008	.0001	-.0002	-.0003	.0002	-.0017	-.0004	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5795.4**	**56420.**	**4983.1**	**2100.9**
Stddev	8.7	293.	18.4	3.1
%RSD	.15041	.51935	.36971	.14836
#1	5797.5	56122.	4964.0	2097.7
#2	5803.0	56432.	4984.5	2104.0
#3	5785.9	56707.	5000.8	2101.0

Zoom In Zoom Out

Sample Name: mp36767-mb1 Acquired: 12/8/2022 0:30:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0008**	**.0005**	**.0031**	**.0001**	**-.0002**	**-.0005**	**.0195**	**.0000**
Stddev	.0007	.0125	.0010	.0008	.0002	.0001	.0008	.0052	.0000
%RSD	1477.	1669.	208.8	26.41	138.6	48.62	170.3	26.67	1010.
#1	-.0000	.0028	-.0004	.0022	.0003	-.0003	.0001	.0185	-.0000
#2	.0007	-.0127	.0015	.0032	.0001	-.0001	-.0014	.0148	-.0000
#3	-.0006	.0121	.0003	.0038	-.0001	-.0001	-.0002	.0251	.0001

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0002**	**-.0005**	**-.0002**	**.0073**	**-.0098**	**-.0004**	**-.0094**	**.0003**
Stddev	.0008	.0001	.0002	.0003	.0042	.0232	.0009	.0375	.0001
%RSD	231.0	55.71	34.00	176.3	57.09	236.1	214.2	400.1	28.64
#1	.0006	-.0002	-.0003	-.0002	.0041	.0015	.0003	-.0477	.0002
#2	-.0006	-.0001	-.0006	-.0004	.0120	.0056	-.0015	-.0077	.0003
#3	.0011	-.0002	-.0005	.0001	.0058	-.0366	-.0002	.0273	.0004

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0016**	**.0002**	**.0027**	**.0022**	**.0032**	**-.0005**	**-.0000**	**.0065**
Stddev	.0001	.0022	.0004	.0017	.0006	.0010	.0008	.0006	.0006
%RSD	27.98	135.5	240.5	62.01	29.15	31.07	175.3	1260.	9.903
#1	.0003	-.0000	-.0002	.0042	.0017	.0042	-.0001	.0000	.0071
#2	.0003	-.0007	.0005	.0031	.0029	.0031	.0001	.0005	.0059
#3	.0002	-.0042	.0002	.0009	.0020	.0023	-.0014	-.0007	.0064

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0000**	**-.0001**	**.0003**	**.0006**	**.0001**	**.0010**	**.0001**
Stddev	.0007	.0001	.0003	.0007	.0004	.0010	.0002	.0002
%RSD	110.3	1186.	303.9	233.1	61.52	1524.	22.56	158.2
#1	-.0000	-.0001	.0000	.0008	.0010	-.0004	.0008	.0002
#2	.0013	.0000	-.0004	-.0005	.0005	-.0006	.0009	.0002
#3	.0006	.0001	.0001	.0006	.0003	.0012	.0012	-.0001

Zoom In Zoom Out

Sample Name: mp36767-mb1 Acquired: 12/8/2022 0:30:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5802.0**	**56564.**	**5042.8**	**2097.4**
Stddev	32.4	55.	8.0	13.2
%RSD	.55908	.09689	.15921	.62699
#1	5790.3	56602.	5036.7	2092.9
#2	5777.1	56501.	5039.7	2087.0
#3	5838.7	56588.	5051.9	2112.2

Zoom In Zoom Out

Sample Name: mp36767-b1 Acquired: 12/8/2022 0:35:36 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2350**	**23.10**	**1.797**	**1.848**	**1.860**	**1.899**	F **-.0367**	**23.02**
Stddev	.0014	.04	.005	.005	.002	.004	.0020	.06
%RSD	.5834	.1817	.2820	.2578	.1105	.1982	5.310	.2446
#1	.2353	23.10	1.802	1.852	1.862	1.899	-.0383	23.08
#2	.2335	23.15	1.798	1.842	1.860	1.903	-.0374	23.00
#3	.2362	23.06	1.792	1.850	1.858	1.895	-.0345	22.97

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.861**	**.1857**	**1.844**	**1.869**	**1.831**	**23.92**	**22.89**	**.0006**
Stddev	.003	.0042	.007	.005	.006	.03	.01	.0012
%RSD	.1774	2.251	.4040	.2588	.3241	.1220	.0594	198.3
#1	1.864	.1899	1.852	1.864	1.828	23.93	22.90	.0017
#2	1.858	.1816	1.842	1.869	1.827	23.95	22.90	-.0007
#3	1.862	.1856	1.837	1.873	1.838	23.89	22.88	.0008

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.99**	**1.899**	**1.845**	**23.18**	**1.843**	**1.697**	**1.873**	W **-.0500**
Stddev	.20	.005	.004	.03	.004	.001	.004	.0050
%RSD	.8806	.2727	.2454	.1116	.2404	.0666	.1942	10.01
#1	23.19	1.898	1.850	23.15	1.848	1.698	1.877	-.0448
#2	23.01	1.894	1.843	23.19	1.841	1.696	1.869	-.0502
#3	22.78	1.905	1.841	23.19	1.840	1.698	1.872	-.0548

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.811**	**1.830**	**.1134**	**1.859**	**1.858**	**1.793**	**2.001**	**1.858**
Stddev	.006	.008	.0011	.003	.001	.005	.020	.005
%RSD	.3314	.4461	1.001	.1441	.0754	.2964	1.013	.2863
#1	1.808	1.826	.1134	1.861	1.860	1.793	2.015	1.858
#2	1.806	1.823	.1122	1.856	1.857	1.787	2.011	1.853
#3	1.818	1.839	.1145	1.861	1.857	1.798	1.978	1.863

Zoom In Zoom Out

Sample Name: mp36767-b1 Acquired: 12/8/2022 0:35:36 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.797**	**1.879**	**1.794**
Stddev	.004	.009	.006
%RSD	.2233	.4557	.3385
#1	1.797	1.887	1.792
#2	1.794	1.879	1.789
#3	1.802	1.870	1.801

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5330.1**	**54908.**	**5035.7**	**2056.7**
Stddev	17.6	71.	12.9	5.4
%RSD	.33079	.12954	.25568	.26205
#1	5310.1	54935.	5026.3	2051.3
#2	5336.8	54962.	5030.5	2062.1
#3	5343.3	54828.	5050.4	2056.7

Zoom In Zoom Out

Sample Name: mp36767-s1 Acquired: 12/8/2022 0:40:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2360**	**23.52**	**1.830**	**2.095**	**1.846**	**1.890**	F **-.0369**	**25.58**
Stddev	.0010	.42	.007	.007	.038	.036	.0003	.48
%RSD	.4379	1.788	.4008	.3293	2.078	1.894	.8840	1.870
#1	.2370	23.77	1.823	2.091	1.861	1.907	-.0370	25.90
#2	.2349	23.04	1.830	2.092	1.802	1.849	-.0372	25.03
#3	.2361	23.77	1.837	2.103	1.875	1.914	-.0366	25.80

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.873**	**.1821**	**1.881**	**1.988**	**1.829**	**24.40**	**25.24**	**.0005**
Stddev	.002	.0011	.003	.004	.004	.47	.48	.0010
%RSD	.1130	.6195	.1744	.1787	.2195	1.908	1.897	214.5
#1	1.872	.1833	1.879	1.985	1.834	24.63	25.42	.0016
#2	1.872	.1816	1.879	1.986	1.828	23.86	24.70	-.0003
#3	1.876	.1813	1.884	1.992	1.826	24.70	25.60	.0002

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.89**	**1.900**	**1.865**	**105.8**	**1.877**	**5.285**	**1.893**	**20.97**
Stddev	.53	.003	.006	2.1	.003	.021	.006	.03
%RSD	2.202	.1360	.3471	1.968	.1602	.4049	.3386	.1221
#1	24.15	1.898	1.858	107.2	1.874	5.262	1.886	20.94
#2	23.28	1.900	1.867	103.4	1.879	5.288	1.895	20.96
#3	24.24	1.903	1.871	106.8	1.879	5.305	1.898	20.99

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.820**	**1.854**	**4.222**	**1.854**	**1.869**	**1.795**	**1.979**	**1.863**
Stddev	.010	.012	.010	.009	.039	.003	.028	.004
%RSD	.5252	.6649	.2405	.5072	2.063	.1751	1.437	.2257
#1	1.810	1.840	4.221	1.844	1.887	1.796	1.955	1.858
#2	1.822	1.860	4.213	1.858	1.825	1.791	2.010	1.866
#3	1.829	1.862	4.233	1.861	1.896	1.797	1.972	1.866

Zoom In Zoom Out

Sample Name: mp36767-s1 Acquired: 12/8/2022 0:40:22 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.846**	**1.903**	**1.801**
Stddev	.003	.004	.000
%RSD	.1672	.1875	.0081
#1	1.846	1.899	1.801
#2	1.842	1.903	1.800
#3	1.848	1.907	1.801

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5135.4**	**53990.**	**5055.1**	**2030.0**
Stddev	10.4	115.	86.3	5.1
%RSD	.20185	.21290	1.7076	.25341
#1	5146.0	54029.	5030.6	2034.5
#2	5135.0	54080.	5151.0	2030.9
#3	5125.3	53860.	4983.6	2024.4

Zoom In Zoom Out

Sample Name: mp36767-s2 Acquired: 12/8/2022 0:45:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2310**	**22.88**	**1.774**	**2.035**	**1.807**	**1.849**	F **-.0354**	**24.89**
Stddev	.0009	.05	.006	.004	.006	.005	.0004	.04
%RSD	.3879	.2046	.3182	.2223	.3536	.2708	1.220	.1570
#1	.2320	22.93	1.768	2.034	1.811	1.854	-.0357	24.93
#2	.2303	22.84	1.773	2.031	1.799	1.845	-.0349	24.85
#3	.2305	22.87	1.780	2.040	1.810	1.847	-.0355	24.89

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.815**	**.1775**	**1.820**	**1.930**	**1.781**	**23.74**	**24.42**	**.0009**
Stddev	.005	.0041	.001	.004	.003	.05	.04	.0011
%RSD	.2808	2.311	.0393	.1951	.1453	.1958	.1622	120.5
#1	1.814	.1734	1.820	1.935	1.779	23.79	24.46	.0001
#2	1.810	.1816	1.820	1.928	1.780	23.70	24.40	.0005
#3	1.820	.1776	1.821	1.928	1.784	23.73	24.39	.0022

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.19**	**1.845**	**1.798**	**102.8**	**1.814**	**5.080**	**1.835**	**20.15**
Stddev	.09	.003	.001	.2	.003	.021	.005	.02
%RSD	.3881	.1609	.0734	.1905	.1878	.4105	.2731	.1089
#1	23.29	1.848	1.798	103.1	1.812	5.088	1.833	20.13
#2	23.14	1.843	1.797	102.7	1.812	5.096	1.840	20.14
#3	23.13	1.843	1.799	102.8	1.818	5.057	1.831	20.17

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.760**	**1.797**	**4.045**	**1.790**	**1.830**	**1.738**	**1.907**	**1.812**
Stddev	.001	.002	.006	.005	.006	.003	.006	.003
%RSD	.0556	.1049	.1555	.2625	.3569	.1709	.3115	.1363
#1	1.759	1.798	4.044	1.791	1.835	1.741	1.908	1.815
#2	1.761	1.795	4.040	1.795	1.822	1.738	1.912	1.810
#3	1.760	1.798	4.052	1.785	1.831	1.735	1.900	1.811

Zoom In Zoom Out

Sample Name: mp36767-s2 Acquired: 12/8/2022 0:45:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.778**	**1.841**	**1.750**
Stddev	.008	.001	.001
%RSD	.4516	.0664	.0551
#1	1.773	1.842	1.750
#2	1.774	1.840	1.749
#3	1.787	1.840	1.751

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5161.9**	**54550.**	**5067.8**	**2041.7**
Stddev	3.8	76.	15.7	1.0
%RSD	.07437	.13853	.31065	.04692
#1	5157.8	54485.	5051.8	2040.6
#2	5162.7	54532.	5083.3	2042.4
#3	5165.3	54633.	5068.3	2042.1

Zoom In Zoom Out

Sample Name: jd56548-14f Acquired: 12/8/2022 0:49:52 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0670**	**.0138**	**.2616**	**.0037**	**.0006**	**-.0011**	**2.195**	**.0029**
Stddev	.0001	.0160	.0005	.0014	.0002	.0001	.0008	.070	.0002
%RSD	86.92	23.96	3.730	.5256	5.607	11.57	71.76	3.208	6.787
#1	.0001	.0508	.0137	.2618	.0039	.0005	-.0017	2.276	.0031
#2	.0002	.0829	.0143	.2630	.0036	.0006	-.0015	2.147	.0027
#3	.0000	.0672	.0133	.2602	.0036	.0006	-.0002	2.162	.0030

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0009**	**.1213**	**.0030**	**.0223**	**1.727**	**.0008**	**.2772**	**.0015**
Stddev	.0011	.0004	.0009	.0003	.0017	.044	.0005	.0320	.0000
%RSD	57.63	46.61	.7259	9.719	7.640	2.527	58.05	11.53	1.243
#1	.0026	.0013	.1222	.0029	.0238	1.776	.0013	.3140	.0015
#2	.0006	.0008	.1211	.0027	.0225	1.692	.0007	.2621	.0015
#3	.0024	.0005	.1205	.0033	.0205	1.714	.0004	.2556	.0015

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0267**	**86.00**	**.0012**	**3.638**	**.0033**	**21.30**	**.0011**	**.0028**	**4.182**
Stddev	.0004	1.96	.0001	.009	.0005	.06	.0009	.0011	.008
%RSD	1.663	2.281	12.05	.2345	15.70	.2680	81.82	39.47	.1918
#1	.0271	88.26	.0012	3.635	.0028	21.35	.0002	.0040	4.183
#2	.0268	84.85	.0011	3.647	.0038	21.24	.0020	.0025	4.173
#3	.0262	84.88	.0013	3.631	.0031	21.32	.0012	.0019	4.189

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0282**	**.0005**	**-.0009**	**.0063**	**.0429**	**.0080**	**.0004**
Stddev	.0003	.0004	.0004	.0008	.0002	.0012	.0001	.0001
%RSD	24.66	1.585	78.18	90.29	2.945	2.724	.7320	33.61
#1	.0011	.0287	.0008	-.0015	.0063	.0416	.0080	.0005
#2	.0008	.0279	.0007	-.0012	.0062	.0439	.0080	.0004
#3	.0013	.0280	.0001	.0000	.0065	.0431	.0079	.0002

Zoom In Zoom Out

Sample Name: jd56548-14f Acquired: 12/8/2022 0:49:52 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5362.5**	**54754.**	**4987.4**	**2041.8**
Stddev	3.0	106.	85.8	3.9
%RSD	.05596	.19396	1.7199	.19214
#1	5365.6	54876.	4889.5	2044.3
#2	5362.3	54679.	5049.4	2043.8
#3	5359.6	54708.	5023.3	2037.3

Zoom In Zoom Out

Sample Name: mp36767-sd1 Acquired: 12/8/2022 0:54:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**.1726**	**.0121**	**.2864**	**.0041**	**.0003**	**-.0032**	**2.305**	**.0034**
Stddev	.0029	.0818	.0034	.0011	.0008	.0006	.0031	.039	.0007
%RSD	207.9	47.38	28.12	.3750	19.26	227.8	97.67	1.700	21.29
#1	-.0038	.1031	.0110	.2852	.0047	-.0002	.0004	2.260	.0031
#2	.0019	.2627	.0094	.2871	.0043	.0009	-.0048	2.333	.0028
#3	-.0023	.1520	.0159	.2870	.0032	.0000	-.0050	2.322	.0042

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0049**	**-.0002**	**.1241**	**.0026**	**.0284**	**1.869**	**.0019**	**.1805**	**.0014**
Stddev	.0028	.0004	.0008	.0023	.0156	.133	.0028	.1497	.0001
%RSD	56.65	206.8	.6199	90.75	55.04	7.124	151.8	82.91	4.434
#1	-.0020	-.0002	.1242	.0003	.0110	2.007	-.0001	.0087	.0013
#2	-.0052	-.0005	.1247	.0025	.0331	1.742	.0006	.2823	.0014
#3	-.0075	.0002	.1232	.0050	.0411	1.859	.0051	.2506	.0015

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0276**	**86.87**	**-.0011**	**3.761**	**.0027**	**22.28**	**.0014**	**.0020**	**4.383**
Stddev	.0005	.10	.0004	.025	.0067	.09	.0050	.0039	.033
%RSD	1.934	.1117	39.39	.6710	250.1	.4214	346.8	196.0	.7419
#1	.0282	86.78	-.0011	3.768	.0048	22.38	.0043	-.0024	4.413
#2	.0273	86.97	-.0016	3.782	-.0048	22.22	-.0044	.0033	4.387
#3	.0273	86.84	-.0007	3.733	.0080	22.22	.0044	.0050	4.348

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.0286**	**.0010**	**-.0026**	**.0072**	**.0438**	**.0180**	**-.0018**
Stddev	.0032	.0002	.0016	.0073	.0009	.0040	.0004	.0005
%RSD	148.9	.7657	160.5	285.6	12.54	9.179	2.245	29.39
#1	-.0006	.0284	-.0008	-.0101	.0081	.0417	.0179	-.0024
#2	.0014	.0288	.0021	-.0021	.0063	.0412	.0185	-.0015
#3	.0057	.0285	.0018	.0045	.0072	.0484	.0177	-.0015

Zoom In Zoom Out

Sample Name: mp36767-sd1 Acquired: 12/8/2022 0:54:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5666.5**	**55735.**	**4995.6**	**2084.0**
Stddev	5.9	151.	27.5	.4
%RSD	.10483	.27151	.55102	.01925
#1	5669.9	55627.	5006.5	2084.5
#2	5669.9	55908.	4964.3	2083.8
#3	5659.6	55670.	5016.0	2083.8

Zoom In Zoom Out

Sample Name: jd56548-3 Acquired: 12/8/2022 1:00:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0327**	**-.0001**	**.2083**	**.0128**	**.0001**	**-.0012**	**7.001**	**.0026**
Stddev	.0002	.0117	.0017	.0011	.0002	.0000	.0008	.016	.0003
%RSD	31.35	35.82	1838.	.5081	1.857	62.37	65.17	.2269	10.86
#1	-.0007	.0215	-.0013	.2095	.0128	.0001	-.0004	6.983	.0025
#2	-.0004	.0448	-.0009	.2082	.0130	.0001	-.0012	7.013	.0029
#3	-.0005	.0318	.0019	.2074	.0125	.0000	-.0020	7.007	.0024

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0211**	**.0009**	**-.0004**	**.0019**	**.7975**	**.3348**	**.0005**	**1.687**	**.2887**
Stddev	.0021	.0002	.0001	.0002	.0045	.0150	.0002	.035	.0005
%RSD	10.11	24.73	29.21	12.08	.5583	4.479	47.20	2.068	.1614
#1	.0191	.0010	-.0003	.0022	.7988	.3181	.0004	1.690	.2892
#2	.0233	.0006	-.0005	.0017	.8012	.3471	.0004	1.650	.2883
#3	.0209	.0010	-.0004	.0019	.7926	.3393	.0008	1.720	.2886

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**11.60**	**.0026**	**.0100**	**.0023**	**3.607**	**.0009**	**.0016**	**4.960**
Stddev	.0002	.03	.0004	.0003	.0008	.018	.0014	.0007	.014
%RSD	81.28	.2703	16.27	2.637	35.41	.5141	165.9	42.59	.2768
#1	.0005	11.60	.0024	.0103	.0029	3.627	-.0002	.0022	4.975
#2	.0001	11.63	.0024	.0100	.0027	3.590	.0003	.0019	4.958
#3	.0002	11.57	.0031	.0098	.0014	3.604	.0025	.0008	4.948

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0394**	**-.0001**	**-.0005**	**.0031**	**.0045**	**.0032**	**-.0004**
Stddev	.0005	.0003	.0000	.0017	.0004	.0005	.0001	.0001
%RSD	233.5	.7856	7.277	318.2	13.42	11.58	4.333	27.99
#1	.0002	.0391	-.0001	.0012	.0029	.0046	.0033	-.0004
#2	-.0003	.0397	-.0001	-.0007	.0036	.0049	.0032	-.0003
#3	.0008	.0394	-.0001	-.0022	.0028	.0039	.0030	-.0006

Zoom In Zoom Out

Sample Name: jd56548-3 Acquired: 12/8/2022 1:00:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5680.8**	**56307.**	**5073.4**	**2088.6**
Stddev	4.6	255.	23.0	3.8
%RSD	.08137	.45308	.45392	.17983
#1	5676.4	56074.	5078.3	2084.3
#2	5685.6	56580.	5048.3	2090.4
#3	5680.5	56267.	5093.6	2091.2

Zoom In Zoom Out

Sample Name: jd56548-6 Acquired: 12/8/2022 1:05:14 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**1.145**	**.0003**	**.0888**	**.0123**	**-.0001**	**-.0004**	**14.58**	**.0053**
Stddev	.0003	.008	.0002	.0008	.0002	.0000	.0009	.05	.0002
%RSD	631.6	.7023	71.73	.9457	1.831	34.38	200.2	.3666	3.162
#1	-.0003	1.138	.0001	.0887	.0121	-.0001	-.0014	14.54	.0054
#2	-.0002	1.143	.0004	.0880	.0125	-.0001	.0000	14.64	.0051
#3	.0003	1.154	.0004	.0897	.0122	-.0001	.0001	14.55	.0054

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093**	**.0007**	**.0036**	**.0019**	**1.841**	**1.486**	**.0043**	**6.872**	**.0482**
Stddev	.0035	.0002	.0005	.0000	.012	.023	.0015	.037	.0000
%RSD	37.50	21.14	13.18	1.812	.6230	1.544	34.18	.5331	.0487
#1	.0081	.0006	.0041	.0019	1.852	1.511	.0052	6.913	.0483
#2	.0066	.0008	.0035	.0019	1.830	1.465	.0052	6.841	.0482
#3	.0132	.0009	.0032	.0019	1.840	1.483	.0026	6.863	.0482

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**18.36**	**.0028**	**.0460**	**.0031**	**5.086**	**.0006**	**.0003**	**10.37**
Stddev	.0003	.01	.0005	.0009	.0002	.003	.0008	.0013	.01
%RSD	338.0	.0728	17.86	2.046	5.396	.0524	141.6	371.8	.0731
#1	.0001	18.35	.0026	.0463	.0032	5.088	.0015	-.0004	10.37
#2	-.0002	18.37	.0034	.0468	.0031	5.083	.0000	-.0004	10.36
#3	.0004	18.35	.0025	.0449	.0029	5.087	.0002	.0018	10.38

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.0560**	**.0452**	**.0020**	**.0032**	**.0086**	**.0348**	**-.0007**
Stddev	.0003	.0002	.0007	.0006	.0001	.0004	.0002	.0001
%RSD	26.65	.4181	1.497	27.80	3.142	4.907	.4489	15.84
#1	-.0012	.0560	.0446	.0014	.0033	.0090	.0350	-.0008
#2	-.0013	.0558	.0459	.0024	.0032	.0082	.0347	-.0006
#3	-.0008	.0563	.0451	.0022	.0031	.0088	.0348	-.0006

Zoom In Zoom Out

Sample Name: jd56548-6 Acquired: 12/8/2022 1:05:14 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5558.1**	**55781.**	**4995.4**	**2078.7**
Stddev	3.3	93.	16.4	2.1
%RSD	.05943	.16642	.32823	.10186
#1	5558.3	55677.	4990.9	2076.2
#2	5554.7	55855.	5013.6	2079.8
#3	5561.3	55811.	4981.7	2080.0

Zoom In Zoom Out

Sample Name: jd56548-8 Acquired: 12/8/2022 1:10:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.5085**	**-.0000**	**.1671**	**.0844**	**.0003**	**-.0019**	**24.83**	**.0037**
Stddev	.0004	.0241	.0009	.0012	.0005	.0000	.0008	.06	.0002
%RSD	155.0	4.734	18720.	.7217	.5913	16.20	42.23	.2251	6.457
#1	-.0001	.4970	-.0010	.1659	.0839	.0003	-.0025	24.76	.0040
#2	.0001	.4923	.0008	.1670	.0846	.0003	-.0021	24.85	.0035
#3	-.0008	.5361	.0002	.1683	.0849	.0002	-.0010	24.87	.0037

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096**	**.0004**	**.0027**	**.0026**	**.6335**	**6.255**	**.0002**	**4.202**	**.1811**
Stddev	.0026	.0002	.0006	.0003	.0048	.022	.0023	.018	.0000
%RSD	27.24	51.88	24.01	11.43	.7499	.3582	1279.	.4154	.0150
#1	.0066	.0007	.0034	.0026	.6361	6.253	.0002	4.190	.1811
#2	.0109	.0002	.0022	.0023	.6280	6.234	-.0021	4.222	.1812
#3	.0112	.0004	.0024	.0029	.6364	6.279	.0024	4.193	.1811

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**155.6**	**.0015**	**.0240**	**.0022**	**16.03**	**-.0003**	**-.0004**	**6.920**
Stddev	.0001	.2	.0003	.0019	.0007	.06	.0006	.0006	.011
%RSD	39.39	.1477	18.31	7.867	29.02	.3503	167.8	142.1	.1600
#1	.0002	155.4	.0018	.0242	.0024	16.05	-.0005	.0003	6.910
#2	.0001	155.6	.0014	.0257	.0015	15.97	.0003	-.0008	6.919
#3	.0002	155.9	.0013	.0220	.0028	16.08	-.0008	-.0008	6.932

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.1524**	**.0146**	**-.0001**	**.0026**	**.0070**	**.0081**	**-.0006**
Stddev	.0007	.0004	.0002	.0012	.0003	.0004	.0001	.0001
%RSD	276.7	.2596	1.167	1524.	11.83	6.256	1.753	24.89
#1	.0010	.1520	.0144	-.0014	.0027	.0072	.0082	-.0007
#2	-.0004	.1526	.0145	.0010	.0029	.0065	.0079	-.0004
#3	.0002	.1527	.0148	.0002	.0023	.0073	.0082	-.0007

Zoom In Zoom Out

Sample Name: jd56548-8 Acquired: 12/8/2022 1:10:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5131.5**	**53612.**	**4989.2**	**2009.5**
Stddev	5.7	177.	33.1	2.6
%RSD	.11049	.32993	.66261	.13073
#1	5136.5	53426.	5025.7	2012.4
#2	5132.6	53778.	4980.8	2007.2
#3	5125.3	53633.	4961.2	2008.8

Zoom In Zoom Out

Sample Name: jd56548-9 Acquired: 12/8/2022 1:15:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**1.121**	**.0003**	**.0830**	**.0097**	**.0000**	**-.0010**	**5.498**	**.0025**
Stddev	.0007	.010	.0005	.0003	.0001	.0001	.0007	.020	.0001
%RSD	715.9	.9159	165.9	.4006	1.149	1528.	65.94	.3539	2.807
#1	.0006	1.117	-.0002	.0830	.0096	-.0000	-.0015	5.495	.0025
#2	.0005	1.113	.0008	.0834	.0098	.0001	-.0002	5.481	.0024
#3	-.0007	1.132	.0002	.0827	.0097	-.0000	-.0014	5.520	.0026

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0071**	**.0007**	**.0122**	**.0025**	**1.497**	**1.444**	**.0018**	**1.782**	**.0373**
Stddev	.0016	.0001	.0000	.0004	.006	.019	.0007	.025	.0001
%RSD	22.43	16.51	.3481	15.33	.4131	1.306	41.73	1.383	.2944
#1	.0069	.0006	.0121	.0027	1.496	1.434	.0010	1.798	.0373
#2	.0088	.0007	.0122	.0021	1.492	1.433	.0024	1.754	.0374
#3	.0056	.0008	.0122	.0028	1.504	1.466	.0019	1.794	.0372

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**8.525**	**.0015**	**.0428**	**.0035**	**1.608**	**.0004**	**.0009**	**4.450**
Stddev	.0002	.009	.0004	.0009	.0002	.002	.0008	.0017	.028
%RSD	76.18	.1098	26.16	2.181	5.055	.1039	195.7	175.5	.6351
#1	.0000	8.532	.0014	.0420	.0034	1.609	-.0001	.0024	4.418
#2	.0003	8.514	.0012	.0438	.0036	1.606	.0013	.0013	4.466
#3	.0004	8.528	.0019	.0426	.0033	1.608	-.0000	-.0009	4.467

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0306**	**.0283**	**-.0005**	**.0028**	**.0052**	**.0072**	**.0001**
Stddev	.0002	.0001	.0002	.0011	.0002	.0003	.0001	.0000
%RSD	44.30	.3764	.6462	252.6	5.591	5.474	1.949	75.16
#1	.0003	.0306	.0283	-.0011	.0029	.0048	.0072	.0000
#2	.0003	.0305	.0284	.0009	.0026	.0053	.0073	.0001
#3	.0006	.0308	.0281	-.0011	.0028	.0053	.0071	.0001

Zoom In Zoom Out

Sample Name: jd56548-9 Acquired: 12/8/2022 1:15:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5674.5**	**56145.**	**5001.6**	**2091.6**
Stddev	27.1	36.	9.7	12.3
%RSD	.47684	.06381	.19350	.58603
#1	5705.6	56185.	4991.7	2105.5
#2	5656.2	56130.	5011.1	2082.6
#3	5661.7	56118.	5001.8	2086.6

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 1:20:35 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2501**	**39.78**	**1.951**	**1.966**	**1.955**	**1.998**	**1.961**	**40.17**	**1.963**
Stddev	.0013	.11	.007	.004	.004	.005	.006	.08	.007
%RSD	.5140	.2747	.3670	.2154	.2166	.2408	.2978	.2021	.3654
#1	.2515	39.91	1.943	1.962	1.950	2.004	1.958	40.26	1.960
#2	.2491	39.72	1.957	1.970	1.956	1.994	1.968	40.13	1.971
#3	.2496	39.73	1.952	1.965	1.959	1.997	1.959	40.11	1.957
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.956**	**1.968**	**1.974**	**1.922**	**40.98**	**39.46**	**1.920**	**40.21**	**1.994**
Stddev	.003	.009	.002	.004	.09	.12	.005	.15	.002
%RSD	.1735	.4833	.1004	.2188	.2149	.3058	.2506	.3800	.0936
#1	1.960	1.959	1.976	1.926	41.08	39.32	1.925	40.12	1.995
#2	1.956	1.978	1.973	1.922	40.91	39.54	1.919	40.39	1.994
#3	1.953	1.967	1.972	1.918	40.94	39.52	1.916	40.13	1.992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.982**	**40.33**	**1.965**	**1.817**	**1.991**	**1.919**	**1.969**	**1.957**	**4.785**
Stddev	.009	.12	.008	.005	.006	.009	.015	.013	.018
%RSD	.4562	.3084	.4192	.2564	.2926	.4843	.7618	.6622	.3816
#1	1.973	40.48	1.957	1.816	1.986	1.908	1.951	1.943	4.766
#2	1.991	40.26	1.973	1.822	1.997	1.924	1.977	1.961	4.802
#3	1.982	40.26	1.964	1.813	1.989	1.925	1.978	1.968	4.788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 1:20:35 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.008**	**1.958**	**1.935**	**2.088**	**1.949**	**1.957**	**1.985**	**1.947**
Stddev	.012	.001	.005	.032	.004	.006	.006	.004
%RSD	.5710	.0619	.2584	1.549	.2268	.3183	.3248	.1922
#1	1.995	1.957	1.941	2.051	1.954	1.955	1.981	1.951
#2	2.015	1.958	1.932	2.111	1.946	1.964	1.993	1.944
#3	2.014	1.960	1.933	2.102	1.947	1.952	1.982	1.945
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5182.1**	**54273.**	**4974.4**	**2048.1**
Stddev	19.8	111.	2.8	6.3
%RSD	.38266	.20507	.05606	.30825
#1	5199.4	54400.	4975.4	2051.9
#2	5160.4	54194.	4971.3	2040.8
#3	5186.4	54225.	4976.6	2051.6

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 1:25:21 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0005**	**-.0002**	**.0041**	**-.0000**	**-.0000**	**-.0002**	**-.0004**	**.0001**
Stddev	.0002	.0222	.0004	.0007	.0001	.0001	.0003	.0073	.0002
%RSD	98.39	4317.	258.3	17.90	157.6	2314.	145.2	1951.	141.1
#1	-.0002	.0261	-.0005	.0049	-.0000	-.0001	-.0001	.0080	.0002
#2	-.0000	-.0107	.0003	.0036	.0000	.0001	.0000	-.0044	-.0001
#3	-.0005	-.0139	-.0004	.0038	-.0001	-.0000	-.0006	-.0047	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0001**	**-.0002**	**-.0002**	**.0003**	**-.0072**	**-.0004**	**-.0037**	**-.0000**
Stddev	.0025	.0001	.0003	.0002	.0003	.0165	.0011	.0274	.0000
%RSD	532.3	153.1	129.5	120.0	106.5	229.3	267.7	743.6	185.5
#1	-.0031	.0001	-.0001	-.0004	.0007	.0082	.0001	-.0163	.0000
#2	.0017	.0001	-.0000	-.0001	.0000	-.0052	.0003	.0277	-.0001
#3	.0001	-.0001	-.0005	-.0000	.0002	-.0246	-.0016	-.0225	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0089**	**-.0000**	**.0011**	**.0007**	**-.0026**	**.0002**	**.0008**	**-.0064**
Stddev	.0002	.0015	.0001	.0010	.0010	.0024	.0019	.0017	.0008
%RSD	57.14	17.40	703.4	94.97	134.7	93.94	1153.	217.3	12.14
#1	.0005	-.0088	.0001	.0021	.0007	-.0044	.0023	-.0009	-.0071
#2	.0006	-.0104	-.0000	.0010	-.0002	-.0034	-.0016	.0009	-.0064
#3	.0002	-.0074	-.0001	.0001	.0018	.0002	-.0002	.0024	-.0056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 1:25:21 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**-.0000**	**.0000**	**.0017**	**.0001**	**.0005**	**-.0004**	**.0001**
Stddev	.0001	.0001	.0003	.0023	.0003	.0002	.0001	.0001
%RSD	29.80	514.9	506.2	132.2	324.4	34.09	25.76	111.4
#1	.0006	.0000	-.0002	.0035	.0004	.0006	-.0004	.0002
#2	.0003	-.0001	-.0000	-.0009	-.0003	.0005	-.0005	-.0000
#3	.0004	.0000	.0003	.0026	.0001	.0003	-.0003	.0002

Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5824.5**	**56196.**	**4988.6**	**2113.1**
Stddev	26.3	125.	22.5	9.1
%RSD	.45219	.22299	.45197	.42860
#1	5811.6	56231.	5003.2	2107.0
#2	5854.8	56057.	4962.6	2123.5
#3	5807.1	56300.	5000.0	2108.7

Zoom In Zoom Out

Sample Name: jd56548-10 Acquired: 12/8/2022 1:30:34 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0019**	**.0006**	**.1811**	**.0130**	**.0001**	**-.0015**	**31.00**	**.0057**
Stddev	.0004	.0107	.0023	.0012	.0004	.0001	.0009	.07	.0003
%RSD	147.8	549.7	405.7	.6701	3.121	262.9	57.90	.2118	4.643
#1	.0007	-.0024	.0021	.1799	.0131	-.0001	-.0005	31.02	.0058
#2	-.0001	.0090	.0016	.1811	.0126	.0002	-.0020	30.93	.0054
#3	.0002	-.0124	-.0020	.1823	.0134	.0001	-.0021	31.05	.0059

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0001**	**.0041**	**.0001**	**.0437**	**2.541**	**.0028**	**9.562**	**.0255**
Stddev	.0015	.0001	.0003	.0002	.0018	.048	.0014	.050	.0001
%RSD	720.4	37.22	7.097	154.0	4.105	1.874	48.26	.5191	.2151
#1	.0009	-.0002	.0045	-.0000	.0417	2.569	.0013	9.568	.0256
#2	-.0015	-.0001	.0039	.0003	.0452	2.486	.0035	9.510	.0255
#3	.0013	-.0002	.0040	.0000	.0442	2.568	.0038	9.609	.0255

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**35.06**	**.0013**	**.0048**	**.0023**	**10.03**	**.0007**	**.0009**	**11.08**
Stddev	.0002	.09	.0001	.0016	.0012	.11	.0009	.0014	.13
%RSD	492.6	.2463	9.207	32.64	51.15	1.131	124.3	152.0	1.138
#1	-.0001	35.12	.0012	.0065	.0032	9.947	.0004	.0024	11.01
#2	.0000	34.96	.0014	.0033	.0028	9.993	.0000	-.0005	11.01
#3	.0002	35.10	.0014	.0047	.0010	10.16	.0017	.0009	11.23

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0010**	**.1410**	**-.0005**	**.0013**	**.0007**	**.0095**	**.0017**	**-.0009**
Stddev	.0004	.0004	.0004	.0008	.0003	.0009	.0002	.0002
%RSD	36.38	.2527	74.97	67.10	45.36	9.823	9.227	24.03
#1	-.0013	.1412	-.0003	.0021	.0010	.0089	.0019	-.0012
#2	-.0006	.1406	-.0010	.0004	.0007	.0090	.0018	-.0009
#3	-.0011	.1412	-.0003	.0013	.0004	.0106	.0016	-.0007

Zoom In Zoom Out

Sample Name: jd56548-10 Acquired: 12/8/2022 1:30:34 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5395.7**	**54648.**	**4990.4**	**2028.2**
Stddev	39.9	93.	27.8	17.8
%RSD	.73976	.16962	.55609	.87991
#1	5419.1	54546.	5009.3	2039.2
#2	5418.3	54727.	5003.3	2037.8
#3	5349.6	54673.	4958.5	2007.6

Zoom In Zoom Out

Sample Name: jd56548-11 Acquired: 12/8/2022 1:35:42 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**2.374**	**.0305**	**.0557**	**.0040**	**.0001**	**-.0015**	**10.06**
Stddev	.0001	.025	.0013	.0004	.0001	.0000	.0006	.04
%RSD	65.16	1.045	4.123	.7178	1.738	88.58	42.01	.4404
#1	-.0000	2.394	.0298	.0557	.0041	.0000	-.0012	10.10
#2	-.0002	2.347	.0297	.0561	.0041	.0001	-.0010	10.01
#3	-.0002	2.382	.0319	.0553	.0039	.0000	-.0021	10.08

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0051**	**-.0001**	**-.0004**	**.1823**	**.0006**	**.0442**	**3.410**	**.0006**
Stddev	.0002	.0016	.0002	.0012	.0002	.0028	.008	.0007
%RSD	4.626	3022.	62.21	.6704	32.62	6.364	.2228	124.4
#1	.0052	.0015	-.0003	.1837	.0007	.0443	3.418	.0001
#2	.0048	-.0018	-.0002	.1817	.0004	.0414	3.407	.0002
#3	.0052	.0001	-.0006	.1814	.0006	.0470	3.404	.0014

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.026**	**.0068**	**.0013**	**198.0**	**.0003**	**2.477**	**.0020**	**68.47**
Stddev	.004	.0000	.0001	.6	.0005	.010	.0004	.32
%RSD	.2001	.5559	5.403	.3019	151.7	.3866	20.52	.4709
#1	2.026	.0068	.0013	198.4	-.0001	2.476	.0022	68.37
#2	2.023	.0068	.0012	197.3	.0002	2.468	.0015	68.21
#3	2.031	.0067	.0014	198.3	.0009	2.487	.0023	68.83

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0012**	**10.35**	**-.0011**	**.1191**	**.0002**	**.0023**	**.0602**
Stddev	.0004	.0004	.06	.0003	.0003	.0004	.0018	.0002
%RSD	64.00	31.20	.5328	27.82	.2434	234.9	77.71	.2768
#1	.0003	.0013	10.35	-.0007	.1194	.0006	.0041	.0600
#2	.0005	.0008	10.30	-.0013	.1189	.0001	.0005	.0601
#3	.0010	.0016	10.41	-.0012	.1191	-.0002	.0025	.0604

Zoom In Zoom Out

Sample Name: jd56548-11 Acquired: 12/8/2022 1:35:42 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0176**	**.0000**	W **-.0011**
Stddev	.0010	.0001	.0001
%RSD	5.770	516.5	6.596
#1	.0164	.0000	-.0010
#2	.0183	.0001	-.0012
#3	.0179	-.0001	-.0011

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5111.3**	**53506.**	**5013.0**	**2010.5**
Stddev	10.5	90.	10.3	4.8
%RSD	.20462	.16839	.20480	.23780
#1	5119.5	53416.	5024.3	2012.7
#2	5114.8	53596.	5010.3	2013.9
#3	5099.5	53504.	5004.3	2005.0

Zoom In Zoom Out

Sample Name: jd56548-12 Acquired: 12/8/2022 1:40:47 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**5.978**	**.0266**	**.0595**	**.0013**	**-.0000**	**-.0012**	**.4616**
Stddev	.0005	.014	.0006	.0006	.0003	.0000	.0008	.0014
%RSD	442.9	.2399	2.430	.9800	25.75	64.30	67.30	.2941
#1	.0003	5.993	.0270	.0594	.0012	-.0000	-.0005	.4610
#2	-.0006	5.964	.0269	.0601	.0010	-.0001	-.0011	.4605
#3	.0000	5.976	.0258	.0589	.0017	-.0000	-.0021	.4631

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0033**	**-.0002**	**.0316**	**.0008**	**.2170**	**.2750**	**.0018**
Stddev	.0001	.0010	.0004	.0007	.0003	.0013	.0195	.0007
%RSD	2.721	30.66	174.8	2.265	41.67	.6097	7.099	38.09
#1	.0045	.0036	.0002	.0308	.0010	.2161	.2784	.0021
#2	.0047	.0042	-.0006	.0323	.0009	.2164	.2540	.0022
#3	.0045	.0022	-.0003	.0316	.0004	.2185	.2926	.0010

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0852**	**.0060**	**.0015**	W **267.3**	**.0008**	**1.772**	**.0016**	**68.40**
Stddev	.0448	.0002	.0001	7.0	.0003	.004	.0009	.15
%RSD	52.64	2.922	7.543	2.602	38.13	.2436	55.18	.2196
#1	.0910	.0059	.0017	267.5	.0005	1.768	.0026	68.58
#2	.1268	.0062	.0015	274.2	.0011	1.771	.0009	68.31
#3	.0377	.0059	.0014	260.3	.0008	1.777	.0013	68.32

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0050**	**8.992**	**.0003**	**.0091**	**.0051**	**.0044**	**.0610**
Stddev	.0008	.0012	.029	.0006	.0001	.0005	.0002	.0024
%RSD	158.1	23.99	.3196	190.7	.6786	9.359	4.716	3.905
#1	.0003	.0036	9.025	-.0001	.0091	.0050	.0042	.0605
#2	-.0001	.0055	8.971	.0001	.0090	.0056	.0046	.0637
#3	.0015	.0059	8.981	.0010	.0091	.0047	.0042	.0590

Zoom In Zoom Out

Sample Name: jd56548-12 Acquired: 12/8/2022 1:40:47 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0086**	**.0028**	**-.0008**
Stddev	.0004	.0001	.0001
%RSD	5.210	4.908	11.30
#1	.0084	.0027	-.0009
#2	.0083	.0030	-.0008
#3	.0091	.0028	-.0008

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5057.7**	**52437.**	**4999.0**	**2009.4**
Stddev	7.1	1369.	23.3	6.0
%RSD	.13953	2.6116	.46630	.30018
#1	5059.6	53182.	5004.9	2004.0
#2	5063.7	50857.	5018.7	2015.9
#3	5049.9	53273.	4973.3	2008.3

Zoom In Zoom Out

Sample Name: jd56548-14 Acquired: 12/8/2022 1:46:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0438**	**.0132**	**.2605**	**.0033**	**.0000**	**-.0011**	**2.160**	**.0022**
Stddev	.0004	.0127	.0008	.0029	.0002	.0001	.0016	.013	.0002
%RSD	102.5	29.02	6.173	1.111	4.542	299.5	148.4	.6075	10.86
#1	.0004	.0297	.0126	.2591	.0033	.0001	.0005	2.160	.0021
#2	.0009	.0543	.0141	.2586	.0032	.0000	-.0027	2.147	.0024
#3	.0000	.0475	.0129	.2638	.0035	-.0001	-.0011	2.174	.0020

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0016**	**-.0002**	**.1211**	**.0006**	**.0518**	**1.738**	**.0012**	**.2911**	**.0035**
Stddev	.0005	.0001	.0004	.0004	.0001	.005	.0011	.0325	.0000
%RSD	33.41	77.70	.3147	69.49	.2848	.2922	92.44	11.16	.9438
#1	-.0015	-.0003	.1212	.0010	.0516	1.733	.0008	.3158	.0035
#2	-.0011	-.0000	.1215	.0006	.0519	1.738	.0025	.2543	.0036
#3	-.0022	-.0002	.1207	.0002	.0519	1.743	.0004	.3031	.0035

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0259**	**85.73**	**.0006**	**3.715**	**.0015**	**21.54**	**.0005**	**-.0005**	**4.270**
Stddev	.0004	.15	.0005	.037	.0008	.17	.0006	.0005	.041
%RSD	1.513	.1715	77.54	.9952	52.93	.7849	123.5	111.4	.9563
#1	.0256	85.65	.0003	3.706	.0007	21.47	.0002	-.0002	4.251
#2	.0259	85.90	.0012	3.684	.0023	21.41	.0011	-.0011	4.242
#3	.0264	85.64	.0004	3.756	.0014	21.73	.0001	-.0001	4.317

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0276**	**.0010**	**-.0007**	**.0056**	**.0403**	**.0014**	**-.0006**
Stddev	.0011	.0001	.0002	.0014	.0002	.0012	.0002	.0001
%RSD	304.5	.4472	22.60	214.0	4.216	2.951	14.45	20.15
#1	.0013	.0275	.0010	.0005	.0053	.0413	.0013	-.0006
#2	-.0009	.0275	.0008	-.0002	.0056	.0390	.0012	-.0007
#3	.0007	.0277	.0012	-.0022	.0058	.0407	.0016	-.0004

Zoom In Zoom Out

Sample Name: jd56548-14 Acquired: 12/8/2022 1:46:02 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5342.9**	**54543.**	**4990.6**	**2034.5**
Stddev	52.5	35.	8.5	18.2
%RSD	.98237	.06452	.17080	.89498
#1	5361.5	54540.	4982.5	2038.4
#2	5383.6	54579.	4999.5	2050.4
#3	5283.7	54509.	4989.9	2014.6

Zoom In Zoom Out

Sample Name: jd56548-3f Acquired: 12/8/2022 1:51:08 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0339**	**-.0003**	**.2099**	**.0139**	**.0000**	**-.0012**	**7.361**	**.0025**
Stddev	.0001	.0147	.0003	.0004	.0009	.0001	.0005	.371	.0001
%RSD	86.36	43.42	90.51	.1993	6.736	20490.	39.75	5.044	4.728
#1	-.0002	.0373	-.0004	.2103	.0136	.0001	-.0012	7.154	.0024
#2	-.0001	.0466	.0000	.2095	.0149	-.0002	-.0008	7.790	.0025
#3	-.0000	.0178	-.0005	.2099	.0131	.0000	-.0017	7.139	.0026

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0179**	**.0014**	**.0000**	**.0011**	**.6389**	**.3629**	**.0016**	**1.777**	**.2982**
Stddev	.0040	.0003	.0004	.0002	.0278	.0061	.0014	.088	.0012
%RSD	22.23	19.69	2127.	13.36	4.345	1.670	89.39	4.936	.3918
#1	.0158	.0017	-.0004	.0012	.6224	.3665	.0007	1.740	.2978
#2	.0154	.0013	.0001	.0013	.6710	.3663	.0032	1.877	.2996
#3	.0225	.0012	.0004	.0010	.6234	.3559	.0009	1.714	.2974

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0000**	**12.18**	**.0026**	**.0037**	**.0015**	**3.681**	**.0008**	**.0011**	**5.066**
Stddev	.0001	.50	.0004	.0003	.0010	.009	.0003	.0019	.013
%RSD	663.7	4.123	14.65	7.927	66.19	.2542	39.93	176.4	.2518
#1	.0000	11.89	.0027	.0038	.0021	3.678	.0006	-.0007	5.079
#2	-.0001	12.76	.0022	.0040	.0021	3.692	.0011	.0008	5.065
#3	.0001	11.89	.0029	.0034	.0004	3.674	.0006	.0032	5.053

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**.0411**	**-.0005**	**-.0007**	**.0029**	**.0046**	**.0032**	**-.0003**
Stddev	.0003	.0019	.0003	.0022	.0001	.0005	.0000	.0001
%RSD	56.94	4.535	68.74	314.3	3.622	11.76	1.544	26.64
#1	-.0008	.0399	-.0004	.0017	.0029	.0052	.0032	-.0003
#2	-.0004	.0432	-.0009	-.0013	.0030	.0045	.0031	-.0002
#3	-.0003	.0401	-.0002	-.0025	.0028	.0042	.0032	-.0002

Zoom In Zoom Out

Sample Name: jd56548-3f Acquired: 12/8/2022 1:51:08 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5683.0**	**56024.**	**4963.4**	**2091.0**
Stddev	8.3	215.	208.8	3.3
%RSD	.14613	.38368	4.2074	.15683
#1	5677.9	56144.	5067.7	2087.3
#2	5692.5	55775.	4723.0	2092.5
#3	5678.5	56152.	5099.6	2093.4

Zoom In Zoom Out

Sample Name: jd56548-6f Acquired: 12/8/2022 1:56:15 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.0249**	**-.0002**	**.0969**	**.0065**	**-.0000**	**-.0012**	**15.94**	**.0032**
Stddev	.0026	.0031	.0010	.0006	.0000	.0001	.0009	.02	.0027
%RSD	245.2	12.56	492.8	.6270	.6579	1610.	81.27	.1439	85.07
#1	.0004	.0262	-.0003	.0976	.0064	-.0001	-.0001	15.96	.0050
#2	.0004	.0271	-.0011	.0965	.0065	.0001	-.0013	15.92	.0046
#3	-.0040	.0213	.0008	.0965	.0064	.0000	-.0020	15.95	.0001

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**-.0002**	**.0014**	**.0022**	**.0363**	**1.400**	**.0028**	**7.033**	**.0010**
Stddev	.0057	.0002	.0004	.0011	.0027	.019	.0004	.042	.0004
%RSD	752.3	108.9	31.41	48.06	7.343	1.374	13.06	.6033	36.18
#1	.0022	-.0005	.0012	.0013	.0393	1.408	.0024	7.010	.0008
#2	.0056	-.0001	.0012	.0020	.0354	1.413	.0030	7.082	.0008
#3	-.0056	-.0000	.0019	.0034	.0341	1.378	.0031	7.008	.0015

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**20.68**	**.0002**	**.0060**	**.0024**	**5.608**	**.0005**	**.0034**	**9.729**
Stddev	.0001	.06	.0007	.0005	.0017	.019	.0009	.0025	.021
%RSD	20.65	.2949	326.8	9.024	71.70	.3449	179.6	72.08	.2117
#1	.0005	20.75	-.0005	.0059	.0022	5.605	-.0002	.0006	9.746
#2	.0004	20.63	.0009	.0066	.0042	5.629	.0002	.0044	9.734
#3	.0004	20.68	.0003	.0055	.0008	5.591	.0016	.0052	9.706

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0607**	**.0001**	**.0002**	**.0008**	**.0066**	**.0243**	**-.0007**
Stddev	.0005	.0002	.0003	.0008	.0002	.0045	.0003	.0002
%RSD	144.9	.3269	486.7	480.6	23.42	68.45	1.381	23.04
#1	-.0006	.0609	-.0000	.0010	.0006	.0083	.0240	-.0007
#2	-.0007	.0605	.0004	-.0003	.0009	.0101	.0242	-.0008
#3	.0002	.0607	-.0002	-.0002	.0010	.0015	.0246	-.0005

Zoom In Zoom Out

Sample Name: jd56548-6f Acquired: 12/8/2022 1:56:15 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5548.4**	*****	**5022.0**	**2066.7**
Stddev	15.3	-----	23.7	4.2
%RSD	.27541	-----	.47155	.20474
#1	5531.1	55594.	5002.1	2062.0
#2	5554.3	55274.	5015.7	2067.7
#3	5559.9	-----	5048.2	2070.3

Zoom In Zoom Out

Sample Name: jd56548-8f Acquired: 12/8/2022 2:01:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0003**	**.0011**	**.1636**	**.0807**	**.0002**	**-.0013**	**24.58**	**.0033**
Stddev	.0006	.0166	.0004	.0023	.0002	.0001	.0012	.16	.0001
%RSD	112.2	4772.	35.53	1.397	.2990	30.26	89.67	.6472	3.052
#1	.0011	-.0131	.0013	.1659	.0809	.0002	-.0013	24.69	.0032
#2	.0000	-.0048	.0006	.1613	.0809	.0003	-.0024	24.40	.0034
#3	.0004	.0189	.0013	.1637	.0805	.0002	-.0001	24.65	.0033

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0000**	**.0017**	**.0027**	**.0079**	**6.256**	**.0017**	**4.106**	**.0147**
Stddev	.0016	.0005	.0002	.0004	.0016	.055	.0009	.025	.0000
%RSD	100.9	3259.	12.08	15.29	20.86	.8778	51.61	.6022	.2326
#1	-.0003	.0003	.0015	.0031	.0098	6.217	.0007	4.108	.0148
#2	.0026	.0003	.0019	.0023	.0070	6.318	.0025	4.129	.0147
#3	.0026	-.0006	.0017	.0027	.0069	6.231	.0020	4.080	.0147

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**153.4**	**.0009**	**.0076**	**.0023**	**15.90**	**.0006**	**.0005**	**6.300**
Stddev	.0002	.6	.0003	.0002	.0010	.17	.0006	.0017	.036
%RSD	252.6	.4147	29.89	2.924	44.34	1.055	95.63	319.4	.5645
#1	-.0002	153.9	.0006	.0077	.0015	16.09	.0006	-.0012	6.315
#2	.0002	152.7	.0010	.0077	.0020	15.76	.0000	.0005	6.259
#3	-.0002	153.5	.0011	.0073	.0035	15.85	.0011	.0023	6.325

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.1511**	**-.0007**	**.0006**	**.0005**	**.0048**	**.0100**	**-.0007**
Stddev	.0001	.0002	.0001	.0004	.0003	.0007	.0001	.0001
%RSD	35.72	.1614	13.76	65.06	54.25	15.34	.6511	16.57
#1	-.0005	.1508	-.0008	.0011	.0006	.0057	.0101	-.0006
#2	-.0002	.1512	-.0006	.0005	.0002	.0043	.0101	-.0007
#3	-.0004	.1512	-.0007	.0003	.0007	.0045	.0099	-.0008

Zoom In Zoom Out

Sample Name: jd56548-8f Acquired: 12/8/2022 2:01:24 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5169.6**	**53455.**	**4948.8**	**2011.0**
Stddev	23.1	316.	32.3	11.0
%RSD	.44678	.59199	.65183	.54773
#1	5158.5	53090.	4916.3	2006.8
#2	5196.2	53643.	4980.8	2023.5
#3	5154.2	53634.	4949.3	2002.8

Zoom In Zoom Out

Sample Name: jd56548-9f Acquired: 12/8/2022 2:06:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0210**	**-.0009**	**.0782**	**.0037**	**-.0000**	**-.0001**	**5.197**	**.0015**
Stddev	.0003	.0024	.0005	.0003	.0002	.0001	.0009	.014	.0001
%RSD	211.8	11.60	54.20	.3765	4.188	252.2	928.1	.2678	6.407
#1	.0004	.0189	-.0009	.0779	.0035	.0001	.0007	5.209	.0015
#2	-.0002	.0205	-.0004	.0782	.0037	-.0001	-.0010	5.199	.0014
#3	.0002	.0237	-.0013	.0784	.0038	-.0001	-.0000	5.182	.0016

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0002**	**.0066**	**.0005**	**.0674**	**1.265**	**-.0007**	**1.445**	**.0100**
Stddev	.0022	.0001	.0005	.0002	.0021	.017	.0006	.006	.0001
%RSD	375.5	85.06	6.883	40.24	3.146	1.356	94.08	.3879	.5197
#1	-.0017	-.0002	.0068	.0007	.0693	1.281	-.0011	1.450	.0100
#2	.0027	-.0000	.0068	.0007	.0676	1.247	.0001	1.446	.0101
#3	.0008	-.0003	.0061	.0003	.0651	1.268	-.0009	1.439	.0100

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**8.224**	**.0006**	**.0143**	**.0024**	**1.563**	**.0006**	**-.0014**	**2.815**
Stddev	.0003	.013	.0003	.0007	.0007	.004	.0006	.0031	.006
%RSD	278.5	.1619	56.60	4.891	31.40	.2784	91.60	229.7	.2073
#1	.0003	8.237	.0006	.0149	.0022	1.559	.0004	.0005	2.812
#2	-.0002	8.225	.0009	.0135	.0032	1.564	.0013	.0004	2.811
#3	.0002	8.211	.0003	.0143	.0017	1.568	.0002	-.0050	2.822

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0286**	**.0004**	**.0006**	**.0008**	**.0023**	**.0028**	**-.0004**
Stddev	.0005	.0000	.0004	.0010	.0003	.0003	.0002	.0001
%RSD	146.9	.1286	99.09	168.2	43.94	14.48	7.983	18.55
#1	.0002	.0285	.0008	-.0003	.0006	.0019	.0029	-.0003
#2	-.0005	.0286	.0004	.0004	.0012	.0026	.0030	-.0003
#3	-.0006	.0285	-.0000	.0018	.0006	.0025	.0026	-.0005

Zoom In Zoom Out

Sample Name: jd56548-9f Acquired: 12/8/2022 2:06:30 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5657.3**	**55829.**	**4960.7**	**2072.0**
Stddev	19.9	215.	8.3	4.9
%RSD	.35128	.38478	.16698	.23702
#1	5673.5	55638.	4954.8	2075.3
#2	5663.4	55789.	4957.2	2074.4
#3	5635.2	56062.	4970.2	2066.4

Zoom In Zoom Out

Sample Name: jd56548-10f Acquired: 12/8/2022 2:11:39 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0046**	**-.0000**	**.1812**	**.0133**	**.0001**	**-.0010**	**31.87**	**.0055**
Stddev	.0003	.0124	.0007	.0007	.0002	.0001	.0010	.11	.0002
%RSD	117.1	268.7	5727.	.3896	1.299	71.77	104.3	.3374	3.207
#1	.0001	.0061	-.0000	.1808	.0131	.0001	-.0002	31.92	.0053
#2	-.0003	-.0182	-.0007	.1807	.0134	.0000	-.0022	31.95	.0055
#3	-.0006	-.0017	.0007	.1820	.0134	.0001	-.0006	31.75	.0057

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**-.0001**	**.0041**	**.0020**	**.0048**	**2.585**	**.0035**	**9.831**	**.0004**
Stddev	.0026	.0002	.0003	.0007	.0016	.029	.0007	.047	.0000
%RSD	138.0	216.7	8.076	34.78	33.91	1.112	19.65	.4816	7.529
#1	-.0011	.0001	.0037	.0020	.0054	2.589	.0040	9.886	.0004
#2	.0034	-.0002	.0044	.0013	.0060	2.555	.0039	9.801	.0004
#3	.0034	-.0002	.0042	.0027	.0029	2.612	.0027	9.807	.0004

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**35.79**	**.0004**	**.0051**	**.0020**	**10.27**	**.0011**	**.0017**	**11.28**
Stddev	.0001	.11	.0004	.0006	.0016	.02	.0004	.0020	.01
%RSD	16.59	.3136	95.13	12.04	79.92	.2185	36.04	114.7	.0707
#1	.0004	35.89	.0001	.0053	.0026	10.25	.0012	.0037	11.29
#2	.0004	35.83	.0003	.0055	.0002	10.30	.0015	.0018	11.28
#3	.0003	35.67	.0009	.0044	.0032	10.27	.0007	-.0003	11.29

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.1439**	**-.0011**	**.0002**	**.0004**	**.0097**	**.0028**	**-.0010**
Stddev	.0004	.0001	.0006	.0024	.0002	.0019	.0000	.0002
%RSD	32.90	.0612	53.73	1013.	50.72	19.46	.8591	15.63
#1	-.0008	.1440	-.0004	-.0020	.0002	.0114	.0028	-.0011
#2	-.0015	.1439	-.0014	.0028	.0005	.0076	.0028	-.0008
#3	-.0011	.1438	-.0016	-.0001	.0005	.0100	.0028	-.0010

Zoom In Zoom Out

Sample Name: jd56548-10f Acquired: 12/8/2022 2:11:39 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5387.7**	**54281.**	**4941.3**	**2026.8**
Stddev	9.0	109.	19.3	2.4
%RSD	.16621	.19998	.38983	.12055
#1	5386.9	54328.	4934.3	2025.7
#2	5379.2	54359.	4963.1	2025.1
#3	5397.1	54157.	4926.6	2029.6

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 2:16:47 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2511**	**39.94**	**1.941**	**1.956**	**1.962**	**2.001**	**1.949**	**40.38**	**1.971**
Stddev	.0005	.18	.005	.008	.005	.006	.003	.13	.004
%RSD	.2160	.4616	.2541	.3889	.2324	.3009	.1681	.3227	.2271
#1	.2515	40.10	1.943	1.951	1.966	2.005	1.952	40.47	1.967
#2	.2513	40.00	1.936	1.952	1.962	2.003	1.946	40.44	1.969
#3	.2505	39.74	1.945	1.965	1.957	1.994	1.948	40.23	1.976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.959**	**1.962**	**1.968**	**1.925**	**41.10**	**39.64**	**1.922**	**40.47**	**1.996**
Stddev	.005	.001	.009	.006	.09	.09	.007	.02	.005
%RSD	.2491	.0596	.4737	.2988	.2301	.2145	.3775	.0386	.2415
#1	1.964	1.963	1.976	1.931	41.16	39.67	1.928	40.45	2.001
#2	1.954	1.961	1.970	1.923	41.16	39.70	1.924	40.48	1.996
#3	1.959	1.961	1.958	1.919	40.99	39.54	1.914	40.46	1.991
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.976**	**40.41**	**1.968**	**1.809**	**1.986**	**1.905**	**1.943**	**1.936**	**4.759**
Stddev	.005	.12	.002	.007	.004	.014	.004	.009	.009
%RSD	.2796	.2944	.1057	.3821	.1750	.7100	.1917	.4793	.1812
#1	1.972	40.48	1.966	1.807	1.984	1.903	1.943	1.934	4.764
#2	1.973	40.48	1.967	1.804	1.985	1.893	1.940	1.928	4.749
#3	1.982	40.28	1.970	1.817	1.990	1.919	1.947	1.946	4.763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 2:16:47 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.993**	**1.968**	**1.948**	**2.054**	**1.955**	**1.957**	**1.984**	**1.950**
Stddev	.007	.005	.003	.025	.005	.007	.007	.003
%RSD	.3687	.2498	.1328	1.196	.2452	.3646	.3649	.1434
#1	1.990	1.972	1.951	2.039	1.960	1.960	1.980	1.952
#2	1.988	1.969	1.946	2.041	1.955	1.949	1.980	1.952
#3	2.001	1.962	1.949	2.082	1.950	1.963	1.993	1.947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5206.1**	**54454.**	**4988.8**	**2055.8**
Stddev	5.6	60.	15.4	.2
%RSD	.10742	.11013	.30907	.00898
#1	5201.9	54507.	5006.5	2055.6
#2	5203.9	54389.	4978.4	2056.0
#3	5212.4	54467.	4981.5	2055.8

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 2:21:35 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0092**	**.0013**	**.0031**	**.0000**	**-.0000**	**.0010**	**-.0052**	**.0001**
Stddev	.0005	.0128	.0006	.0008	.0002	.0000	.0016	.0080	.0002
%RSD	659.8	138.7	47.97	26.47	601.8	238.7	154.7	154.1	205.8
#1	-.0006	-.0229	.0007	.0040	-.0001	.0000	.0022	.0036	.0002
#2	.0004	.0024	.0019	.0027	-.0000	-.0000	-.0008	-.0121	.0003
#3	-.0000	-.0071	.0012	.0025	.0002	-.0000	.0018	-.0071	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0001**	**-.0002**	**-.0002**	**.0009**	**-.0099**	**.0017**	**.0070**	**.0000**
Stddev	.0015	.0002	.0004	.0002	.0016	.0241	.0014	.0364	.0001
%RSD	555.6	217.3	172.7	111.1	180.1	243.8	82.20	519.0	232.1
#1	.0004	.0001	.0000	.0000	.0023	-.0222	.0033	-.0285	-.0000
#2	-.0013	-.0004	-.0006	-.0002	.0010	.0179	.0012	.0442	.0000
#3	.0017	-.0000	-.0000	-.0004	-.0008	-.0254	.0006	.0054	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0157**	**.0001**	**.0011**	**.0002**	**-.0013**	**-.0004**	**.0006**	**-.0061**
Stddev	.0001	.0047	.0004	.0006	.0002	.0045	.0019	.0019	.0003
%RSD	17.31	29.96	448.2	58.51	82.45	341.2	498.8	311.0	5.112
#1	.0003	.0183	.0004	.0012	.0001	.0018	.0018	-.0016	-.0064
#2	.0003	.0186	.0004	.0016	.0002	-.0065	-.0017	.0017	-.0062
#3	.0002	.0103	-.0004	.0004	.0004	.0008	-.0013	.0017	-.0058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 2:21:35 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0000**	**.0000**	**-.0001**	**.0003**	**-.0015**	**-.0004**	**.0001**
Stddev	.0006	.0001	.0001	.0005	.0002	.0007	.0001	.0003
%RSD	142.4	793.6	196.3	491.0	63.57	46.88	24.88	229.6
#1	.0005	.0001	-.0000	.0004	.0002	-.0023	-.0003	.0004
#2	-.0002	.0001	.0000	-.0007	.0005	-.0014	-.0005	-.0001
#3	.0009	-.0001	.0001	-.0001	.0002	-.0009	-.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5809.6**	**56604.**	**5010.5**	**2109.0**
Stddev	5.0	291.	14.2	1.4
%RSD	.08689	.51451	.28418	.06839
#1	5808.1	56624.	5002.9	2109.3
#2	5815.2	56304.	5001.8	2110.3
#3	5805.4	56885.	5027.0	2107.5

Zoom In Zoom Out

Sample Name: jd56548-11f Acquired: 12/8/2022 2:26:49 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**2.157**	**.0294**	**.0552**	**.0035**	**.0000**	**-.0006**	**10.11**
Stddev	.0008	.014	.0003	.0006	.0002	.0001	.0005	.08
%RSD	186.3	.6461	1.002	1.142	5.998	447.2	85.47	.7559
#1	.0000	2.155	.0294	.0560	.0035	.0000	-.0001	10.05
#2	.0014	2.144	.0297	.0548	.0037	.0001	-.0006	10.10
#3	-.0001	2.172	.0291	.0550	.0033	-.0001	-.0011	10.20

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0051**	**-.0012**	**-.0003**	**.1778**	**.0026**	**.0090**	**3.503**	**.0002**
Stddev	.0000	.0005	.0001	.0010	.0001	.0023	.022	.0008
%RSD	.8208	46.37	37.15	.5767	2.337	25.65	.6371	406.9
#1	.0051	-.0005	-.0002	.1784	.0027	.0063	3.519	-.0003
#2	.0051	-.0015	-.0002	.1766	.0026	.0103	3.477	.0012
#3	.0051	-.0015	-.0004	.1784	.0026	.0103	3.512	-.0002

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.043**	**.0039**	**.0013**	**193.8**	**.0000**	**2.235**	**.0018**	**66.22**
Stddev	.074	.0000	.0002	.3	.0002	.017	.0009	.32
%RSD	3.641	.7625	16.99	.1371	1197.	.7444	47.93	.4859
#1	1.960	.0039	.0010	193.9	.0001	2.251	.0018	66.55
#2	2.066	.0039	.0013	193.5	-.0002	2.238	.0027	65.91
#3	2.103	.0039	.0015	194.0	.0002	2.218	.0010	66.19

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0043**	**10.26**	**-.0009**	**.1183**	**-.0006**	**.0012**	**.0581**
Stddev	.0010	.0024	.04	.0006	.0004	.0002	.0009	.0003
%RSD	160.2	55.35	.4228	67.17	.3801	26.43	76.59	.5676
#1	.0010	.0051	10.30	-.0013	.1182	-.0006	.0017	.0583
#2	-.0005	.0061	10.22	-.0002	.1179	-.0008	.0016	.0583
#3	.0014	.0016	10.27	-.0012	.1187	-.0004	.0001	.0577

Zoom In Zoom Out

Sample Name: jd56548-11f Acquired: 12/8/2022 2:26:49 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0161**	**.0039**	W **-.0010**
Stddev	.0017	.0002	.0001
%RSD	10.61	4.705	5.470
#1	.0176	.0038	-.0011
#2	.0143	.0038	-.0010
#3	.0164	.0041	-.0010

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5144.3**	**53564.**	**4992.3**	**2021.4**
Stddev	3.5	70.	34.9	3.1
%RSD	.06723	.13075	.69856	.15394
#1	5141.1	53579.	5004.2	2018.1
#2	5143.8	53626.	5019.7	2024.3
#3	5147.9	53488.	4953.1	2021.7

Zoom In Zoom Out

Sample Name: jd56548-12f Acquired: 12/8/2022 2:31:52 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**5.657**	**.0267**	**.0580**	**.0003**	**-.0000**	**-.0006**	**.0667**
Stddev	.0006	.014	.0010	.0012	.0002	.0001	.0003	.0062
%RSD	122.7	.2537	3.570	1.986	73.27	196.0	43.19	9.311
#1	.0002	5.664	.0256	.0581	.0001	-.0001	-.0004	.0613
#2	-.0008	5.667	.0272	.0568	.0005	.0000	-.0009	.0735
#3	-.0007	5.641	.0273	.0591	.0003	-.0000	-.0005	.0654

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0009**	**-.0000**	**.0294**	**.0024**	**.0161**	**.2246**	**.0019**
Stddev	.0002	.0017	.0000	.0003	.0004	.0029	.0066	.0008
%RSD	5.461	179.2	599.6	.8834	16.02	17.98	2.921	44.24
#1	.0048	.0021	.0000	.0291	.0028	.0195	.2174	.0013
#2	.0043	.0017	-.0000	.0296	.0024	.0143	.2302	.0029
#3	.0045	-.0010	-.0000	.0294	.0020	.0146	.2262	.0016

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0146**	**.0000**	**.0018**	W **263.5**	**.0004**	**1.586**	**.0019**	**67.53**
Stddev	.0090	.0000	.0001	1.8	.0001	.004	.0023	.16
%RSD	61.71	17800.	4.145	.6744	34.23	.2468	123.2	.2396
#1	-.0235	-.0000	.0017	265.3	.0004	1.585	.0008	67.47
#2	-.0055	.0000	.0018	261.8	.0005	1.591	.0045	67.41
#3	-.0148	-.0000	.0018	263.3	.0002	1.583	.0003	67.71

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0007**	**8.706**	**-.0001**	**.0013**	**-.0003**	**.0012**	**.0580**
Stddev	.0011	.0033	.009	.0006	.0000	.0003	.0004	.0007
%RSD	1950.	461.2	.1047	523.7	3.402	77.69	32.89	1.256
#1	-.0005	-.0008	8.702	-.0004	.0013	-.0002	.0009	.0580
#2	-.0009	-.0016	8.699	.0006	.0013	-.0002	.0017	.0573
#3	.0012	.0046	8.716	-.0005	.0012	-.0006	.0010	.0588

Zoom In Zoom Out

Sample Name: jd56548-12f Acquired: 12/8/2022 2:31:52 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0089**	**.0038**	**-.0007**
Stddev	.0005	.0002	.0001
%RSD	5.452	6.490	9.596
#1	.0084	.0040	-.0008
#2	.0094	.0040	-.0007
#3	.0090	.0035	-.0007

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5067.7**	**53114.**	**4955.3**	**2014.0**
Stddev	3.7	187.	39.3	3.0
%RSD	.07321	.35228	.79302	.14857
#1	5063.7	52898.	4921.3	2015.3
#2	5068.4	53217.	4946.3	2016.2
#3	5071.0	53226.	4998.3	2010.6

Zoom In Zoom Out

Sample Name: mp36376-mb1 Acquired: 12/8/2022 2:37:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0035**	**.0009**	**.0019**	**.0005**	**-.0001**	**.0001**	**.0097**	**.0000**
Stddev	.0003	.0187	.0004	.0005	.0001	.0001	.0004	.0012	.0002
%RSD	428.4	528.3	39.98	26.65	24.36	117.0	583.8	12.12	399.6
#1	.0001	-.0174	.0009	.0021	.0006	-.0002	.0003	.0110	.0002
#2	-.0004	.0186	.0005	.0013	.0005	-.0001	.0003	.0096	-.0002
#3	.0002	.0094	.0012	.0023	.0003	.0000	-.0004	.0086	.0001

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**.0000**	**-.0002**	**-.0007**	**.0021**	**.0055**	**.0007**	**-.0033**	**.0000**
Stddev	.0018	.0002	.0002	.0005	.0036	.0305	.0024	.0153	.0000
%RSD	668.4	3679.	98.75	68.58	168.1	558.1	345.2	468.4	66.23
#1	.0018	.0002	-.0004	-.0005	.0011	-.0049	.0006	-.0134	.0000
#2	-.0016	-.0002	-.0003	-.0012	-.0008	-.0185	-.0016	-.0107	.0000
#3	-.0010	-.0000	.0000	-.0004	.0061	.0398	.0031	.0143	.0000

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.1186**	**.0002**	**.0007**	**.0016**	**.0263**	**.0002**	**.0012**	**-.0038**
Stddev	.0002	.0157	.0005	.0026	.0007	.0158	.0013	.0006	.0021
%RSD	269.9	13.23	196.7	357.1	41.89	60.30	514.1	53.75	54.65
#1	-.0003	.1347	.0002	.0024	.0010	.0446	-.0012	.0007	-.0023
#2	.0000	.1176	.0007	.0021	.0015	.0174	.0013	.0009	-.0029
#3	.0001	.1034	-.0002	-.0023	.0023	.0169	.0006	.0019	-.0062

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0001**	**-.0003**	**-.0002**	**.0003**	**-.0007**	**.0021**	**.0000**
Stddev	.0006	.0001	.0004	.0016	.0002	.0009	.0003	.0001
%RSD	69.68	136.1	117.3	781.0	71.85	131.1	15.91	274.8
#1	.0010	.0001	.0001	-.0009	.0005	.0001	.0019	-.0000
#2	.0013	.0001	-.0006	.0016	.0002	-.0017	.0024	-.0000
#3	.0002	-.0000	-.0004	-.0013	.0001	-.0005	.0019	.0001

Zoom In Zoom Out

Sample Name: mp36376-mb1 Acquired: 12/8/2022 2:37:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5801.4**	**56224.**	**4932.7**	**2103.6**
Stddev	7.5	65.	24.2	4.2
%RSD	.12914	.11501	.49051	.19734
#1	5810.1	56165.	4911.9	2104.3
#2	5796.7	56293.	4926.8	2099.2
#3	5797.5	56213.	4959.2	2107.4

Zoom In Zoom Out

Sample Name: mp36790-mb1 Acquired: 12/8/2022 2:42:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5814.4**	**56802.**	**5036.1**	**2104.6**
Stddev	1.6	133.	39.1	2.6
%RSD	.02760	.23394	.77553	.12546
#1	5813.3	56952.	5046.9	2106.3
#2	5813.6	56757.	5068.6	2106.0
#3	5816.2	56698.	4992.8	2101.6

Zoom In Zoom Out

Sample Name: mp36790-mb1 Acquired: 12/8/2022 2:42:19 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0017**	**.0000**	**.0028**	**.0001**	**-.0001**	**.0001**	**.0146**	**.0003**
Stddev	.0004	.0021	.0003	.0001	.0002	.0001	.0005	.0047	.0002
%RSD	424.1	129.0	8559.	4.980	217.7	116.7	667.2	31.88	88.21
#1	.0003	-.0001	-.0002	.0030	-.0001	.0000	.0006	.0158	.0001
#2	-.0004	-.0041	.0004	.0027	.0000	-.0001	.0000	.0095	.0001
#3	-.0002	-.0008	-.0001	.0027	.0003	-.0001	-.0004	.0186	.0006

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**-.0000**	**-.0001**	**-.0003**	**.0143**	**-.0067**	**.0012**	**-.0212**	**.0003**
Stddev	.0041	.0002	.0002	.0002	.0021	.0352	.0016	.0284	.0000
%RSD	92.42	421.3	340.0	60.08	14.37	528.6	131.8	134.3	6.588
#1	.0091	.0002	.0001	-.0002	.0134	-.0247	.0002	-.0115	.0004
#2	.0024	-.0002	-.0002	-.0005	.0129	.0339	.0004	.0012	.0003
#3	.0018	-.0002	-.0000	-.0002	.0167	-.0292	.0031	-.0531	.0003

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0226**	**-.0000**	**.0018**	**.0011**	**.0032**	**.0000**	**.0020**	**.0088**
Stddev	.0000	.0130	.0003	.0003	.0010	.0038	.0011	.0002	.0001
%RSD	60.79	57.63	2383.	15.16	86.91	120.4	34520.	9.701	1.187
#1	-.0001	.0370	-.0002	.0022	.0017	.0076	.0008	.0021	.0087
#2	-.0001	.0119	-.0003	.0017	.0016	.0005	-.0013	.0018	.0089
#3	-.0000	.0188	.0004	.0017	-.0000	.0015	.0005	.0021	.0088

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0000**	**.0002**	**-.0008**	**.0004**	**-.0006**	**.0014**	**-.0001**
Stddev	.0002	.0000	.0002	.0018	.0003	.0005	.0001	.0001
%RSD	51.54	77.67	112.7	227.7	59.76	82.12	8.346	83.36
#1	-.0006	.0001	.0002	-.0003	.0002	-.0012	.0013	-.0001
#2	-.0005	.0001	-.0000	-.0028	.0004	-.0005	.0013	-.0002
#3	-.0002	.0000	.0003	.0007	.0007	-.0002	.0015	-.0000

Zoom In Zoom Out

Sample Name: mp36790-lb1 Acquired: 12/8/2022 2:47:31 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0106**	**.0021**	**.0116**	**.0109**	**.0000**	**.0007**	**.5339**
Stddev	.0006	.0066	.0009	.0001	.0001	.0001	.0005	.0030
%RSD	99.97	62.43	43.34	.6647	.8856	275.6	71.23	.5642
#1	-.0011	.0149	.0028	.0116	.0108	.0002	.0011	.5373
#2	.0000	.0030	.0011	.0116	.0108	.0000	.0007	.5328
#3	-.0006	.0141	.0026	.0117	.0110	-.0001	.0002	.5316

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0025**	**.0001**	**.0010**	**.0107**	**.0276**	**1.758**	**.0087**
Stddev	.0001	.0021	.0003	.0003	.0005	.0013	.047	.0016
%RSD	58.38	83.06	323.5	26.27	4.505	4.569	2.668	18.89
#1	.0002	-.0043	-.0002	.0013	.0112	.0264	1.704	.0090
#2	.0001	-.0030	.0001	.0008	.0106	.0275	1.782	.0101
#3	.0003	-.0002	.0004	.0008	.0103	.0289	1.787	.0069

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0494**	**.0023**	**.0002**	F **1344.**	**.0039**	**.1243**	**.0013**	**.1160**
Stddev	.0323	.0000	.0006	10.	.0003	.0021	.0018	.0049
%RSD	65.23	1.463	259.0	.7720	8.922	1.670	130.9	4.224
#1	.0142	.0023	.0009	1334.	.0041	.1236	.0033	.1213
#2	.0775	.0024	-.0001	1343.	.0041	.1266	.0007	.1116
#3	.0566	.0023	-.0001	1355.	.0035	.1226	.0000	.1151

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0081**	**.1801**	**.0019**	**.0062**	**.0000**	F **-.0077**	**.0003**
Stddev	.0003	.0030	.0025	.0003	.0001	.0005	.0022	.0008
%RSD	20.70	36.93	1.413	15.48	1.614	1459.	28.94	269.4
#1	.0015	.0101	.1777	.0018	.0061	-.0003	-.0059	.0008
#2	.0019	.0046	.1828	.0022	.0062	-.0001	-.0071	-.0006
#3	.0013	.0095	.1799	.0016	.0063	.0005	-.0102	.0007

Zoom In Zoom Out

Sample Name: mp36790-lb1 Acquired: 12/8/2022 2:47:31 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.0006**	**.1655**	**.0001**
Stddev	.0014	.0019	.0002
%RSD	219.5	1.132	360.8
#1	.0005	.1634	-.0002
#2	-.0003	.1670	.0002
#3	-.0022	.1662	.0002

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4416.9**	**48335.**	**4932.5**	**1841.4**
Stddev	53.5	117.	41.1	25.9
%RSD	1.2110	.24177	.83333	1.4043
#1	4450.7	48212.	4931.1	1863.6
#2	4355.2	48444.	4974.2	1813.0
#3	4444.7	48347.	4892.1	1847.8

Zoom In Zoom Out

Sample Name: mp36790-b1 Acquired: 12/8/2022 2:52:52 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2457**	**25.41**	**1.889**	**1.935**	**1.966**	**2.010**	F **-.0379**	**25.66**
Stddev	.0008	.04	.004	.003	.002	.005	.0008	.04
%RSD	.3219	.1439	.2280	.1645	.1151	.2336	2.141	.1616
#1	.2453	25.45	1.885	1.931	1.968	2.015	-.0374	25.69
#2	.2453	25.40	1.894	1.937	1.965	2.010	-.0389	25.61
#3	.2467	25.38	1.888	1.936	1.963	2.006	-.0376	25.68

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.962**	**.1893**	**1.944**	**1.977**	**1.931**	**26.33**	**25.29**	**.0015**
Stddev	.002	.0012	.008	.004	.004	.07	.02	.0005
%RSD	.1204	.6455	.4144	.2148	.2069	.2735	.0655	30.95
#1	1.959	.1880	1.936	1.978	1.936	26.40	25.27	.0021
#2	1.964	.1904	1.944	1.973	1.928	26.33	25.30	.0012
#3	1.963	.1897	1.952	1.982	1.931	26.26	25.31	.0014

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.87**	**2.006**	**1.944**	**25.57**	**1.952**	**1.800**	**1.972**	F **-.0548**
Stddev	.15	.005	.008	.05	.005	.011	.008	.0041
%RSD	.5903	.2453	.3963	.2002	.2345	.5947	.4191	7.555
#1	25.91	2.007	1.936	25.63	1.946	1.788	1.965	-.0535
#2	25.70	2.001	1.951	25.54	1.954	1.809	1.971	-.0515
#3	25.99	2.011	1.946	25.55	1.955	1.803	1.981	-.0595

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.898**	**1.920**	**.1223**	**1.959**	**1.972**	**1.907**	**2.078**	**1.963**
Stddev	.007	.008	.0011	.008	.003	.007	.014	.004
%RSD	.3684	.4061	.8743	.4067	.1444	.3815	.6715	.1892
#1	1.890	1.914	.1224	1.950	1.975	1.906	2.062	1.967
#2	1.903	1.918	.1212	1.964	1.971	1.899	2.083	1.959
#3	1.902	1.929	.1233	1.964	1.970	1.914	2.089	1.964

Zoom In Zoom Out

Sample Name: mp36790-b1 Acquired: 12/8/2022 2:52:52 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.907**	**1.989**	**1.901**
Stddev	.006	.005	.006
%RSD	.3072	.2782	.2937
#1	1.900	1.983	1.907
#2	1.911	1.991	1.896
#3	1.910	1.993	1.900

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5343.6**	**55018.**	**5038.1**	**2067.7**
Stddev	7.3	171.	26.3	4.8
%RSD	.13568	.31129	.52243	.23214
#1	5352.0	55179.	5019.9	2071.6
#2	5339.2	55038.	5026.2	2062.4
#3	5339.6	54838.	5068.3	2069.2

Zoom In Zoom Out

Sample Name: mp36790-ls1 Acquired: 12/8/2022 2:57:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2626**	**24.93**	**1.971**	**1.816**	**1.911**	**1.943**	F **-.0350**	**25.04**
Stddev	.0018	.07	.011	.005	.003	.005	.0007	.17
%RSD	.6833	.2990	.5516	.2549	.1443	.2673	1.912	.6592
#1	.2617	25.02	1.959	1.811	1.908	1.949	-.0352	25.23
#2	.2646	24.88	1.979	1.820	1.914	1.940	-.0355	24.96
#3	.2614	24.90	1.976	1.817	1.910	1.940	-.0342	24.94

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.968**	**.1811**	**1.971**	**1.899**	**1.903**	**25.44**	**26.69**	**.0102**
Stddev	.006	.0043	.004	.008	.007	.07	.05	.0003
%RSD	.3284	2.364	.2105	.4312	.3547	.2930	.2020	3.005
#1	1.961	.1807	1.969	1.908	1.909	25.51	26.63	.0103
#2	1.973	.1855	1.967	1.897	1.903	25.37	26.74	.0105
#3	1.970	.1770	1.975	1.892	1.896	25.44	26.71	.0099

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.47**	**1.927**	**1.820**	F **1354.**	**1.986**	**1.848**	**1.928**	**-.0075**
Stddev	.21	.003	.010	16.	.002	.010	.003	.0028
%RSD	.8512	.1341	.5301	1.214	.0930	.5291	.1512	37.17
#1	24.67	1.930	1.809	1371.	1.987	1.837	1.929	-.0043
#2	24.26	1.925	1.822	1353.	1.984	1.850	1.931	-.0092
#3	24.49	1.926	1.828	1338.	1.987	1.856	1.925	-.0090

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.848**	**2.066**	**.1735**	**1.782**	**1.912**	**1.836**	**1.880**	**1.902**
Stddev	.009	.004	.0009	.013	.004	.001	.006	.003
%RSD	.4916	.1949	.4944	.7541	.1939	.0666	.3024	.1495
#1	1.841	2.063	.1731	1.767	1.911	1.835	1.874	1.904
#2	1.859	2.071	.1745	1.791	1.916	1.837	1.883	1.903
#3	1.845	2.065	.1730	1.790	1.909	1.835	1.884	1.899

Zoom In Zoom Out

Sample Name: mp36790-ls1 Acquired: 12/8/2022 2:57:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.805**	**2.132**	**1.877**
Stddev	.008	.011	.003
%RSD	.4552	.5295	.1708
#1	1.797	2.119	1.881
#2	1.813	2.138	1.876
#3	1.807	2.138	1.875

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4404.2**	**49572.**	**4983.1**	**1899.2**
Stddev	6.8	74.	18.0	10.6
%RSD	.15492	.14982	.36150	.55945
#1	4410.4	49536.	4965.9	1911.4
#2	4405.3	49657.	5001.8	1894.3
#3	4396.9	49522.	4981.6	1891.9

Zoom In Zoom Out

Sample Name: mp36790-s1 Acquired: 12/8/2022 3:02:37 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2777**	**26.34**	**2.060**	**2.005**	**2.507**	**1.966**	F **-.0356**	F **508.0**
Stddev	.0018	.01	.007	.006	.006	.001	.0014	1.6
%RSD	.6405	.0493	.3358	.2927	.2508	.0429	3.955	.3183
#1	.2789	26.35	2.068	2.012	2.502	1.965	-.0349	507.1
#2	.2785	26.34	2.059	2.003	2.506	1.967	-.0347	509.8
#3	.2756	26.32	2.054	2.001	2.514	1.966	-.0372	507.0

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.072**	**.7396**	**1.997**	**1.894**	**1.993**	**26.13**	**36.84**	**.0134**
Stddev	.003	.0022	.002	.008	.005	.03	.10	.0006
%RSD	.1620	.2936	.1099	.4044	.2315	.1280	.2676	4.819
#1	2.076	.7398	1.999	1.885	1.995	26.13	36.75	.0139
#2	2.070	.7417	1.995	1.900	1.996	26.17	36.83	.0136
#3	2.070	.7374	1.998	1.895	1.987	26.10	36.95	.0127

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**47.85**	F **9.853**	**1.890**	F **1334.**	**2.025**	**1.978**	**1.951**	**6.515**
Stddev	.25	.033	.005	7.	.003	.003	.004	.021
%RSD	.5252	.3369	.2613	.5310	.1238	.1616	.2245	.3147
#1	47.67	9.860	1.895	1327.	2.028	1.981	1.946	6.508
#2	48.14	9.882	1.885	1341.	2.023	1.979	1.954	6.499
#3	47.74	9.817	1.890	1334.	2.026	1.975	1.952	6.538

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.950**	**2.148**	**11.87**	**1.791**	**3.020**	**1.886**	**1.886**	**1.926**
Stddev	.003	.012	.02	.000	.008	.003	.005	.004
%RSD	.1416	.5459	.2012	.0132	.2561	.1453	.2784	.2305
#1	1.952	2.152	11.89	1.791	3.012	1.883	1.888	1.922
#2	1.947	2.135	11.85	1.790	3.021	1.888	1.880	1.931
#3	1.951	2.157	11.85	1.791	3.027	1.886	1.889	1.926

Zoom In Zoom Out

Sample Name: mp36790-s1 Acquired: 12/8/2022 3:02:37 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.895**	**2.136**	**1.921**
Stddev	.011	.006	.001
%RSD	.5563	.2599	.0527
#1	1.900	2.142	1.921
#2	1.883	2.132	1.922
#3	1.903	2.134	1.921

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4178.0**	**48236.**	**4863.5**	**1807.2**
Stddev	4.2	24.	15.9	2.9
%RSD	.09970	.05017	.32679	.16181
#1	4175.8	48213.	4881.6	1804.3
#2	4175.3	48262.	4857.1	1807.2
#3	4182.8	48233.	4851.9	1810.1

Zoom In Zoom Out

Sample Name: mp36790-s2 Acquired: 12/8/2022 3:07:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2733**	**25.78**	**2.038**	**1.996**	**2.475**	**1.942**	F **-.0350**	F **503.8**
Stddev	.0018	.13	.006	.009	.005	.003	.0019	1.7
%RSD	.6562	.4961	.2908	.4293	.2075	.1494	5.512	.3301
#1	.2731	25.87	2.045	2.006	2.469	1.941	-.0348	505.7
#2	.2752	25.83	2.034	1.990	2.478	1.939	-.0331	502.8
#3	.2716	25.63	2.035	1.993	2.478	1.945	-.0370	502.8

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.057**	**.7293**	**1.978**	**1.870**	**1.966**	**25.66**	**36.17**	**.0127**
Stddev	.012	.0067	.003	.004	.007	.05	.02	.0013
%RSD	.5605	.9184	.1648	.1955	.3591	.1782	.0636	10.08
#1	2.070	.7351	1.981	1.869	1.968	25.70	36.15	.0127
#2	2.049	.7308	1.975	1.875	1.971	25.61	36.20	.0140
#3	2.052	.7220	1.978	1.868	1.958	25.67	36.18	.0114

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**47.14**	F **9.763**	**1.869**	F **1322.**	**2.002**	**1.969**	**1.939**	**6.524**
Stddev	.29	.063	.006	22.	.003	.013	.012	.036
%RSD	.6159	.6459	.3047	1.685	.1549	.6542	.5993	.5478
#1	47.47	9.834	1.876	1303.	2.005	1.972	1.934	6.546
#2	46.99	9.741	1.866	1346.	2.001	1.954	1.931	6.483
#3	46.95	9.713	1.866	1315.	1.999	1.979	1.953	6.544

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.932**	**2.134**	**11.90**	**1.780**	**2.981**	**1.850**	**1.882**	**1.898**
Stddev	.014	.021	.05	.009	.003	.004	.012	.009
%RSD	.6983	.9697	.3918	.5127	.0824	.2207	.6354	.5011
#1	1.937	2.126	11.95	1.777	2.983	1.853	1.892	1.898
#2	1.917	2.118	11.88	1.773	2.978	1.845	1.869	1.907
#3	1.943	2.157	11.87	1.790	2.980	1.852	1.885	1.888

Zoom In Zoom Out

Sample Name: mp36790-s2 Acquired: 12/8/2022 3:07:40 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**1.882**	**2.122**	**1.886**
Stddev	.012	.010	.004
%RSD	.6398	.4622	.2059
#1	1.881	2.133	1.889
#2	1.870	2.117	1.888
#3	1.894	2.115	1.882

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4176.9**	**48376.**	**4865.4**	**1801.3**
Stddev	4.2	123.	7.5	4.4
%RSD	.09939	.25345	.15405	.24656
#1	4172.4	48297.	4867.2	1796.1
#2	4180.4	48518.	4871.7	1803.9
#3	4178.0	48315.	4857.1	1803.8

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 3:12:43 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2516**	**39.73**	**1.952**	**1.966**	**1.955**	**1.989**	**1.955**	**40.22**	**1.973**
Stddev	.0009	.02	.004	.004	.006	.005	.003	.04	.001
%RSD	.3588	.0591	.1779	.2175	.2929	.2522	.1475	.1074	.0511
#1	.2523	39.76	1.948	1.964	1.961	1.995	1.955	40.27	1.973
#2	.2506	39.72	1.953	1.963	1.954	1.986	1.952	40.21	1.972
#3	.2517	39.72	1.955	1.971	1.949	1.986	1.958	40.19	1.974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.961**	**1.969**	**1.973**	**1.921**	**40.92**	**39.48**	**1.899**	**40.37**	**2.002**
Stddev	.004	.001	.002	.002	.07	.10	.006	.24	.006
%RSD	.2120	.0340	.1185	.0755	.1607	.2423	.3046	.6003	.3198
#1	1.965	1.969	1.975	1.919	40.97	39.55	1.906	40.63	2.010
#2	1.960	1.970	1.971	1.921	40.85	39.52	1.896	40.35	1.999
#3	1.957	1.969	1.972	1.922	40.94	39.37	1.896	40.15	1.998
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.992**	**39.60**	**1.976**	**1.816**	**1.991**	**1.925**	**1.957**	**1.959**	**4.782**
Stddev	.005	.07	.002	.003	.001	.016	.014	.020	.010
%RSD	.2570	.1728	.1002	.1817	.0493	.8513	.7357	1.021	.2160
#1	1.987	39.58	1.976	1.812	1.991	1.928	1.948	1.951	4.781
#2	1.991	39.54	1.974	1.818	1.991	1.908	1.949	1.944	4.771
#3	1.997	39.67	1.978	1.818	1.990	1.940	1.974	1.981	4.792
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 3:12:43 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.009**	**1.959**	**1.955**	**2.118**	**1.957**	**1.973**	**1.995**	**1.951**
Stddev	.016	.006	.005	.023	.003	.000	.008	.003
%RSD	.8028	.2948	.2428	1.107	.1675	.0172	.3866	.1342
#1	1.996	1.965	1.958	2.116	1.960	1.973	1.986	1.954
#2	2.004	1.955	1.957	2.095	1.959	1.973	2.000	1.951
#3	2.027	1.956	1.949	2.142	1.954	1.972	1.997	1.949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5209.0**	**54233.**	**4973.7**	**2055.9**
Stddev	5.2	154.	16.4	2.7
%RSD	.09971	.28463	.32924	.12896
#1	5205.3	54057.	4970.4	2058.4
#2	5206.7	54297.	4959.1	2053.1
#3	5215.0	54346.	4991.4	2056.2

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 3:17:30 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0053**	**.0005**	**.0059**	**.0001**	**-.0001**	**.0012**	**-.0030**	**.0001**
Stddev	.0004	.0122	.0004	.0005	.0002	.0000	.0025	.0024	.0002
%RSD	74.67	231.9	72.67	7.670	252.4	38.99	209.7	79.38	213.7
#1	-.0008	-.0008	.0001	.0062	.0002	-.0001	-.0017	-.0004	-.0001
#2	-.0006	-.0191	.0007	.0061	.0002	-.0002	.0028	-.0050	.0003
#3	-.0001	.0041	.0008	.0054	-.0002	-.0001	.0025	-.0035	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0001**	**-.0002**	**-.0001**	**.0036**	**.0785**	**.0024**	**-.0266**	**.0000**
Stddev	.0059	.0002	.0006	.0003	.0014	.0223	.0011	.0148	.0000
%RSD	2213.	251.0	306.6	185.4	39.80	28.44	47.81	55.77	269.1
#1	.0071	.0001	-.0004	-.0004	.0052	.0913	.0024	-.0355	.0000
#2	-.0028	-.0001	-.0007	-.0000	.0026	.0527	.0035	-.0095	-.0000
#3	-.0035	-.0003	.0005	.0001	.0029	.0915	.0012	-.0348	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.1843**	**-.0000**	**-.0004**	**.0017**	**-.0025**	**.0008**	**.0016**	**-.0071**
Stddev	.0002	.0171	.0003	.0015	.0006	.0061	.0009	.0002	.0007
%RSD	52.21	9.270	812.5	329.0	35.29	245.5	106.4	10.80	10.24
#1	.0006	.2017	.0002	.0003	.0016	.0009	.0011	.0015	-.0077
#2	.0002	.1676	.0002	-.0021	.0011	-.0095	-.0002	.0015	-.0073
#3	.0004	.1835	-.0004	.0005	.0023	.0012	.0015	.0018	-.0063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 3:17:30 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0000**	**-.0003**	**-.0008**	**.0002**	**-.0003**	**-.0005**	**-.0000**
Stddev	.0004	.0001	.0004	.0023	.0002	.0010	.0001	.0002
%RSD	67.17	573.1	145.5	306.3	141.3	331.3	17.20	401.7
#1	.0003	.0000	-.0005	-.0014	-.0001	.0008	-.0004	-.0002
#2	.0004	.0001	.0002	-.0026	.0003	-.0011	-.0005	.0002
#3	.0010	-.0001	-.0005	.0018	.0003	-.0006	-.0006	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5812.3**	**56159.**	**4966.0**	**2108.4**
Stddev	2.1	178.	20.5	1.0
%RSD	.03530	.31655	.41234	.04612
#1	5810.2	56337.	4981.9	2108.7
#2	5812.6	55982.	4942.9	2107.3
#3	5814.2	56158.	4973.2	2109.2

Zoom In Zoom Out

Sample Name: jd56483-1a Acquired: 12/8/2022 3:22:44 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.0640**	**.0053**	**.1207**	**.5426**	**.0008**	**.0013**	F **484.3**
Stddev	.0006	.0155	.0023	.0009	.0027	.0001	.0006	.6
%RSD	23.60	24.28	43.69	.7733	.5011	7.836	49.18	.1235
#1	.0029	.0506	.0033	.1196	.5438	.0008	.0015	484.9
#2	.0029	.0603	.0047	.1213	.5445	.0007	.0017	484.1
#3	.0019	.0810	.0079	.1212	.5394	.0008	.0006	483.8

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093**	**.5626**	**.0050**	**.0003**	**.0115**	**.4778**	**9.258**	**.0098**
Stddev	.0002	.0036	.0003	.0000	.0002	.0020	.036	.0006
%RSD	2.314	.6423	5.856	.9871	1.997	.4142	.3947	5.780
#1	.0091	.5648	.0047	.0003	.0117	.4797	9.297	.0098
#2	.0095	.5646	.0053	.0003	.0112	.4780	9.253	.0103
#3	.0094	.5585	.0050	.0003	.0115	.4758	9.225	.0092

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.77**	F **8.164**	**.0010**	F **1324.**	**.0299**	**.0455**	**.0138**	**6.637**
Stddev	.08	.023	.0002	7.	.0008	.0003	.0019	.021
%RSD	.3396	.2797	24.34	.5594	2.573	.7579	13.46	.3199
#1	22.74	8.165	.0013	1332.	.0306	.0458	.0118	6.614
#2	22.85	8.186	.0008	1324.	.0300	.0452	.0139	6.640
#3	22.70	8.140	.0010	1317.	.0291	.0454	.0155	6.656

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0053**	**.0150**	**11.60**	**-.0007**	**1.057**	**.0006**	F **-.0023**	**.0044**
Stddev	.0022	.0010	.00	.0001	.004	.0006	.0050	.0011
%RSD	41.84	6.729	.0250	21.02	.3357	103.4	213.5	26.10
#1	.0076	.0141	11.60	-.0008	1.059	.0004	-.0080	.0055
#2	.0033	.0161	11.60	-.0008	1.060	.0013	.0011	.0043
#3	.0049	.0149	11.60	-.0005	1.053	.0001	-.0000	.0032

Zoom In Zoom Out

Sample Name: jd56483-1a Acquired: 12/8/2022 3:22:44 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0130**	**.2143**	W **-.0010**
Stddev	.0006	.0004	.0001
%RSD	4.787	.1954	13.41
#1	.0128	.2139	-.0009
#2	.0124	.2143	-.0011
#3	.0137	.2148	-.0012

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4171.9**	**47317.**	**4835.2**	**1778.0**
Stddev	1.6	64.	29.0	3.1
%RSD	.03779	.13467	.60054	.17532
#1	4170.4	47271.	4824.1	1774.8
#2	4173.6	47389.	4813.4	1778.4
#3	4171.8	47290.	4868.2	1781.0

Zoom In Zoom Out

Sample Name: mp36790-sd1 Acquired: 12/8/2022 3:28:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0826**	**.0054**	**.1400**	**.5561**	**.0005**	**.0014**	**504.7**
Stddev	.0032	.0393	.0011	.0029	.0012	.0004	.0029	2.3
%RSD	306.2	47.60	20.14	2.070	.2166	87.88	204.6	.4619
#1	-.0027	.0833	.0045	.1366	.5561	.0007	.0009	507.4
#2	.0027	.1215	.0066	.1416	.5549	-.0000	-.0012	503.7
#3	.0031	.0429	.0051	.1417	.5573	.0008	.0046	503.1

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089**	**.5996**	**.0050**	**-.0006**	**.0126**	**.4958**	**9.401**	**.0146**
Stddev	.0012	.0235	.0026	.0010	.0011	.0133	.060	.0057
%RSD	13.51	3.915	52.26	154.8	8.610	2.687	.6345	38.78
#1	.0078	.5874	.0075	-.0009	.0138	.5040	9.467	.0096
#2	.0086	.6267	.0051	.0004	.0123	.4804	9.352	.0136
#3	.0102	.5847	.0023	-.0014	.0117	.5030	9.383	.0208

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.93**	**8.820**	**.0018**	W **1429.**	**.0319**	**.0478**	**.0134**	**6.634**
Stddev	.36	.025	.0005	12.	.0016	.0067	.0057	.024
%RSD	1.523	.2781	29.93	.8727	5.142	14.05	42.70	.3601
#1	24.35	8.848	.0013	1437.	.0301	.0415	.0077	6.618
#2	23.65	8.804	.0017	1436.	.0320	.0471	.0133	6.623
#3	23.80	8.807	.0024	1415.	.0334	.0549	.0191	6.662

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.0153**	**11.80**	**-.0007**	**1.075**	**-.0001**	**-.0025**	**.0762**
Stddev	.0015	.0126	.08	.0033	.002	.0008	.0090	.0001
%RSD	199.7	82.19	.6412	450.6	.1837	873.1	366.0	.1535
#1	-.0017	.0291	11.77	.0030	1.077	-.0001	.0034	.0763
#2	-.0014	.0046	11.74	-.0023	1.074	-.0009	-.0128	.0761
#3	.0010	.0122	11.88	-.0029	1.073	.0007	.0020	.0762

Zoom In Zoom Out

Sample Name: mp36790-sd1 Acquired: 12/8/2022 3:28:07 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 5.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0129**	**.2283**	**-.0011**
Stddev	.0072	.0016	.0012
%RSD	55.54	.7220	108.5
#1	.0187	.2278	-.0000
#2	.0049	.2270	-.0025
#3	.0152	.2302	-.0009

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4866.3**	**52038.**	**4884.2**	**1954.5**
Stddev	11.3	167.	11.1	4.1
%RSD	.23230	.32111	.22780	.20867
#1	4872.0	51855.	4872.2	1957.9
#2	4873.6	52182.	4886.3	1955.5
#3	4853.3	52076.	4894.1	1950.0

Zoom In Zoom Out

Sample Name: jd56441-1 Acquired: 12/8/2022 3:33:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0022**	**.2587**	**.0041**	**.0950**	**.5452**	**.0009**	**-.0001**	F **446.6**
Stddev	.0001	.0135	.0022	.0002	.0008	.0001	.0003	1.7
%RSD	2.569	5.230	54.41	.1633	.1396	12.14	296.0	.3728
#1	.0022	.2439	.0046	.0951	.5444	.0009	.0002	446.5
#2	.0022	.2704	.0059	.0948	.5460	.0011	-.0000	448.4
#3	.0021	.2619	.0016	.0951	.5452	.0008	-.0005	445.1

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0133**	**.1602**	**.0272**	**.0001**	**.0295**	**.1677**	**13.51**	**.0122**
Stddev	.0003	.0047	.0002	.0002	.0005	.0006	.05	.0014
%RSD	2.012	2.955	.6439	118.0	1.786	.3562	.3719	11.66
#1	.0133	.1555	.0273	-.0000	.0299	.1674	13.46	.0124
#2	.0135	.1603	.0270	.0002	.0289	.1683	13.54	.0107
#3	.0130	.1650	.0273	.0003	.0297	.1672	13.55	.0135

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**45.03**	**1.748**	**.0001**	F **1308.**	**.0309**	**.0312**	**2.161**	**9.195**
Stddev	.34	.007	.0003	14.	.0004	.0020	.004	.034
%RSD	.7636	.4207	500.8	1.096	1.165	6.380	.1904	.3670
#1	45.22	1.756	.0001	1321.	.0313	.0331	2.159	9.219
#2	45.23	1.743	.0003	1311.	.0309	.0314	2.158	9.156
#3	44.63	1.745	-.0002	1293.	.0305	.0291	2.165	9.209

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0575**	**.0100**	**20.12**	**.0001**	**1.455**	**.0027**	F **-.0026**	**.0154**
Stddev	.0007	.0024	.07	.0001	.003	.0002	.0019	.0002
%RSD	1.178	24.33	.3250	127.6	.1847	8.998	70.96	1.063
#1	.0568	.0072	20.19	.0002	1.452	.0027	-.0005	.0153
#2	.0582	.0115	20.08	.0001	1.458	.0029	-.0040	.0153
#3	.0575	.0113	20.08	-.0000	1.455	.0025	-.0035	.0156

Zoom In Zoom Out

Sample Name: jd56441-1 Acquired: 12/8/2022 3:33:25 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0225**	**.4480**	W **-.0018**
Stddev	.0005	.0009	.0002
%RSD	2.132	.2056	13.22
#1	.0228	.4490	-.0021
#2	.0220	.4478	-.0017
#3	.0228	.4472	-.0017

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4186.2**	**47350.**	**4816.4**	**1773.7**
Stddev	4.1	221.	19.5	3.0
%RSD	.09807	.46646	.40576	.16703
#1	4190.0	47118.	4798.1	1771.4
#2	4181.8	47557.	4814.2	1772.7
#3	4186.6	47374.	4837.0	1777.1

Zoom In Zoom Out

Sample Name: jd56547-1 Acquired: 12/8/2022 3:38:38 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.8585**	**.0242**	**.2676**	**.7039**	**.0021**	**-.0011**	**121.7**
Stddev	.0008	.0209	.0010	.0004	.0021	.0001	.0013	.3
%RSD	43.10	2.432	4.000	.1495	.3032	5.456	117.5	.2638
#1	.0021	.8681	.0233	.2680	.7022	.0022	-.0007	121.3
#2	.0009	.8346	.0240	.2676	.7063	.0020	-.0026	122.0
#3	.0024	.8729	.0252	.2672	.7031	.0020	-.0001	121.7

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0067**	**.1315**	**.0120**	**.0019**	**.0067**	**.7917**	**23.89**	**.0109**
Stddev	.0003	.0039	.0004	.0005	.0001	.0083	.05	.0012
%RSD	4.829	3.001	2.947	24.15	1.679	1.051	.2052	10.71
#1	.0064	.1352	.0124	.0015	.0067	.7910	23.87	.0122
#2	.0068	.1319	.0118	.0024	.0066	.8004	23.94	.0106
#3	.0070	.1274	.0117	.0018	.0068	.7838	23.85	.0099

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.34**	**1.961**	**.0036**	F **1230.**	**.0301**	**.0390**	**.1644**	**1.405**
Stddev	.09	.002	.0002	13.	.0001	.0011	.0014	.003
%RSD	.2541	.1236	5.441	1.094	.3848	2.842	.8436	.2130
#1	36.33	1.962	.0035	1243.	.0302	.0380	.1651	1.405
#2	36.44	1.958	.0038	1232.	.0302	.0388	.1653	1.409
#3	36.26	1.963	.0034	1216.	.0300	.0402	.1628	1.403

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.0099**	**6.234**	**.0006**	**.6344**	**.0109**	F **-.0061**	**.0194**
Stddev	.0004	.0009	.007	.0005	.0021	.0003	.0032	.0004
%RSD	25.28	9.349	.1127	91.36	.3332	2.436	51.78	2.222
#1	.0020	.0090	6.241	.0008	.6326	.0107	-.0040	.0189
#2	.0012	.0099	6.234	.0010	.6367	.0112	-.0098	.0198
#3	.0020	.0108	6.227	-.0000	.6338	.0109	-.0047	.0194

Zoom In Zoom Out

Sample Name: jd56547-1 Acquired: 12/8/2022 3:38:38 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0079**	**.9389**	**.0000**
Stddev	.0008	.0006	.0003
%RSD	10.07	.0648	1670.
#1	.0086	.9383	.0004
#2	.0070	.9389	-.0001
#3	.0080	.9395	-.0002

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4298.8**	**47904.**	**4814.6**	**1813.9**
Stddev	7.1	60.	8.8	2.3
%RSD	.16502	.12573	.18203	.12713
#1	4300.0	47948.	4809.5	1811.8
#2	4291.1	47928.	4809.5	1813.6
#3	4305.1	47835.	4824.7	1816.4

Zoom In Zoom Out

Sample Name: jd56547-2 Acquired: 12/8/2022 3:43:53 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040**	**.0360**	**.0068**	**.1633**	**.7873**	**.0013**	**.0009**	F **602.2**
Stddev	.0008	.0124	.0004	.0009	.0020	.0001	.0021	12.8
%RSD	20.93	34.52	6.118	.5449	.2508	9.021	232.0	2.118
#1	.0032	.0254	.0069	.1629	.7861	.0014	.0009	610.9
#2	.0040	.0496	.0064	.1627	.7861	.0011	-.0012	587.6
#3	.0048	.0328	.0072	.1644	.7895	.0013	.0029	608.2

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.2432**	**.0164**	**.0002**	**.0040**	**41.37**	**34.85**	**.0201**
Stddev	.0006	.0048	.0003	.0006	.0006	.09	.08	.0015
%RSD	18.97	1.975	2.091	320.6	14.63	.2203	.2383	7.528
#1	.0023	.2476	.0164	.0006	.0040	41.44	34.86	.0185
#2	.0031	.2381	.0160	-.0005	.0046	41.27	34.77	.0201
#3	.0034	.2438	.0167	.0004	.0034	41.39	34.93	.0215

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.14**	**2.748**	**.0134**	F **1216.**	**.0481**	**.0430**	**.0065**	**6.830**
Stddev	.19	.005	.0007	10.	.0015	.0028	.0013	.123
%RSD	.4834	.1790	5.486	.8259	3.056	6.503	19.96	1.793
#1	40.35	2.753	.0132	1205.	.0484	.0404	.0074	6.771
#2	39.97	2.750	.0128	1224.	.0465	.0426	.0050	6.749
#3	40.09	2.743	.0142	1219.	.0494	.0460	.0072	6.971

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**.0120**	**4.350**	**.0010**	**1.538**	**.0001**	F **-.0091**	**.0260**
Stddev	.0012	.0024	.079	.0005	.004	.0002	.0008	.0007
%RSD	64.95	20.03	1.804	55.48	.2365	445.8	9.229	2.520
#1	-.0029	.0109	4.301	.0011	1.536	-.0000	-.0099	.0265
#2	-.0019	.0104	4.307	.0015	1.536	-.0001	-.0083	.0253
#3	-.0006	.0148	4.440	.0004	1.542	.0003	-.0092	.0262

Zoom In Zoom Out

Sample Name: jd56547-2 Acquired: 12/8/2022 3:43:53 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0072**	**.1772**	**.0002**
Stddev	.0008	.0033	.0001
%RSD	10.70	1.844	46.98
#1	.0063	.1757	.0002
#2	.0073	.1749	.0001
#3	.0078	.1809	.0004

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4124.9**	**46672.**	**4750.0**	**1723.8**
Stddev	68.2	125.	27.1	27.4
%RSD	1.6532	.26845	.57053	1.5887
#1	4156.6	46652.	4725.7	1740.1
#2	4171.4	46557.	4779.2	1739.1
#3	4046.6	46806.	4745.1	1692.2

Zoom In Zoom Out

Sample Name: jd56547-3 Acquired: 12/8/2022 3:49:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.2865**	**.0037**	**.0884**	**1.231**	**.0004**	**.0018**	F **455.6**
Stddev	.0005	.0120	.0008	.0009	.003	.0001	.0012	.9
%RSD	18.52	4.192	22.01	1.029	.2372	15.60	64.63	.2066
#1	.0021	.2992	.0038	.0888	1.228	.0004	.0025	456.4
#2	.0026	.2754	.0029	.0873	1.230	.0003	.0005	455.8
#3	.0031	.2847	.0045	.0889	1.234	.0004	.0025	454.6

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.2706**	**.0203**	**-.0005**	**.0051**	**.2275**	**5.757**	**.0021**
Stddev	.0003	.0048	.0004	.0007	.0004	.0024	.008	.0022
%RSD	7.956	1.780	2.123	146.4	8.604	1.057	.1334	104.2
#1	.0033	.2699	.0203	-.0001	.0054	.2281	5.749	.0015
#2	.0031	.2661	.0198	-.0001	.0046	.2248	5.764	.0003
#3	.0036	.2757	.0207	-.0013	.0054	.2295	5.757	.0045

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.14**	**3.583**	**.0002**	F **1194.**	**.0232**	**.0277**	**.0114**	**2.469**
Stddev	.11	.001	.0002	3.	.0004	.0010	.0006	.013
%RSD	.5589	.0131	73.19	.2885	1.581	3.489	5.709	.5288
#1	20.23	3.583	.0002	1197.	.0229	.0288	.0111	2.479
#2	20.18	3.583	.0003	1191.	.0230	.0271	.0109	2.472
#3	20.02	3.582	.0000	1196.	.0236	.0272	.0121	2.454

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0114**	**3.539**	**-.0002**	**.8093**	**.0068**	F **-.0075**	**.0276**
Stddev	.0014	.0030	.007	.0005	.0032	.0001	.0036	.0006
%RSD	905.2	26.34	.2101	321.4	.3950	2.110	48.19	2.146
#1	-.0005	.0132	3.544	-.0003	.8058	.0069	-.0112	.0282
#2	.0017	.0080	3.543	.0004	.8102	.0067	-.0040	.0274
#3	-.0007	.0132	3.531	-.0005	.8119	.0068	-.0072	.0271

Zoom In Zoom Out

Sample Name: jd56547-3 Acquired: 12/8/2022 3:49:10 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0038**	**.1368**	**-.0001**
Stddev	.0009	.0002	.0001
%RSD	22.93	.1441	105.9
#1	.0041	.1366	-.0001
#2	.0045	.1368	-.0000
#3	.0028	.1370	-.0003

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4208.3**	**47258.**	**4789.2**	**1772.6**
Stddev	3.7	118.	31.5	1.0
%RSD	.08765	.25040	.65856	.05854
#1	4206.6	47394.	4754.7	1773.8
#2	4205.9	47188.	4816.5	1772.4
#3	4212.6	47191.	4796.4	1771.8

Zoom In Zoom Out

Sample Name: jd56547-4 Acquired: 12/8/2022 3:54:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.7195**	**.0062**	**.0827**	**.9719**	**.0002**	**.0011**	F **459.8**
Stddev	.0001	.0403	.0005	.0019	.0343	.0001	.0011	16.1
%RSD	5.795	5.607	8.207	2.253	3.525	59.21	93.31	3.493
#1	.0021	.7583	.0063	.0808	1.005	.0002	.0018	475.4
#2	.0019	.6778	.0057	.0845	.9738	.0003	.0017	460.6
#3	.0021	.7223	.0067	.0829	.9368	.0001	-.0001	443.3

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0054**	**.2028**	**.0160**	**.0001**	**.0057**	**.4373**	**6.624**	**.0026**
Stddev	.0004	.0056	.0002	.0006	.0003	.0137	.232	.0008
%RSD	7.823	2.758	.9436	648.0	4.732	3.139	3.496	29.40
#1	.0059	.2076	.0162	.0007	.0054	.4506	6.840	.0031
#2	.0051	.2040	.0159	-.0006	.0058	.4381	6.652	.0017
#3	.0052	.1966	.0160	.0002	.0058	.4232	6.380	.0029

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.13**	**2.573**	**.0000**	F **1191.**	**.0165**	**.0580**	**.0119**	**2.581**
Stddev	.38	.001	.0001	40.	.0002	.0012	.0018	.015
%RSD	2.905	.0545	338.8	3.347	1.081	2.012	15.23	.5660
#1	13.52	2.575	.0001	1237.	.0167	.0584	.0140	2.565
#2	13.12	2.573	.0001	1170.	.0164	.0566	.0104	2.594
#3	12.76	2.572	-.0001	1166.	.0164	.0588	.0114	2.583

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0099**	**4.909**	**.0007**	**1.180**	**.0116**	F **-.0065**	**.0224**
Stddev	.0015	.0042	.028	.0017	.041	.0003	.0008	.0004
%RSD	335.8	42.32	.5755	239.3	3.512	2.825	12.69	1.741
#1	-.0012	.0097	4.882	-.0012	1.220	.0119	-.0073	.0225
#2	.0007	.0143	4.939	.0019	1.183	.0112	-.0057	.0220
#3	.0018	.0059	4.905	.0014	1.137	.0117	-.0064	.0227

Zoom In Zoom Out

Sample Name: jd56547-4 Acquired: 12/8/2022 3:54:26 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0054**	**.1852**	**.0002**
Stddev	.0006	.0013	.0001
%RSD	10.76	.7075	25.24
#1	.0050	.1838	.0002
#2	.0061	.1865	.0003
#3	.0052	.1854	.0002

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4201.3**	**47236.**	**4779.6**	**1775.8**
Stddev	5.3	11.	140.6	7.2
%RSD	.12718	.02316	2.9415	.40490
#1	4206.1	47247.	4633.3	1782.7
#2	4202.3	47238.	4791.9	1768.4
#3	4195.6	47225.	4913.7	1776.3

Zoom In Zoom Out

Sample Name: jd56572-1 Acquired: 12/8/2022 3:59:42 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.6848**	**.0033**	**.0886**	**.8089**	**.0001**	**-.0004**	F **368.6**
Stddev	.0007	.0151	.0003	.0012	.0013	.0000	.0017	.4
%RSD	44.67	2.204	8.535	1.389	.1604	16.79	395.4	.1069
#1	.0019	.6687	.0036	.0883	.8075	.0001	-.0013	369.1
#2	.0007	.6870	.0030	.0875	.8091	.0002	-.0016	368.4
#3	.0019	.6986	.0034	.0899	.8100	.0001	.0015	368.4

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047**	**.1464**	**.0126**	**.0007**	**.0061**	**.4180**	**4.332**	**.0134**
Stddev	.0001	.0039	.0003	.0004	.0001	.0029	.003	.0005
%RSD	3.033	2.680	2.612	53.09	1.171	.7035	.0645	3.803
#1	.0046	.1419	.0123	.0010	.0061	.4192	4.335	.0140
#2	.0047	.1486	.0124	.0007	.0061	.4147	4.330	.0132
#3	.0049	.1488	.0129	.0003	.0062	.4202	4.332	.0131

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.49**	**1.857**	**.0009**	F **1193.**	**.0112**	**.1741**	**.0292**	**1.383**
Stddev	.10	.007	.0001	13.	.0005	.0016	.0012	.010
%RSD	.6059	.3820	7.753	1.123	4.844	.9234	4.269	.7152
#1	16.54	1.863	.0010	1208.	.0111	.1748	.0301	1.375
#2	16.56	1.849	.0009	1185.	.0118	.1752	.0278	1.380
#3	16.37	1.859	.0008	1185.	.0107	.1723	.0297	1.394

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0088**	**5.063**	**.0008**	**1.114**	**.0127**	F **-.0054**	**.0175**
Stddev	.0010	.0006	.030	.0009	.002	.0002	.0020	.0003
%RSD	187.8	7.021	.6014	107.0	.1976	1.357	37.27	1.807
#1	-.0005	.0081	5.040	.0001	1.112	.0128	-.0031	.0177
#2	.0015	.0093	5.051	.0006	1.115	.0128	-.0067	.0177
#3	.0007	.0090	5.097	.0018	1.116	.0125	-.0063	.0171

Zoom In Zoom Out

Sample Name: jd56572-1 Acquired: 12/8/2022 3:59:42 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0064**	**.1582**	**-.0000**
Stddev	.0014	.0013	.0002
%RSD	21.51	.8519	386.4
#1	.0065	.1571	-.0000
#2	.0078	.1577	-.0002
#3	.0050	.1597	.0001

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4250.4**	**47621.**	**4805.4**	**1798.9**
Stddev	9.0	116.	21.0	10.3
%RSD	.21176	.24305	.43727	.57172
#1	4259.4	47561.	4817.6	1806.3
#2	4250.3	47755.	4817.4	1803.1
#3	4241.4	47548.	4781.1	1787.1

Zoom In Zoom Out

Sample Name: jd56572-2 Acquired: 12/8/2022 4:04:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**1.740**	**.0045**	**.3351**	**.6480**	**.0005**	**-.0008**	**191.0**
Stddev	.0004	.006	.0007	.0010	.0033	.0001	.0023	1.0
%RSD	51.92	.3523	15.34	.2874	.5079	10.67	294.9	.5347
#1	.0010	1.743	.0048	.3362	.6490	.0006	-.0027	191.6
#2	.0003	1.744	.0037	.3345	.6506	.0005	-.0015	191.6
#3	.0009	1.733	.0049	.3347	.6443	.0005	.0018	189.8

Elem	Cd2288	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066**	**.1202**	**.0231**	**.0016**	**.0321**	**1.105**	**5.339**	**.0064**
Stddev	.0001	.0017	.0005	.0002	.0005	.019	.057	.0009
%RSD	1.359	1.407	2.119	14.03	1.676	1.752	1.059	14.76
#1	.0065	.1219	.0237	.0019	.0327	1.120	5.274	.0072
#2	.0066	.1185	.0227	.0015	.0317	1.112	5.365	.0054
#3	.0067	.1202	.0231	.0015	.0318	1.083	5.378	.0066

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.67**	**1.598**	**.0008**	F **1130.**	**.0238**	**.0830**	**.0483**	**2.199**
Stddev	.22	.005	.0003	24.	.0008	.0010	.0008	.010
%RSD	1.217	.3380	44.69	2.163	3.503	1.152	1.744	.4543
#1	17.77	1.595	.0007	1142.	.0235	.0821	.0487	2.191
#2	17.81	1.595	.0004	1145.	.0247	.0840	.0489	2.210
#3	17.42	1.604	.0011	1101.	.0232	.0829	.0473	2.196

Elem	Sb2068	Se1960	Si2124	Sn1899	Sr4077	Ti3349	Tl1908	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**.0110**	**8.698**	**.0003**	**.5920**	**.0154**	F **-.0061**	**.0158**
Stddev	.0008	.0007	.008	.0007	.0032	.0006	.0007	.0005
%RSD	100.2	6.458	.0950	283.3	.5370	3.664	12.30	2.978
#1	.0002	.0103	8.701	.0010	.5926	.0149	-.0052	.0163
#2	.0016	.0117	8.704	.0003	.5949	.0153	-.0066	.0155
#3	.0005	.0109	8.689	-.0005	.5886	.0160	-.0064	.0156

Zoom In Zoom Out

Sample Name: jd56572-2 Acquired: 12/8/2022 4:04:58 Type: Unk
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**.0084**	**.2644**	**.0006**
Stddev	.0003	.0004	.0001
%RSD	4.135	.1477	26.24
#1	.0080	.2648	.0007
#2	.0087	.2642	.0004
#3	.0084	.2641	.0006

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4328.1**	**48631.**	**4846.3**	**1835.0**
Stddev	4.9	151.	83.5	2.0
%RSD	.11394	.31106	1.7225	.10746
#1	4331.8	48793.	4785.8	1832.8
#2	4330.0	48494.	4811.5	1835.8
#3	4322.5	48606.	4941.5	1836.4

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 4:10:15 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2504**	**39.77**	**1.927**	**1.940**	**1.939**	**1.985**	**1.930**	**40.25**	**1.950**
Stddev	.0007	.09	.007	.001	.001	.001	.004	.07	.007
%RSD	.2991	.2225	.3798	.0604	.0610	.0513	.2016	.1796	.3776
#1	.2496	39.85	1.935	1.940	1.939	1.985	1.934	40.33	1.958
#2	.2503	39.79	1.924	1.941	1.941	1.984	1.928	40.19	1.945
#3	.2511	39.67	1.921	1.939	1.938	1.986	1.928	40.24	1.946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.948**	**1.954**	**1.977**	**1.909**	**40.78**	**39.23**	**1.916**	**40.21**	**1.993**
Stddev	.007	.004	.005	.002	.02	.06	.003	.20	.001
%RSD	.3517	.2147	.2327	.0967	.0571	.1592	.1633	.4897	.0687
#1	1.944	1.955	1.982	1.912	40.81	39.17	1.919	40.32	1.993
#2	1.956	1.958	1.972	1.908	40.79	39.29	1.913	40.33	1.992
#3	1.945	1.950	1.976	1.909	40.76	39.24	1.914	39.98	1.995
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.962**	**39.69**	**1.955**	**1.821**	**1.974**	**1.889**	**1.926**	**1.920**	**4.726**
Stddev	.003	.08	.006	.003	.005	.011	.003	.003	.017
%RSD	.1615	.1993	.3173	.1640	.2584	.6026	.1622	.1287	.3518
#1	1.965	39.75	1.961	1.825	1.979	1.902	1.930	1.923	4.744
#2	1.959	39.72	1.956	1.819	1.974	1.882	1.924	1.918	4.723
#3	1.961	39.60	1.948	1.820	1.968	1.882	1.925	1.918	4.711
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Zoom In Zoom Out

Sample Name: ccv Acquired: 12/8/2022 4:10:15 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.979**	**1.947**	**1.939**	**2.045**	**1.953**	**1.938**	**1.981**	**1.940**
Stddev	.005	.002	.003	.005	.002	.004	.004	.001
%RSD	.2432	.0857	.1662	.2495	.0855	.2252	.2037	.0328
#1	1.978	1.947	1.935	2.039	1.955	1.943	1.982	1.940
#2	1.985	1.949	1.938	2.050	1.951	1.936	1.985	1.941
#3	1.975	1.946	1.942	2.046	1.953	1.936	1.977	1.939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5237.6**	**54601.**	**5042.2**	**2071.3**
Stddev	6.9	56.	7.9	2.6
%RSD	.13107	.10178	.15644	.12584
#1	5235.2	54634.	5036.5	2069.4
#2	5232.2	54631.	5051.2	2070.2
#3	5245.3	54536.	5039.0	2074.3

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 4:15:01 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3961	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0036**	**.0001**	**.0031**	**-.0001**	**-.0000**	**-.0005**	**-.0022**	**.0002**
Stddev	.0006	.0028	.0013	.0005	.0004	.0002	.0010	.0052	.0001
%RSD	1216.	78.50	1151.	15.48	598.4	4743.	186.7	242.0	52.62
#1	-.0000	.0020	.0001	.0037	.0001	.0002	-.0016	-.0068	.0003
#2	.0007	.0020	-.0011	.0029	.0002	-.0001	.0003	.0035	.0002
#3	-.0005	.0069	.0014	.0028	-.0005	-.0001	-.0003	-.0032	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Ce4040	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**-.0000**	**-.0001**	**-.0002**	**.0020**	**.1182**	**.0007**	**-.0137**	**.0000**
Stddev	.0031	.0002	.0001	.0004	.0022	.0181	.0012	.0175	.0000
%RSD	83.95	543.3	92.23	202.2	112.4	15.36	171.7	127.9	357.4
#1	.0060	-.0002	-.0002	-.0007	.0044	.1108	-.0004	-.0336	-.0000
#2	.0049	-.0001	-.0001	.0001	.0001	.1049	.0019	-.0067	.0000
#3	.0002	.0002	-.0000	-.0000	.0014	.1389	.0006	-.0008	-.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1774	Pb2203	S_1820	Sb2068	Se1960	Si2124
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.2992**	**.0003**	**.0007**	**.0010**	**.0005**	**.0000**	**.0002**	**-.0059**
Stddev	.0001	.0113	.0002	.0009	.0006	.0039	.0009	.0006	.0004
%RSD	31.14	3.790	71.64	125.9	56.62	753.4	11230.	242.9	6.769
#1	.0001	.3099	.0005	.0003	.0014	.0030	-.0002	.0007	-.0054
#2	.0002	.3003	.0001	.0001	.0004	.0025	-.0008	.0005	-.0061
#3	.0003	.2873	.0004	.0017	.0012	-.0039	.0010	-.0004	-.0061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Zoom In Zoom Out

Sample Name: ccb Acquired: 12/8/2022 4:15:01 Type: QC
Method: SGS 070219(v18) Mode: CONC Corr. Factor: 1.000000
User: admin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3349	Tl1908	V_2924	W_2079	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**-.0001**	**.0001**	**-.0006**	**-.0000**	**-.0009**	**-.0004**	**.0001**
Stddev	.0007	.0000	.0005	.0010	.0003	.0010	.0001	.0001
%RSD	108.3	31.46	552.1	152.3	7310.	106.6	12.94	41.80
#1	.0001	-.0001	-.0004	-.0016	.0002	-.0010	-.0004	.0002
#2	.0015	-.0001	.0004	.0003	-.0004	.0001	-.0005	.0001
#3	.0004	-.0001	.0003	-.0007	.0002	-.0018	-.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	In2306	Y_3600	Y_3710	Y_2243
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5815.1**	**56478.**	**4967.9**	**2112.4**
Stddev	3.8	109.	19.8	2.6
%RSD	.06601	.19260	.39907	.12328
#1	5812.5	56447.	4972.2	2115.4
#2	5819.5	56387.	4946.2	2110.7
#3	5813.3	56598.	4985.2	2111.0

NOTE: The remaining raw data for this batch is not relevant to this job. As such it has been omitted.

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Ag 328.068 {103}	☒	17	Mn	0.000140	0.000000	No
				Mo	-0.000064	0.000000	No
				Ti	-0.000239	0.000000	No
				Fe	-0.000300	0.000000	No
				V	-0.000411	0.000000	No
				Zn	-0.000100	0.000000	No
				Ca	-0.000005	0.000000	No
				Al	-0.000003	0.000000	No
				Mg	0.000002	0.000000	No
				Ba	-0.000089	0.000000	No
				Cr	-0.000038	0.000000	No
				Zr	0.005000	0.000000	No
				Sn	-0.000100	0.000000	No
				W	0.000000	0.000000	No
				K	-0.000080	0.000000	No
				Ce	-0.002021	0.000000	No
				Ni	0.000000	0.000000	No
	Al 396.152 { 85}	☒	6	Si	0.000913	0.000000	No
				Ca	0.000078	0.000000	No
				Mo	0.043334	0.000000	No
				Zr	-0.006000	0.000000	No
				Ti	-0.000017	0.000000	No
				Ce	-0.018255	0.000000	No
	As 189.042 {478}	☒	24	Al	0.000004	0.000000	No
				Fe	-0.000045	0.000000	No
				Ca	0.000001	0.000000	No
				Mn	-0.000110	0.000000	No
				Mo	0.000235	0.000000	No
				Cr	-0.002510	0.000000	No
				V	0.000065	0.000000	No
				Co	-0.000252	0.000000	No
				W	0.000000	0.000000	No
				Sn	-0.000023	0.000000	No
				Cd	-0.000194	0.000000	No
				Tl	0.000052	0.000000	No
				Be	-0.000017	0.000000	No
				Mg	-0.000003	0.000000	No
				Si	-0.000013	0.000000	No
				Zn	-0.000130	0.000000	No
				Sr	-0.000080	0.000000	No
				Zr	-0.000400	0.000000	No
				Ti	-0.000031	0.000000	No
				Cu	0.000077	0.000000	No
				K	0.000000	0.000000	No
				B	-0.000230	0.000000	No
				S	-0.000020	0.000000	No
				Ce	-0.000600	0.000000	No
	B 208.959 {462}	☒	1	Mo	0.030533	0.000000	No
	Ba 455.403 { 74}	☒	3	Mg	0.000021	0.000000	No
				Al	0.000002	0.000000	No
				Zr	0.000007	0.000000	No
	Be 313.042 {108}	☒	11	V	0.001220	0.000000	No
				Mo	-0.000030	0.000000	No
				Ti	-0.000413	0.000000	No
				Mn	-0.000018	0.000000	No
				Ni	0.000001	0.000000	No
				Ca	0.000000	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Cu	0.000014	0.000000	No
			Zn	-0.000010	0.000000	No
			Fe	0.000001	0.000000	No
			W	0.000000	0.000000	No
			K	-0.000050	0.000000	No
Bi 223.061 {451}	☒	9	V	-0.000680	0.000000	No
			Co	-0.002200	0.000000	No
			Ca	-0.000005	0.000000	No
			Mg	-0.000002	0.000000	No
			W	0.020000	0.000000	No
			Cu	-0.001186	0.000000	No
			Fe	0.000072	0.000000	No
			Cr	0.001500	0.000000	No
			Ti	-0.005487	0.000000	No
Ca 317.933 {106}	☒	13	Fe	0.000130	0.000000	No
			W	0.003960	0.000000	No
			Tl	0.004950	0.000000	No
			Be	0.001840	0.000000	No
			Ba	0.003500	0.000000	No
			Cu	-0.001800	0.000000	No
			Cd	0.003700	0.000000	No
			Ni	0.001513	0.000000	No
			B	-0.000210	0.000000	No
			Se	0.002000	0.000000	No
			Co	0.000540	0.000000	No
			Cr	0.000640	0.000000	No
			Al	0.000026	0.000000	No
Cd 228.802 {448}	☒	14	As	-0.001935	0.000000	No
			Ni	-0.000500	0.000000	No
			Fe	-0.000059	0.000000	No
			V	-0.000900	0.000000	No
			Ba	0.000054	0.000000	No
			Co	-0.001160	0.000000	No
			Ca	0.000000	0.000000	No
			Mn	-0.000186	0.000000	No
			Cr	-0.000093	0.000000	No
			Cu	0.000024	0.000000	No
			Al	0.000000	0.000000	No
			Mo	-0.000096	0.000000	No
			W	0.000000	0.000000	No
			Si	-0.000500	0.000000	No
Ce 404.076 { 83}	☒	9	V	-0.000600	0.000000	No
			Mn	-0.060000	0.000000	No
			Zr	-0.026700	0.000000	No
			Ca	-0.000120	0.000000	No
			Ti	-0.001800	0.000000	No
			Cr	-0.003800	0.000000	No
			As	-0.010200	0.000000	No
			Mo	-0.002500	0.000000	No
			Fe	-0.000210	0.000000	No
Co 228.616 {448}	☒	9	Fe	-0.000002	0.000000	No
			Cr	0.000100	0.000000	No
			Mo	-0.001780	0.000000	No
			Ni	0.000084	0.000000	No
			Ti	0.002198	0.000000	No
			W	0.000160	0.000000	No
			Cd	-0.000188	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Ca	0.000000	0.000000	No
			As	0.000150	0.000000	No
Cr 267.716 {126}	☒	11	Mn	0.000318	0.000000	No
			Mo	-0.000342	0.000000	No
			Fe	-0.000027	0.000000	No
			Cd	-0.000050	0.000000	No
			Al	0.000004	0.000000	No
			Ca	0.000002	0.000000	No
			Mg	0.000001	0.000000	No
			Ti	-0.000053	0.000000	No
			Ba	0.000013	0.000000	No
			Cu	0.000100	0.000000	No
			Sr	-0.000100	0.000000	No
Cu 324.754 {104}2	☒	17	Cr	0.000000	0.000000	No
			V	-0.000208	0.000000	No
			Mo	0.000632	0.000000	No
			Ti	0.000024	0.000000	No
			Fe	-0.000043	0.000000	No
			Al	0.000003	0.000000	No
			Sn	0.000103	0.000000	No
			Co	-0.001135	0.000000	No
			Zr	0.000100	0.000000	No
			Si	-0.000002	0.000000	No
			Mn	0.000026	0.000000	No
			Se	0.000050	0.000000	No
			Ag	0.000166	0.000000	No
			Sb	0.000024	0.000000	No
			Pb	-0.000260	0.000000	No
			Be	-0.000031	0.000000	No
			W	0.000000	0.000000	No
Fe 259.940 {130}	☒	14	Co	0.000004	0.000000	No
			Si	-0.000100	0.000000	No
			Tl	-0.002590	0.000000	No
			Se	-0.000050	0.000000	No
			Cr	0.001134	0.000000	No
			Mn	-0.001433	0.000000	No
			V	-0.000064	0.000000	No
			Cu	0.000953	0.000000	No
			K	-0.000200	0.000000	No
			Zn	0.000046	0.000000	No
			Ti	-0.000631	0.000000	No
			Ca	0.000013	0.000000	No
			Ba	0.001000	0.000000	No
			Al	0.000042	0.000000	No
K 766.490 { 44}	☒	11	Fe	-0.000455	0.000000	No
			Al	-0.000083	0.000000	No
			Ca	-0.000079	0.000000	No
			Mn	0.001430	0.000000	No
			Si	-0.003000	0.000000	No
			V	-0.002000	0.000000	No
			Sn	-0.004700	0.000000	No
			Na	0.000300	0.000000	No
			Mo	-0.000850	0.000000	No
			Cu	-0.010000	0.000000	No
			Mg	-0.000066	0.000000	No
Li 670.784 { 50}	☒	1	Ca	0.000018	0.000000	No
Mg 279.079 {121}	☒	2	Mo	-0.006280	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			Fe	-0.000095	0.000000	No
Mn 257.610 {131}	☒	7	Fe	-0.000013	0.000000	No
			Si	0.000044	0.000000	No
			Ba	0.000012	0.000000	No
			Ni	0.000028	0.000000	No
			Mo	0.000000	0.000000	No
			Cr	-0.000114	0.000000	No
			Mg	0.000004	0.000000	No
Mo 202.030 {467}	☒	5	Fe	-0.000010	0.000000	No
			Mg	-0.000001	0.000000	No
			Ca	0.000003	0.000000	No
			W	0.000000	0.000000	No
			V	-0.000230	0.000000	No
Na 589.592 { 57}	☒	5	K	0.000038	0.000000	No
			Ba	0.000900	0.000000	No
			Ca	0.000055	0.000000	No
			Al	0.000120	0.000000	No
			V	-0.005000	0.000000	No
Ni 231.604 {446}	☒	11	Fe	0.000022	0.000000	No
			Zn	-0.000021	0.000000	No
			Be	-0.000112	0.000000	No
			Co	-0.000160	0.000000	No
			Tl	0.000209	0.000000	No
			V	-0.000032	0.000000	No
			Cu	0.000100	0.000000	No
			Cr	-0.000014	0.000000	No
			Si	-0.000003	0.000000	No
			Sn	0.000079	0.000000	No
			W	0.000083	0.000000	No
P 177.495 {490}	☒	4	Mn	-0.001900	0.000000	No
			Ca	-0.000024	0.000000	No
			Fe	0.000000	0.000000	No
			Cu	-0.071000	0.000000	No
Pb 220.353 {453}	☒	23	Al	-0.000107	0.000000	No
			Fe	0.000069	0.000000	No
			Ca	-0.000012	0.000000	No
			Mn	0.000145	0.000000	No
			Zn	0.000064	0.000000	No
			Mo	-0.000573	0.000000	No
			Cu	0.000110	0.000000	No
			V	-0.000007	0.000000	No
			Co	0.000071	0.000000	No
			Ti	-0.000500	0.000000	No
			Si	0.000016	0.000000	No
			Ba	-0.000012	0.000000	No
			Sb	0.000006	0.000000	No
			Sr	-0.000100	0.000000	No
			W	0.000000	0.000000	No
			Mg	0.000010	0.000000	No
			Cd	0.000076	0.000000	No
			Zr	-0.000300	0.000000	No
			Ni	0.000202	0.000000	No
			S	0.000005	0.000000	No
			Se	0.000036	0.000000	No
			As	0.000176	0.000000	No
			Cr	0.000034	0.000000	No
S 182.034 {485}	☒	6	Ca	-0.000006	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Al	-0.000276	0.000000	No
				Fe	-0.000241	0.000000	No
				W	0.000000	0.000000	No
				Mn	0.003000	0.000000	No
				Mo	-0.017500	0.000000	No
	Sb 206.833 {463}	☒	16	Fe	-0.000010	0.000000	No
				Al	0.000000	0.000000	No
				Ca	-0.000009	0.000000	No
				Ni	-0.000679	0.000000	No
				Cr	0.011060	0.000000	No
				V	-0.003900	0.000000	No
				Zn	-0.000400	0.000000	No
				Mo	0.001034	0.000000	No
				Ti	-0.001000	0.000000	No
				Sn	-0.006427	0.000000	No
				Mg	-0.000001	0.000000	No
				Zr	-0.000627	0.000000	No
				Sr	0.000209	0.000000	No
				W	0.000000	0.000000	No
				Si	0.000000	0.000000	No
				Ce	-0.002300	0.000000	No
	Se 196.090 {472}	☒	24	Al	0.000030	0.000000	No
				Ca	-0.000002	0.000000	No
				Mn	0.000470	0.000000	No
				Mo	0.000420	0.000000	No
				Fe	-0.000425	0.000000	No
				Co	-0.000200	0.000000	No
				V	-0.000289	0.000000	No
				Sr	-0.000008	0.000000	No
				Cu	-0.000113	0.000000	No
				W	0.000000	0.000000	No
				Si	0.000037	0.000000	No
				Tl	0.000180	0.000000	No
				Be	-0.000143	0.000000	No
				Zn	-0.000250	0.000000	No
				B	-0.000141	0.000000	No
				Ti	0.000016	0.000000	No
				Cd	0.000090	0.000000	No
				Zr	-0.000280	0.000000	No
				Ba	-0.000220	0.000000	No
				Mg	-0.000002	0.000000	No
				Cr	0.000161	0.000000	No
				S	-0.000011	0.000000	No
				Ce	-0.005564	0.000000	No
				As	0.000400	0.000000	No
	Si 212.412 {459}	☒	14	Sr	0.000366	0.000000	No
				Ni	0.000106	0.000000	No
				Mo	0.025500	0.000000	No
				Ti	0.001740	0.000000	No
				Al	0.000012	0.000000	No
				Cd	0.001043	0.000000	No
				Ba	0.000170	0.000000	No
				Fe	0.000015	0.000000	No
				Sn	0.002213	0.000000	No
				Zn	0.000385	0.000000	No
				As	0.000560	0.000000	No
				Pb	0.000471	0.000000	No

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
			V	0.001002	0.000000	No
			W	-0.025000	0.000000	No
Sn 189.989 {478}	☒	6	Ti	-0.003411	0.000000	No
			Mo	0.000011	0.000000	No
			Fe	0.000005	0.000000	No
			Mn	0.000060	0.000000	No
			Si	0.000089	0.000000	No
			W	-0.010000	0.000000	No
Sr 407.771 { 83}	☒	2	Fe	0.000002	0.000000	No
			Ca	0.000012	0.000000	No
Ti 334.904 {101}	☒	4	Cr	-0.000084	0.000000	No
			Mo	0.001149	0.000000	No
			Si	0.000035	0.000000	No
			Ca	-0.000003	0.000000	No
Tl 190.856 {477}	☒	24	Cr	0.000200	0.000000	No
			Mo	-0.009180	0.000000	No
			Al	0.000008	0.000000	No
			Fe	-0.000111	0.000000	No
			V	-0.001151	0.000000	No
			Mn	0.002500	0.000000	No
			Si	-0.000210	0.000000	No
			Ca	0.000002	0.000000	No
			Ti	-0.012001	0.000000	No
			Mg	0.000002	0.000000	No
			Co	0.001060	0.000000	No
			Sr	-0.000250	0.000000	No
			B	-0.000030	0.000000	No
			Ba	0.000110	0.000000	No
			Zn	0.000025	0.000000	No
			As	0.000030	0.000000	No
			Ni	-0.000049	0.000000	No
			Cu	-0.000032	0.000000	No
			W	0.015000	0.000000	No
			Sn	-0.000080	0.000000	No
			Se	-0.000040	0.000000	No
			S	-0.000020	0.000000	No
			K	0.000000	0.000000	No
			P	0.000033	0.000000	No
V 292.402 {115}	☒	7	Ti	0.000660	0.000000	No
			Mo	-0.014200	0.000000	No
			Fe	0.000019	0.000000	No
			Sr	0.000000	0.000000	No
			Cr	-0.002800	0.000000	No
			Mn	-0.021490	0.000000	No
			W	0.000050	0.000000	No
W 207.911 {462}	☒	24	Al	0.000002	0.000000	No
			Si	-0.000900	0.000000	No
			Fe	-0.000007	0.000000	No
			As	-0.000200	0.000000	No
			Mg	0.000000	0.000000	No
			Mn	-0.000110	0.000000	No
			Mo	-0.000300	0.000000	No
			Ti	0.000080	0.000000	No
			Sr	-0.000850	0.000000	No
			V	-0.000140	0.000000	No
			Cd	-0.000650	0.000000	No
			Cr	-0.000390	0.000000	No

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
				Zn	0.012200	0.000000	No
				Sn	0.000078	0.000000	No
				Zr	-0.000000	0.000000	No
				B	-0.001000	0.000000	No
				Sb	-0.003000	0.000000	No
				Co	0.000041	0.000000	No
				Ni	-0.000263	0.000000	No
				Be	-0.000130	0.000000	No
				Se	-0.000080	0.000000	No
				Cu	-0.000118	0.000000	No
				Ba	-0.000090	0.000000	No
				Tl	-0.000110	0.000000	No
	Zn 206.200 {464}	☒	17	Cr	-0.000774	0.000000	No
				Mo	-0.000328	0.000000	No
				Fe	0.000003	0.000000	No
				Al	0.000002	0.000000	No
				Si	0.000006	0.000000	No
				Ba	-0.000060	0.000000	No
				Ca	0.000002	0.000000	No
				Sr	0.000017	0.000000	No
				Sn	0.000069	0.000000	No
				Cu	0.000056	0.000000	No
				As	-0.000050	0.000000	No
				Be	0.000071	0.000000	No
				Bi	-0.000400	0.000000	No
				W	0.010000	0.000000	No
				Ti	-0.000100	0.000000	No
				Mg	0.000006	0.000000	No
				Mn	-0.000110	0.000000	No
	Zr 339.198 { 99}	☒	9	Mo	0.000523	0.000000	No
				Ti	0.000190	0.000000	No
				Fe	-0.000010	0.000000	No
				Si	0.000070	0.000000	No
				Bi	0.000295	0.000000	No
				Cr	-0.000200	0.000000	No
				V	0.000200	0.000000	No
				Sn	-0.000400	0.000000	No
				W	0.020000	0.000000	No
	In 230.606 {446}*	☒	None				
	Y 360.073 { 94}*	☒	None				
	Y 371.030 { 91}*	☒	None				
	Y 224.306 {451}*	☒	None				

Element, Wavelength and Order	Date of Fit	Date of Cal.	Type of Fit	Weighting	A0	A1	A2	n (Exponent)
Ag 328.068 {103}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.001605	0.099760	0.000000	1.000000
Al 396.152 { 85}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.001040	0.041392	0.000000	1.000000
As 189.042 {478}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000637	0.171849	0.000000	1.000000
B 208.959 {462}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000340	0.264695	0.000000	1.000000
Ba 455.403 { 74}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.016546	3.349998	0.000000	1.000000
Be 313.042 {108}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000051	2.469435	0.000000	1.000000
Bi 223.061 {451}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.001441	0.352520	0.000000	1.000000
Ca 317.933 {106}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.001965	0.042121	0.000000	1.000000
Cd 228.802 {448}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000288	0.986498	0.000000	1.000000
Ce 404.076 { 83}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000425	0.032848	0.000000	1.000000
Co 228.616 {448}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000161	0.562355	0.000000	1.000000
Cr 267.716 {126}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000021	0.082471	0.000000	1.000000
Cu 324.754 {104}2	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.001585	0.226076	0.000000	1.000000
Fe 259.940 {130}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000438	0.062535	0.000000	1.000000
K 766.490 { 44}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.005688	0.063362	0.000000	1.000000
Li 670.784 { 50}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.003186	1.282605	0.000000	1.000000
Mg 279.079 {121}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000065	0.005288	0.000000	1.000000
Mn 257.610 {131}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000075	0.725449	0.000000	1.000000
Mo 202.030 {467}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000315	0.997394	0.000000	1.000000
Na 589.592 { 57}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.014377	0.150444	0.000000	1.000000
Ni 231.604 {446}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000055	0.320158	0.000000	1.000000
P 177.495 {490}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000813	0.110476	0.000000	1.000000
Pb 220.353 {453}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000266	0.177585	0.000000	1.000000
S 182.034 {485}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.001206	0.050760	0.000000	1.000000
Sb 206.833 {463}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000921	0.260761	0.000000	1.000000
Se 196.090 {472}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000420	0.107884	0.000000	1.000000
Si 212.412 {459}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.005186	0.294868	0.000000	1.000000
Sn 189.989 {478}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000046	0.260017	0.000000	1.000000
Sr 407.771 { 83}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000381	4.970439	0.000000	1.000000
Ti 334.904 {101}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000002	0.119031	0.000000	1.000000
Tl 190.856 {477}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000069	0.045852	0.000000	1.000000
V 292.402 {115}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000068	0.128716	0.000000	1.000000
W 207.911 {462}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000782	0.465162	0.000000	1.000000
Zn 206.200 {464}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	0.000662	1.104372	0.000000	1.000000
Zr 339.198 { 99}	12/8/2022 10:06:27	12/7/2022 12:10:58	Linear	1/Conc	-0.000234	0.344149	0.000000	1.000000
In 230.606 {446}*	12/8/2022 10:06:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 360.073 { 94}*	12/8/2022 10:06:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 371.030 { 91}*	12/8/2022 10:06:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000
Y 224.306 {451}*	12/8/2022 10:06:27	12/23/2009 10:44:16	Linear	1/Conc	0.000000	0.000000	0.000000	1.000000

	Element, Wavelength and Order	Correlation	Std Error of Est	Predicted MDL	Predicted MQL	Status	Reslope		QC Norm	
							Slope	Y-int	Slope factor	Offset
	Ag 328.068 {103}	1.000000	0.000000	0.000691	0.002302	OK.	1.000000	0.000000	1	0
	Al 396.152 { 85}	1.000000	0.000000	0.016720	0.055735	OK.	1.000000	0.000000	1	0
	As 189.042 {478}	1.000000	0.000000	0.001265	0.004216	OK.	1.000000	0.000000	1	0
	B 208.959 {462}	1.000000	0.000000	0.000862	0.002872	OK.	1.000000	0.000000	1	0
	Ba 455.403 { 74}	1.000000	0.000000	0.000262	0.000875	OK.	1.000000	0.000000	1	0
	Be 313.042 {108}	1.000000	0.000000	0.000122	0.000406	OK.	1.000000	0.000000	1	0
	Bi 223.061 {451}	1.000000	0.000000	0.001353	0.004511	OK.	1.000000	0.000000	1	0
	Ca 317.933 {106}	1.000000	0.000000	0.007739	0.025795	OK.	1.000000	0.000000	1	0
	Cd 228.802 {448}	1.000000	0.000000	0.000296	0.000987	OK.	1.000000	0.000000	1	0
	Ce 404.076 { 83}	1.000000	0.000000	0.003956	0.013185	OK.	1.000000	0.000000	1	0
	Co 228.616 {448}	1.000000	0.000000	0.000306	0.001018	OK.	1.000000	0.000000	1	0
	Cr 267.716 {126}	1.000000	0.000000	0.000495	0.001651	OK.	1.000000	0.000000	1	0
	Cu 324.754 {104}2	1.000000	0.000000	0.000438	0.001460	OK.	1.000000	0.000000	1	0
	Fe 259.940 {130}	1.000000	0.000000	0.003302	0.011007	OK.	1.000000	0.000000	1	0
	K 766.490 { 44}	1.000000	0.000000	0.033084	0.110278	OK.	1.000000	0.000000	1	0
	Li 670.784 { 50}	1.000000	0.000000	0.001583	0.005275	OK.	1.000000	0.000000	1	0
	Mg 279.079 {121}	1.000000	0.000000	0.045237	0.150789	OK.	1.000000	0.000000	1	0
	Mn 257.610 {131}	1.000000	0.000000	0.000062	0.000206	OK.	1.000000	0.000000	1	0
	Mo 202.030 {467}	1.000000	0.000000	0.000306	0.001021	OK.	1.000000	0.000000	1	0
	Na 589.592 { 57}	1.000000	0.000000	0.013462	0.044875	OK.	1.000000	0.000000	1	0
	Ni 231.604 {446}	1.000000	0.000000	0.000465	0.001552	OK.	1.000000	0.000000	1	0
	P 177.495 {490}	1.000000	0.000000	0.001668	0.005560	OK.	1.000000	0.000000	1	0
	Pb 220.353 {453}	1.000000	0.000000	0.001274	0.004247	OK.	1.000000	0.000000	1	0
	S 182.034 {485}	1.000000	0.000000	0.004608	0.015361	OK.	1.000000	0.000000	1	0
	Sb 206.833 {463}	1.000000	0.000000	0.001343	0.004475	OK.	1.000000	0.000000	1	0
	Se 196.090 {472}	1.000000	0.000000	0.002518	0.008393	OK.	1.000000	0.000000	1	0
	Si 212.412 {459}	1.000000	0.000000	0.001161	0.003868	OK.	1.000000	0.000000	1	0
	Sn 189.989 {478}	1.000000	0.000000	0.000808	0.002692	OK.	1.000000	0.000000	1	0
	Sr 407.771 { 83}	1.000000	0.000000	0.000122	0.000406	OK.	1.000000	0.000000	1	0
	Ti 334.904 {101}	1.000000	0.000000	0.000527	0.001757	OK.	1.000000	0.000000	1	0
	Tl 190.856 {477}	1.000000	0.000000	0.001868	0.006228	OK.	1.000000	0.000000	1	0
	V 292.402 {115}	1.000000	0.000000	0.000440	0.001465	OK.	1.000000	0.000000	1	0
	W 207.911 {462}	1.000000	0.000000	0.001332	0.004439	OK.	1.000000	0.000000	1	0
	Zn 206.200 {464}	1.000000	0.000000	0.000230	0.000768	OK.	1.000000	0.000000	1	0
	Zr 339.198 { 99}	1.000000	0.000000	0.000240	0.000799	OK.	1.000000	0.000000	1	0
	In 230.606 {446}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 360.073 { 94}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 371.030 { 91}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0
	Y 224.306 {451}*	0.000000	0.000000	-1.000000	-1.000000	Warnin	1.000000	0.000000	1	0

SGS

Mercury Hot Block Digestion Log

Product **HG / HGTCLP**
Matrix: Aq / Liq / DW

Methods (Circle as appropriate)
EPA 245.1 **SW846 7470A**
Required corrected Temp. Range is 90-95 C.

MA Batch #: MA53423
Analyst: LM
Date: 12/7/2022
Balance ID: N/A
Reagents: See attached sheet
Auto pipet ID: M-82

Hot Block # HG-7 Start Time: 11:00 End Time: 13:00 Tube # 1-37.
Start Temp: 93 Corrected Start Temp: 92 Correction: -1 Thermometer ID: 3124942.
End Temp: 95 Corrected Start Temp: 94 Correction: -1 Thermometer ID: 3124942.
Hot Block #_____ Start Time:_____ End Time:_____ Tube #_____.
Start Temp:_____ Corrected Start Temp:_____ Correction:_____ Thermometer ID:_____.
End Temp:_____ Corrected Start Temp:_____ Correction:_____ Thermometer ID:_____.

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used Amount Spiked	Spiked Used Added-Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
1	MP36800-MB1	N	30	30				MP36800	
2	MP36800-B1	N	30	30	2.0ml	Y	0.03		HG-22-166-38-HGA3, IN. V.
3	MP36800-S1	Y	30	30	2.0ml	Y	0.03		JD56464-16, HG-22-166-38-HGA3, IN. V.
4	MP36800-S2	Y	30	30	2.0ml	Y	0.03		JD56464-16, HG-22-166-38-HGA3, IN. V.
5	JD56464-16	Y	30	30					
6	JD56464-21	Y	30	30					
7	JD56464-22	Y	30	30					
8	JD56437-3	Y	30	30					UTCQC
9	JD56554-14	Y	30	30					
10	JD56617-1	Y	30	30					
11	JD56617-2	Y	30	30					
12	JD56617-3	Y	30	30					
13	JD56617-4	Y	30	30					
14	JD56617-5	Y	30	30					
15	JD56618-2	Y	30	30					
16	JD56618-3	Y	30	30					
17	MP36801-MB1	N*	30	30				MP36801	TCLP
18	MP36801-B1	N*	30	30	2.0ml	Y	0.03		HG-22-166-38-HGA3, IN. V.
19	MP36801-S1	N*	30	30	2.0ml	Y	0.03		JD56551-1A, HG-22-166-38-HGA3, IN. V.
20	MP36801-S2	N*	30	30	2.0ml	Y	0.03		JD56551-1A, HG-22-166-38-HGA3, IN. V.
21	JD56551-1A	N*	30	30					*0.5mL of HNO3 added at 10:30 for pH<2
22	MP36802-MB1	N*	30	30				MP36802	TCLP
23	MP36802-B1	N*	30	30	2.0ml	Y	0.03		HG-22-166-38-HGA3, IN. V.
24	MP36802-S1	N*	30	30	2.0ml	Y	0.03		JD56483-1A,HG-22-166-38-HGA3, IN. V.
25	MP36802-S2	N*	30	30	2.0ml	Y	0.03		JD56483-1A,HG-22-166-38-HGA3, IN. V.
26	JD56483-1A	N*	30	30					*0.5mL of HNO3 added at 10:30 for pH<2
27	JD56441-1	Y	30	30					
28	JD56547-1	Y	30	30					
29	JD56547-2	Y	30	30					
30	JD56547-3	Y	30	30					
31	JD56547-4	Y	30	30					
32	JD56572-1	Y	30	30					
33	JD56572-2	Y	30	30					
34	JD56572-3	Y	30	30					
35	JD56572-4	Y	30	30					

ANALYST: LM DATE: 12/7/22
Spike witness:_____ DATE:_____
QC: REVIEWER:_____ DATE:_____

DAYT-MET-0113-01-FORM-HGWATERPREP
Revision Date: 8/28/18

SGS

Mercury Hot Block Digestion Log

Product **HG / HGTCLP**
Matrix: Aq / Liq / DW

MA Batch #: MA53423
Analyst: LM
Date: 12/7/2022
Balance ID: N/A
Reagents: See attached sheet
Auto pipet ID: M-82

Methods (Circle as appropriate)
EPA 245.1 **SW846 7470A**
Required corrected Temp. Range is 90-95 C.

Hot Block # HG-7 Start Time: 11:00 End Time: 13:00 Tube # 1-37.
Start Temp: 93 Corrected Start Temp: 92 Correction: -1 Thermometer ID: 3124942 .
End Temp: 95 Corrected Start Temp: 94 Correction: -1 Thermometer ID: 3124942 .
Hot Block #_____ Start Time:_____ End Time:_____ Tube #_____.
Start Temp:_____ Corrected Start Temp:_____ Correction:_____ Thermometer ID:_____.
End Temp:_____ Corrected Start Temp:_____ Correction:_____ Thermometer ID:_____.

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used Amount Spiked	Spiked Used Added- Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
36	JD56572-5	Y	30	30					
37	JD56572-6	Y	30	30					
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
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63									
64									
65									
66									
67									
68									
69									
70									

ANALYST: LM
Spike witness:_____
QC: REVIEWER:_____

DATE: 12/7/22
DATE:_____
DATE:_____

DAYT-MET-0113-01-FORM-HGWATERPREP
Revision Date: 8/28/18

7.3.1

7

SGS

Mercury Hot Block Digestion Log

Product **HG / EHG / HGTCLP**
Matrix: Aq / Liq / DW

MA Batch #: MA53423
Analyst: LM
Date: 12/7/2022
Balance ID: N/A
Reagents: See attached sheet
Auto pipet ID M-82

Methods (Circle as appropriate)
EPA 245.1 **SW846 7470A**
Required corrected Temp. Range is 90-95 C.
Hot Block # HG-7 Start Time: 11:00 End Time: 13:00 Tube # S1-CRI.

Start Temp: 93 Corrected Start Temp: 92 Correction: -1 Thermometer ID: 3124942 .
End Temp: 95 Corrected Start Temp: 94 Correction: -1 Thermometer ID: 3124942 .

Bot #	Sample ID	pH <2 Y/N	Initial Sample Vol ml	Final Samp Vol ml	Spiked Used Amount Spiked	Spiked Used Added- Y or N	Spikelot and Conc (mg/L)	MP Number	Comments/Lot # and Vendor
S-1	Calibration Blank	N	30 ml	30 ml	0.0 ml	N			
S-2	0.2 ug/l Standard	N	30 ml	30 ml	2.0 ml	Y	0.003		HG-22-166-39-HGA4, IN. V.
S-3	0.5 ug/l Standard	N	30 ml	30 ml	5.0 ml	Y	0.003		HG-22-166-39-HGA4, IN. V.
S-4	1.0 ug/l Standard	N	30 ml	30 ml	1.0 ml	Y	0.030		HG-22-166-38-HGA3, IN. V.
S-5	2.5 ug/l Standard	N	30 ml	30 ml	2.5 ml	Y	0.030		HG-22-166-38-HGA3, IN. V.
S-6	5.0 ug/l Standard	N	30 ml	30 ml	5.0 ml	Y	0.030		HG-22-166-38-HGA3, IN. V.
ICV	ICV_MA53423 (Externa	N	30 ml	30 ml	3.0 ml	Y	0.03		HG-22-166-40-HGB3, AGILENT
ICB	ICB	N	30 ml	30 ml	0.0 ml	N			
CCV	CCV_MA53423	N	30 ml	30 ml	2.5 ml	Y	0.03		HG-22-166-38-HGA3, IN. V.
CCB	CCB	N	30 ml	30 ml	0.0 ml	N			
CRI	CRI	N	30 ml	30 ml	2.0 ml	Y	0.003		HG-22-166-39-HGA4, IN. V.

Form HG022-03
Revision Date: 8/24/15

ANALYST: LM
QC: REVIEWER:

DATE: 12/7/22
DATE:

SGS

Reagent Information Log- Hg Waters

MA # 53423

Reagents	Exp. Date	Reagent # or
Conc. Sulfuric Acid	11/14/2024	Fisher 220502
Conc. Nitric Acid	11/24/2024	Baker 2212062003
Sodium Chloride-Hydroxylamine Hydrochloride	5/18/2023	HG-22-165 187 -HGHCL
Potassium Permanganate 5%	5/18/2023	HG-22-165 185 -HGKM2
Potassium Persulfate	5/18/2023	HG-22-165 186 -HGKS
Stannous Chloride	12/8/2022	HG-22-166 41 -HGS
STD Hg standard solution 1000 ppm	2/14/2023	Inorganic Ventures R2-HG696409
STD Hg standard solution 30 ppb	12/8/2022	HG-22-166- 38 -HGA3
STD Hg standard solution 3ppb	12/8/2022	HG-22-166- 39 -HGA4
ICV Hg standard solution 1000 ppm	4/30/2026	Agilent CT-1449
ICV Hg standard solution 30ppb	12/8/2022	HG-22-166- 40 -HGB3
Dilution Acid	6/5/2023	HG-22-166- 33 HGD2
Digestion Tubes Lot	N/A	Environmental Express 2209103
pH Paper	8/1/2024	Hydrion 222221

Form:GN087A79-03
Rev. Date: 6/6/17

SGS North America Inc.

Aqueous Metals Digestion Form

Batch Information

Batch ID	Start Date	Start Time	End Date	End time	QC Samp 1	QC Samp 2
MP36790	12/7/2022	10:00	12/7/2022	15:30	JD56483-1A	

Temperature

		Block ID1	Therm. ID#	Temperature	Correction	Corrected Temp
1	Start	MP-6	1124748	94	1	95
1	End	MP-6	1124748	94	1	95
2	Start					
2	End					

Methods and Equipment

	Dig. Method	Heating Method		Auto Pipette #	Digestion Tube Lot #	
	SW846 3010A	Digestion Block		M-81	2208065	

Sample ID	Bottle Number	pH<2 (Y/N)	Initial Sample Volume	Final Volume in ML	Reagent Groups Added	Spike Groups Added	Comments
MP36790-MB1	N/A	N	50	50	AB		
MP36790-B1	N/A	N	50	50	AB	ABCD	
MP36790-S1	6.3	N	50	50	AB	ABCD	*
MP36790-S2	6.3	N	50	50	AB	ABCD	*
MP36790-SD1	6.3	N	50	50	AB		*
JD56441-1	1.2	Y	50	50	AB		
JD56483-1A	6.3	N	50	50	AB		*
JD56547-1	1.1	Y	50	50	AB		
JD56547-2	1.1	Y	50	50	AB		
JD56547-3	1.1	Y	50	50	AB		
JD56547-4	1.1	Y	50	50	AB		
JD56572-1	1.1	Y	50	50	AB		
JD56572-2	1.1	Y	50	50	AB		
JD56572-3	1.1	Y	50	50	AB		
JD56572-4	1.1	Y	50	50	AB		
JD56572-5	1.1	Y	50	50	AB		
JD56572-6	1.1	Y	50	50	AB		
MP36790-LB1	1.1	N	50	50	AB		*
MP36790-LS1	1.1	N	50	50	AB	ABCD	*

Reagents Groups

Group	Description	MLs Used
A	CONC. HNO3	3
B	1:1 HCL	5
C		
D		
E		
F		
G		
H		

Spike Groups

Group	Description	MLs Used
A	ACCUTEST 13A REV1	0.5
B	ACCUTEST 14A REV1	0.5
C	MINERALS 5000 PPM	0.25
D	AG 20 PPM	0.625
E		
F		
G		
H		
I		

Comments: * 0.5 ML OF CONC. HNO3 WAS ADDED TO MAKE PH<@ AT 9:55

Analyst RAMSHAE **Approved by** PATM **Approved on** 12/7/2022

Note: Reagent traceability for batch Start Date can be seen on the reagent traceability page for this batch.
Serial Dilution samples shown for QC purposes only.
Acceptable Temperature range is 90-95 degrees C unless otherwise noted

SGS

Metals Digestion Reagents Information Log

Digestion Batch ID: MP36790 DATE: 12/07/22

Matrix: ALL

Standard/Reagent Type	Exp. Date	Standard/Reagent ID
Spiking Solution- (ACCUTEST 13A REV1)	1/28/2023	MP-21-58-73
Spiking Solution- (ACCUTEST 14A REV1)	1/28/2023	MP-21-58-76
Spiking Solution - 5000 mg/l Minerals	9/28/2023	T2-MEB720000 MFG: INO.VENT
Spiking Solution - Sulfur 1000ppm	5/17/2024	LOT: 051721 MFG: ABSOLUTE STD.
Spiking Solution - Si 1000ppm	5/10/2023	S2-S1700841 MFG: INO.VENT
Spiking Solution - Bi 1000ppm	6/30/2023	S2-Bi706253 MFG: INO.VENT.
Spiking Solution - Se 20ppm	5/28/2023	MP-21-58-83
Spiking Solution - Li 1000ppm	11/2/2023	T2-LI718262 MFG: INO.VENT.
Spiking Solution- Ag 20 ppm	3/21/2023	MP-21-58-71
Spiking Solution - (ACCUTEST 13B REV1)	12/23/2022	MP-21-58-58
Spiking Solution - (ACCUTEST 14B REV1)	12/23/2022	MP-21-58-61
Spiking Solution - 1000ppm Minerals	2/28/2023	MP-21-58-69
Spiking Solution- P		
Nitric Acid	11/30/2024	LOT:2212062003 MFG: J.T-BAKER
Nitric Acid (1:1)	5/24/2023	MP-21-60-134 1:1 HNO3
Hydrochloric Acid	11/22/2024	LOT:4122060 MFG: FISHER CHEMICAL
Hydrochloric Acid (1:1)	5/30/2023	MP-21-60-157 1:1 HCL
Hydrogen Peroxide	11/17/2024	LOT: 221315 MFG: FISHER
Soil Lab Control/Soil LC	7/6/2024	LOT: D110-540 MFG: ERA
Teflon Chips(For Soil MB and Blank Spike)	N/A	LOT: 27407287 MFG: SAINT-GOBAIN
Digestion Tubes	N/A	LOT: 2208065 MFG: ENV. EXPRESS
pH Paper	2/15/2024	LOT: 205521 MFG: HYDRION
Filter paper Q8	N/A	LOT: 17607330 MFG: FISHER

Spike witnessed By: RE

metals digestion reagents information log 2022
1/17/18

Misc. Raw Data

Raw Data

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2. **TC Batch ID: TCO769**

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	4.00		4.00	4.00	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	3.99
PH Buffer														7.00	7.01		7.00	7.01					7.00	7.00
PH Buffer														10.00	9.99		10.00	9.99					10.00	9.99
LB (fluid #1)	N	64	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.81
LB (fluid #2)	N	NA	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	NA
JD56441-1	N	6	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.25	100	100.25	NA	9.53	5 mins	NA	1.66	1	4.93	YES	2005	NA	5.55
JD56483-1A	N	15	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.23	100	100.23	NA	10.41	5 mins	NA	1.99	1	4.93	YES	2004.6	NA	5.59
JD56547-1	N	18	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.56	100	100.56	NA	8.98	5 mins	NA	1.62	1	4.93	YES	2011.2	NA	5.07
JD56547-2	N	32	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.59	100	100.59	NA	9.32	5 mins	NA	1.79	1	4.93	YES	2011.8	NA	6.36
JD56547-3	N	40	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.36	100	100.36	NA	8.98	5 mins	NA	1.55	1	4.93	YES	2007.2	NA	5.56
JD56547-4	N	46	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.12	100	100.12	NA	8.79	5 mins	NA	1.59	1	4.93	YES	2002.4	NA	5.52
JD56572-1	N	48	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.25	100	100.25	NA	9.07	5 mins	NA	1.63	1	4.93	YES	2005	NA	5.34
JD56572-2	N	49	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.56	100	100.56	NA	8.64	5 mins	NA	1.57	1	4.93	YES	2011.2	NA	5.07
JD56572-3	N	50	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.44	100	100.44	NA	8.77	5 mins	NA	1.67	1	4.93	YES	2008.8	NA	6.14
JD56572-4	N	53	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.34	100	100.34	NA	8.99	5 mins	NA	1.65	1	4.93	YES	2006.8	NA	6.14
PH Buffer														4.00	4.00		2.00	2.01					4.00	3.96
PH Buffer														10.00	10.01		4.00	4.00					10.00	10.00
JD56572-5	N	58	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.10	100	100.10	NA	9.04	5 mins	NA	1.52	1	4.93	YES	2002	NA	5.47
JD56572-6	N	59	M/E	9	5-Dec-22	6-Dec-22	16:55	8:55	12:55	9:15	100.59	100	100.59	NA	9.23	5 mins	NA	1.63	1	4.93	YES	2011.8	NA	6.31
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.00		2.00	2.01					4.00	3.96
PH Buffer														10.00	10.01		4.00	4.00					7.00	6.99

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____ Set-up analyst: NF Take-down analyst: NF

Form: AGN-TCLPE-07bRevised: 18-Jun-17Validated: AD, 18-Jun-17

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

TC Batch ID: TCO769

Balance ID: B54

pH meter ID: PH 67

Temperature ranges during leaching. (Must be from 20.5-25.4 °C, and recorded for each leaching period).

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	29-Oct-22
5	29	29-Oct-22
7	28	29-Oct-22
8	NA	22-Apr-21
9	32	29-Oct-22
10	32	29-Oct-22
11	NA	7-Sep-21
12	28	29-Oct-22

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID: 5624720

Expiration: 13-Jul-23

Recorded temperature: 50

Heating time: Start:

End:

Reagent Information	Reagent ID or Manufacturer Lot	Expiration Date
Reagent		
Extraction fluid 1	GNE10-72115-TCLP	15-Dec-2022
Extraction fluid 2	GNE10-72116-TCLP	15-Dec-2022
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE7-70898-TCLP	20-Jan-2023
pH 2 buffer	FISHER 210051	1-Mar-2023
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Sep-2023
pH 10 buffer	FISHER 210276	1-Feb-2023
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jan-2023
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	12/2/2022

Form: AGN-TCLPE-07bRevised: 18-Jun-17Validated: AD, 18-Jun-17

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404 SSOW: 12599404-2022-002 PO# 340-009117

SGS Job Number: JD56572

Sampling Date: 12/02/22

Report to:

edds@ghd.com
wells.richard@ghd.com
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Kathleen.Shaw@ghd.com;mary.cameron@ghd.com
ATTN: Distribution4

Total number of pages in report: **8**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sample Summary

GHD Services Inc.

Job No: JD56572

SJRWP - PCFSE, Harris County, TX
Project No: 12599404 SSOW: 12599404-2022-002 PO# 340-009117

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD56572-1	12/02/22	09:00	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-26
JD56572-1A	12/02/22	09:00	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-26
JD56572-2	12/02/22	10:00	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-23
JD56572-2A	12/02/22	10:00	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-23
JD56572-3	12/02/22	11:00	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-22
JD56572-3A	12/02/22	11:00	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-22
JD56572-4	12/02/22	13:15	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-21
JD56572-4A	12/02/22	13:15	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-21
JD56572-5	12/02/22	14:05	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-20
JD56572-5A	12/02/22	14:05	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-20
JD56572-6	12/02/22	15:20	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-19
JD56572-6A	12/02/22	15:20	MTK	12/03/22	SO	Soil	12599404-120222-S-MTK-WC-19

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID: 12599404-120222-S-MTK-WC-26
Lab Sample ID: JD56572-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.81	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0047	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.011			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120222-S-MTK-WC-23
Lab Sample ID: JD56572-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.65	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0066	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.024			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120222-S-MTK-WC-22
Lab Sample ID: JD56572-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.80	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.020			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120222-S-MTK-WC-21
Lab Sample ID: JD56572-4
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	1.0	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0045	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.028			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120222-S-MTK-WC-20
Lab Sample ID: JD56572-5
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.71	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0054	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.033			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120222-S-MTK-WC-19
Lab Sample ID: JD56572-6
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	1.2	D005	100	0.20	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0057	D006	1.0	0.0040	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/07/22	12/07/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.031			0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/07/22	12/08/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53423
(2) Instrument QC Batch: MA53430
(3) Prep QC Batch: MP36790
(4) Prep QC Batch: MP36802

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-002; PO# 340-009117

SGS Job Number: JD56629

Sampling Date: 12/05/22

Report to:

edds@ghd.com
wells.richard@ghd.com
jason.davis@ghd.com
Alice.Harpole@ghd.com
Kathleen.Shaw@ghd.com;mary.cameron@ghd.com
ATTN: Distribution4

Total number of pages in report: 6

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Sample Summary

GHD Services Inc.

Job No: JD56629

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-002; PO# 340-009117

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JD56629-1	12/05/22	09:00	MTK	12/06/22	SO	Soil	12599404-120522-S-MTK-WC-18
JD56629-1A	12/05/22	09:00	MTK	12/06/22	SO	Soil	12599404-120522-S-MTK-WC-18
JD56629-2	12/05/22	10:15	MTK	12/06/22	SO	Soil	12599404-120522-S-MTK-WC-17
JD56629-2A	12/05/22	10:15	MTK	12/06/22	SO	Soil	12599404-120522-S-MTK-WC-17

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID: 12599404-120522-S-MTK-WC-18
Lab Sample ID: JD56629-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/05/22
Date Received: 12/06/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	1.0	D005	100	0.20	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/11/22	12/12/22	LM	SW846 7470A [1]	SW846 7471B [3]
Nickel	0.024			0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53441
(2) Instrument QC Batch: MA53449
(3) Prep QC Batch: MP36867
(4) Prep QC Batch: MP36886

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120522-S-MTK-WC-17
Lab Sample ID: JD56629-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/05/22
Date Received: 12/06/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	1.1	D005	100	0.20	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.012	D006	1.0	0.0040	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/11/22	12/12/22	LM	SW846 7470A [1]	SW846 7471B [3]
Nickel	0.051			0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53441
(2) Instrument QC Batch: MA53449
(3) Prep QC Batch: MP36867
(4) Prep QC Batch: MP36886

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

CHAIN OF CUSTODY

SGS North America Inc. - Houston
10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.sgs.com/ehsusa

SO

JD56629

PAGE 1 OF 1

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job #

Client / Reporting Information

Company Name: GHD Services Inc
Street Address: 5551 Corporate Blvd #200
City: Baton Rouge State: LA Zip: 70808
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com
Phone #: 225-454-4363
Sampler(s) Name(s): Marc Kemp Phone #: 772-233-3916

Project Information

Project Name: San Jacinto Waste Pits
Street: 13300 Market St
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City State Zip:
Attention:

Requested Analyses

SGS Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZA/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	TCLP Dioxins/Furans 1311/1613B	TCLP Metals 1311/6010C	TCLP Mercury 1311/7470A	LAB USE ONLY
1	12599404-120522-S-MTK-WC-18	12/05/22	0900	MTK	S	2						2							X	X	X	B24
2	12599404-120522-S-MTK-WC-17	12/05/22	1015	MTK	S	2						2							X	X	X	DL9T2
	Temp Blank	—	—	—	W	1																

12.05.22

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)

- [x] Standard 10 Business Days
- [ ] 5 Business Days *RUSH*
- [ ] 4 Business Days *RUSH*
- [ ] 3 Business Days *RUSH*
- [ ] 2 Business Days *RUSH*
- [ ] 1 Business Day *EMERGENCY*

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Approved By (SGS PM): / Date:
Initial Assessment: NA(3A)
Label Verification:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other ___

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

See SSOW

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Date / Time:	Relinquished By:	Date / Time:	Received By:	Date / Time:
1		12-05-22/17:00	1 fedex		2 fedex	12.6.22 10:00	2	
3			3		4		4	
5			5		Custody Seal #	Intact / Not intact / Absent	Preserved where applicable	On Ice ✓ Cooler Temp. °C: 14 Therm. ID:

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SGS Sample Receipt Summary

Job Number: JD56629 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 12/6/2022 10:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (1.4);

Cooler Temps (Corrected) °C: Cooler 1: (1.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-002; PO# 340-009117

SGS Job Number: JD56730

Sampling Date: 12/06/22

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: **29**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Sample Summary

GHD Services Inc.

Job No: JD56730

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-002; PO# 340-009117

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD56730-1	12/06/22	10:40	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-16
JD56730-1A	12/06/22	10:40	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-16
JD56730-2	12/06/22	13:30	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-15
JD56730-2A	12/06/22	13:30	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-15
JD56730-3	12/06/22	14:10	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-14
JD56730-3A	12/06/22	14:10	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-14
JD56730-4	12/06/22	15:15	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-13
JD56730-4A	12/06/22	15:15	MTK	12/07/22	SO	Soil	12599404-120622-S-MTK-WC-13

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD56730
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	12/15/2022 9:42:12 A

On 12/07/2022, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD56730 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Metals Analysis By Method SW846 6010D

Matrix: LEACHATE **Batch ID:** MP36886

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56635-1MS, JD56635-1MSD, JD56635-1SDL were used as the QC samples for metals.
- Blank Spike Recovery(s) for Nickel are outside control limits.
- RPD(s) for Serial Dilution for Beryllium, Lead, Vanadium are outside control limits for sample MP36886-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JD56730-2 for Antimony: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- JD56730-3 for Cadmium: Elevated detection limit due to dilution required for high interfering element.
- JD56730-2 for Arsenic: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- JD56730-2 for Cadmium: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- JD56730-2 for Lead: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- JD56730-2 for Nickel: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- JD56730-2 for Selenium: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- JD56730-2 for Silver: Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).
- MP36886-LS1 for Nickel: Spike blank indicates possible high bias, but all associated samples < RL.

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP36867

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56635-1MS, JD56635-1MSD were used as the QC samples for metals.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD56730
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 12/06/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD56730-1	**12599404-120622-S-MTK-WC-16**					
Barium		0.75	0.20		mg/l	SW846 6010D
Cadmium		0.016	0.0040		mg/l	SW846 6010D
Nickel		0.15	0.010		mg/l	SW846 6010D
JD56730-2	**12599404-120622-S-MTK-WC-15**					
Barium		0.21	0.20		mg/l	SW846 6010D
Nickel [a]		0.061	0.050		mg/l	SW846 6010D
JD56730-3	**12599404-120622-S-MTK-WC-14**					
Barium		0.66	0.20		mg/l	SW846 6010D
Chromium		0.024	0.010		mg/l	SW846 6010D
Lead		0.16	0.10		mg/l	SW846 6010D
Mercury		0.00046	0.00020		mg/l	SW846 7470A
Nickel		0.065	0.010		mg/l	SW846 6010D
JD56730-4	**12599404-120622-S-MTK-WC-13**					
Barium		1.1	0.20		mg/l	SW846 6010D
Cadmium		0.0041	0.0040		mg/l	SW846 6010D
Nickel		0.091	0.010		mg/l	SW846 6010D

(a) Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 12599404-120622-S-MTK-WC-16
Lab Sample ID: JD56730-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/06/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	0.75	D005	100	0.20	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.016	D006	1.0	0.0040	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/11/22	12/12/22	LM	SW846 7470A [1]	SW846 7471B [3]
Nickel	0.15			0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53441
(2) Instrument QC Batch: MA53449
(3) Prep QC Batch: MP36867
(4) Prep QC Batch: MP36886

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120622-S-MTK-WC-15
Lab Sample ID: JD56730-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/06/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	< 0.50			0.50	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Arsenic [a]	< 0.50	D004	5.0	0.50	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Barium	0.21	D005	100	0.20	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	< 0.0020			0.0020	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium [a]	< 0.020	D006	1.0	0.020	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Lead [a]	< 0.50	D008	5.0	0.50	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/11/22	12/12/22	LM	SW846 7470A [1]	SW846 7471B [4]
Nickel [a]	0.061			0.050	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Selenium [a]	< 0.50	D010	1.0	0.50	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Silver [a]	< 0.050	D011	5.0	0.050	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Vanadium	< 0.050			0.050	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA53441
(2) Instrument QC Batch: MA53449
(3) Instrument QC Batch: MA53457
(4) Prep QC Batch: MP36867
(5) Prep QC Batch: MP36886

(a) Elevated detection limit due to dilution required for matrix interference (indicated by failing internal standard on original analysis).

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120622-S-MTK-WC-14
Lab Sample ID: JD56730-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/06/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Barium	0.66	D005	100	0.20	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	< 0.0020			0.0020	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium [a]	< 0.020	D006	1.0	0.020	mg/l	5	12/11/22	12/13/22	ND	SW846 6010D [3]	SW846 3010A [5]
Chromium	0.024	D007	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Lead	0.16	D008	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Mercury	0.00046	D009	0.20	0.00020	mg/l	1	12/11/22	12/12/22	LM	SW846 7470A [1]	SW846 7471B [4]
Nickel	0.065			0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]
Vanadium	< 0.050			0.050	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA53441
(2) Instrument QC Batch: MA53449
(3) Instrument QC Batch: MA53457
(4) Prep QC Batch: MP36867
(5) Prep QC Batch: MP36886

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120622-S-MTK-WC-13
Lab Sample ID: JD56730-4
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/06/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	1.1	D005	100	0.20	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.0041	D006	1.0	0.0040	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/11/22	12/12/22	LM	SW846 7470A [1]	SW846 7471B [3]
Nickel	0.091			0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/11/22	12/12/22	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53441
(2) Instrument QC Batch: MA53449
(3) Prep QC Batch: MP36867
(4) Prep QC Batch: MP36886

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Houston
10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.sgs.com/ehsusa

SD

KR-112322-41

PAGE 1 OF 1

FED-EX Tracking # 2917 6265 1008
Bottle Order Control #
SGS Quote #
SGS Job # JD 56730

Client / Reporting Information	Project Information	Requested Analyses
Company Name: GHD Services Inc	Project Name: San Jacinto Waste Pits	
Street Address: 5551 Corporate Blvd #200	Street:	Billing Information (if different from Report to)
City / State / Zip: Baton Rouge, LA 70808	City / State: Channelview TX	Company Name:
Project Contact / E-mail: Wells Richard Wells.Richard@GHD.com	Project #: 12599404	Street Address:
Phone #:	Client Purchase Order #:	City / State / Zip:
Sampler(s) Name(s) / Phone #: Marc Kemper 772-233-3016	Project Manager: Wells Richard	Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	Preserved Bottles	TCLP Dioxins/Furans 1311/1613B	TCLP Metals 1311/6010C	TCLP Mercury 1311/7470A	LAB USE ONLY
1	12599404-120622-S-MTK-WC-16	12/06/22	1040	MTK	S	2	None	X	X	X	
2	WC-15	12/06/22	1330	MTK	S	2	None	X	X	X	
3	WC-14	12/6/22	1410	MTK	S	2	None	X	X	X	
4	WC-13	12/6/22	1515	MTK	S	2	None	X	X	X	

12.06.22

Turnaround Time (Business days)

- [X] Standard 10 Business Days
- [ ] 5 Business Days *RUSH*
- [ ] 4 Business Days *RUSH*
- [ ] 3 Business Days *RUSH*
- [ ] 2 Business Days *RUSH*
- [ ] 1 Business Day *EMERGENCY*

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other ___

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

See SSOW

Sample Custody must be documented below each time samples change possession, including courier delivery. 10:00

	Relinquished by:	Date / Time:	Received By:	Date / Time:	Relinquished By:	Date / Time:	Received By:	Date / Time:
1		12-6-22/1700	1 Fedex		2 Fedex	12/7/22	2	
3			3		4		4	
5			5		Custody Seal #	Intact / Not intact / Absent	Preserved where applicable	On Ice ☑ Cooler Temp. °C: 2.1 Therm. ID:

http://www.sgs.com/en/terms-and-conditions

EHSA-QAC-0024-00-FORM-Houston - Standard COC

5.1 5

JD56730: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD56730 **Client:** GHD SERVICES INC. **Project:** SJRWP - PCFSE, HARRIS COUNTY, TX

Date / Time Received: 12/7/2022 10:00:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (2.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36867 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00020	.000034	.000095	0.000026	<0.00020

Associated samples MP36867: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36867 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	JD56635-1 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	0.0018	0.0020	90.0	75-125

Associated samples MP36867: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36867 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	JD56635-1 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0021	0.0020	105.0	15.4	20

Associated samples MP36867: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36867
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 12/11/22

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0017	0.0020	85.0	80-120

Associated samples MP36867: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.20	.017	.046		
Antimony	0.10	.0017	.0047	-0.00040	<0.10
Arsenic	0.10	.0021	.0028	-0.00050	<0.10
Barium	0.20	.0008	.013	-0.00060	<0.20
Beryllium	0.0020	.0003	.0005	0.0	<0.0020
Bismuth	0.020	.0023	.004		
Boron	0.10	.0023	.063		
Cadmium	0.0040	.0003	.001	0.00020	<0.0040
Calcium	5.0	.0066	.099		
Chromium	0.010	.0003	.002	0.00010	<0.010
Cobalt	0.050	.0004	.0026		
Copper	0.010	.0008	.0059		
Iron	0.10	.0053	.032		
Lead	0.10	.0011	.0018	0.00020	<0.10
Lithium	0.050	.0048	.0073		
Magnesium	5.0	.032	.14		
Manganese	0.015	.0001	.0014		
Molybdenum	0.020	.0006	.0036		
Nickel	0.010	.0004	.0017	-0.00010	<0.010
Potassium	10	.077	.2		
Selenium	0.10	.0032	.0049	0.0013	<0.10
Silicon	0.20	.0017	.1		
Silver	0.010	.001	.0019	0.00030	<0.010
Sodium	10	.034	.57		
Strontium	0.010	.0003	.001		
Sulfur	0.050	.003	.045		
Thallium	0.10	.0018	.0018		
Tin	0.010	.0008	.0037		
Titanium	0.010	.0005	.0025		
Tungsten	0.050	.0026	.04		
Vanadium	0.050	.0006	.0018	-0.00010	<0.050
Zinc	0.020	.0001	.0069		
Zirconium	0.010	.0003	.0041		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	RL	IDL	MDL	MB raw	final

Associated samples MP36886: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/11/22

Metal	JD56635-1 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony	0.0	1.8	2.0	90.0	75-125
Arsenic	0.051	1.9	2.0	92.5	75-125
Barium	0.37	2.1	2.0	86.5	75-125
Beryllium	0.00060	1.8	2.0	90.0	75-125
Bismuth					
Boron					
Cadmium	0.0023	1.8	2.0	89.9	75-125
Calcium					
Chromium	0.0040	1.8	2.0	89.8	75-125
Cobalt					
Copper					
Iron					
Lead	0.0078	2.0	2.0	99.6	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	0.029	2.1	2.0	103.6	75-125
Phosphorus					
Potassium					
Selenium	0.0	1.9	2.0	95.0	75-125
Silicon					
Silver	0.0	0.23	0.25	92.0	75-125
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium	0.0013	1.8	2.0	89.9	75-125
Zinc					
Zirconium					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	JD56635-1 Original MS	Spikelot MPSPK2	% Rec	QC Limits

Associated samples MP36886: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	JD56635-1 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	1.8	2.0	90.0	0.0	20
Arsenic	0.051	1.9	2.0	92.5	0.0	20
Barium	0.37	2.2	2.0	91.5	4.7	20
Beryllium	0.00060	1.8	2.0	90.0	0.0	20
Bismuth						
Boron						
Cadmium	0.0023	1.8	2.0	89.9	0.0	20
Calcium						
Chromium	0.0040	1.8	2.0	89.8	0.0	20
Cobalt						
Copper						
Iron						
Lead	0.0078	2.0	2.0	99.6	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	0.029	2.1	2.0	103.6	0.0	20
Phosphorus						
Potassium						
Selenium	0.0	1.9	2.0	95.0	0.0	20
Silicon						
Silver	0.0	0.24	0.25	96.0	4.3	20
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium	0.0013	1.8	2.0	89.9	0.0	20
Zinc						
Zirconium						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22

Metal	JD56635-1 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit

Associated samples MP36886: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:			12/11/22				12/11/22	
Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum								
Antimony	1.8	2.0	90.0	80-120	2.1	2.0	105.0	80-120
Arsenic	1.8	2.0	90.0	80-120	2.2	2.0	110.0	80-120
Barium	1.8	2.0	90.0	80-120	2.1	2.0	105.0	80-120
Beryllium	1.8	2.0	90.0	80-120	2.1	2.0	105.0	80-120
Boron								
Cadmium	1.8	2.0	90.0	80-120	2.1	2.0	105.0	80-120
Calcium								
Chromium	1.8	2.0	90.0	80-120	2.1	2.0	105.0	80-120
Cobalt								
Copper								
Iron								
Lead	2.0	2.0	100.0	80-120	2.4	2.0	120.0	80-120
Lithium								
Magnesium								
Manganese								
Molybdenum								
Nickel	2.0	2.0	100.0	80-120	2.5	2.0	125.0*(a	80-120
Phosphorus								
Potassium								
Selenium	1.8	2.0	90.0	80-120	2.2	2.0	110.0	80-120
Silicon								
Silver	0.23	0.25	92.0	80-120	0.28	0.25	112.0	80-120
Sodium								
Strontium								
Sulfur								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium	1.8	2.0	90.0	80-120	2.1	2.0	105.0	80-120
Zinc								
Zirconium								

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/11/22 12/11/22

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits

Associated samples MP36886: JD56730-1, JD56730-2, JD56730-3, JD56730-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Spike blank indicates possible high bias, but all associated samples < RL.

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: ug/l

Prep Date: 12/11/22

Metal	JD56635-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	51.0	53.7	5.3	0-10
Barium	371	385	3.6	0-10
Beryllium	0.600	0.00	100.0(a)	0-10
Bismuth				
Boron				
Cadmium	2.30	2.20	4.3	0-10
Calcium				
Chromium	4.00	4.30	7.5	0-10
Cobalt				
Copper				
Iron				
Lead	7.80	5.60	28.2 (a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	28.6	27.8	2.8	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium	1.30	0.00	100.0(a)	0-10
Zinc				
Zirconium				

Associated samples MP36886: JD56730-1, JD56730-2, JD56730-3, JD56730-4

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56730
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36886 Methods: SW846 6010D
Matrix Type: LEACHATE Units: ug/l

Prep Date: 12/11/22

	JD56635-1		QC
Metal	Original SDL 1:5	%DIF	Limits

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404 SSOW: 12599404-2022-002; PO# 340-009117

SGS Job Number: JD56827

Sampling Date: 12/07/22

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: 27

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD56827

SJRWP - PCFSE, Harris County, TX
Project No: 12599404 SSOW: 12599404-2022-002; PO# 340-009117

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD56827-1	12/07/22	09:30	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-12
JD56827-1A	12/07/22	09:30	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-12
JD56827-2	12/07/22	10:20	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-11
JD56827-2A	12/07/22	10:20	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-11
JD56827-3	12/07/22	11:20	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-9
JD56827-3A	12/07/22	11:20	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-9
JD56827-4	12/07/22	13:25	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-6
JD56827-4A	12/07/22	13:25	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-6
JD56827-5	12/07/22	14:30	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-3
JD56827-5A	12/07/22	14:30	MTK	12/07/22	SO	Soil	12599404-120722-S-MTK-WC-3

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD56827
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	12/15/2022 8:19:06 P

On 12/07/2022, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD56827 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Metals Analysis By Method SW846 6010D

Matrix: LEACHATE **Batch ID:** MP36893

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56863-1MS, JD56863-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Antimony, Arsenic, Beryllium, Cadmium, Chromium, Nickel, Selenium, Vanadium are outside control limits for sample MP36893-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP36899

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56863-1MS, JD56863-1MSD were used as the QC samples for metals.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD56827
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 12/07/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD56827-1	**12599404-120722-S-MTK-WC-12**					
Barium		2.2	0.20		mg/l	SW846 6010D
Cadmium		0.0055	0.0040		mg/l	SW846 6010D
Nickel		0.064	0.010		mg/l	SW846 6010D
JD56827-2	**12599404-120722-S-MTK-WC-11**					
Barium		0.76	0.20		mg/l	SW846 6010D
Nickel		0.032	0.010		mg/l	SW846 6010D
JD56827-3	**12599404-120722-S-MTK-WC-9**					
Barium		1.2	0.20		mg/l	SW846 6010D
Nickel		0.017	0.010		mg/l	SW846 6010D
JD56827-4	**12599404-120722-S-MTK-WC-6**					
Barium		0.36	0.20		mg/l	SW846 6010D
Cadmium		0.0056	0.0040		mg/l	SW846 6010D
Nickel		0.029	0.010		mg/l	SW846 6010D
JD56827-5	**12599404-120722-S-MTK-WC-3**					
Barium		0.59	0.20		mg/l	SW846 6010D
Cadmium		0.0046	0.0040		mg/l	SW846 6010D
Nickel		0.023	0.010		mg/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 12599404-120722-S-MTK-WC-12
Lab Sample ID: JD56827-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/07/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	2.2	D005	100	0.20	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0055	D006	1.0	0.0040	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/12/22	12/13/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.064			0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53447
(2) Instrument QC Batch: MA53456
(3) Prep QC Batch: MP36893
(4) Prep QC Batch: MP36899

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120722-S-MTK-WC-11
Lab Sample ID: JD56827-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/07/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.76	D005	100	0.20	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/12/22	12/13/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.032			0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53447
(2) Instrument QC Batch: MA53456
(3) Prep QC Batch: MP36893
(4) Prep QC Batch: MP36899

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120722-S-MTK-WC-9
Lab Sample ID: JD56827-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/07/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	1.2	D005	100	0.20	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/12/22	12/13/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.017			0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53447
(2) Instrument QC Batch: MA53456
(3) Prep QC Batch: MP36893
(4) Prep QC Batch: MP36899

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120722-S-MTK-WC-6
Lab Sample ID: JD56827-4
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/07/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.36	D005	100	0.20	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0056	D006	1.0	0.0040	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/12/22	12/13/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.029			0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53447
(2) Instrument QC Batch: MA53456
(3) Prep QC Batch: MP36893
(4) Prep QC Batch: MP36899

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120722-S-MTK-WC-3
Lab Sample ID: JD56827-5
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/07/22
Date Received: 12/07/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	0.59	D005	100	0.20	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Beryllium	< 0.0020			0.0020	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	0.0046	D006	1.0	0.0040	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/12/22	12/13/22	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.023			0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]
Vanadium	< 0.050			0.050	mg/l	1	12/12/22	12/13/22	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA53447
(2) Instrument QC Batch: MA53456
(3) Prep QC Batch: MP36893
(4) Prep QC Batch: MP36899

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Houston
10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.sgs.com/ehsusa

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD 56827

Client / Reporting Information

Company Name: GHD Services Inc
Street Address: 5551 Corporate Blvd #200
City: Baton Rouge State: LA Zip: 70808
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com
Phone #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016

Project Information

Project Name: San Jacinto Waste Pits
Street: 18350 Market St
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard
Attention:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:

Requested Analyses

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	Collection Date	Time	Sampled By	Matrix	# of bottles	Preserved Bottles	TCLP Dioxins/Furans	TCLP Metals	TCLP Mercury	LAB USE ONLY
1	12599404-126722-5-MTK-WC-12	12/7/22	0930	MTK	S	2	NONE	X	X	X	B24
2	-WC-11	12/7/22	1020	MTK	S	2	NONE	X	X	X	
3	-WC-9	12/7/22	1120	MTK	S	2	NONE	X	X	X	
4	-WC-6	12/7/22	1325	MTK	S	2	NONE	X	X	X	
5	-WC-3	12/7/22	1430	MTK	S	2	NONE	X	X	X	

12.07.22

Turnaround Time (Business days)

- [X] Standard 10 Business Days
- [ ] 5 Business Days *RUSH*
- [ ] 4 Business Days *RUSH*
- [ ] 3 Business Days *RUSH*
- [ ] 2 Business Days *RUSH*
- [ ] 1 Business Day *EMERGENCY*

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other ___

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

See SSOW

[redacted] TC23

[redacted]

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Date / Time:	Relinquished By:	Date / Time:	Received By:	Date / Time:
1		1 Fedex		2 Fedex	12/8/22 10:00	2	
3		3		4		4	
5		5		Custody Seal #	☐ Intact ☐ Not intact ☐ Absent	Preserved where applicable ☐	On Ice ☐ Therm. ID: Cooler Temp. °C: 4.0

http://www.sgs.com/en/terms-and-conditions

EHSA-QAC-0024-00-FORM-Houston - Standard COC

SGS Sample Receipt Summary

Job Number: JD56827 **Client:** GHD **Project:** SAN JOEITO WASTE PITS

Date / Time Received: 12/8/2022 10:00:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (4.0);

Cooler Temps (Corrected) °C: Cooler 1: (4.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JD56827: Chain of Custody
Page 2 of 2

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.20	.0092	.046		
Antimony	0.10	.0028	.0047	0.00040	<0.10
Arsenic	0.10	.0026	.0028	-0.00030	<0.10
Barium	0.20	.0002	.013	0.00090	<0.20
Beryllium	0.0020	.0002	.0005	0.0	<0.0020
Bismuth	0.020	.0025	.004		
Boron	0.10	.0018	.063		
Cadmium	0.0040	.0004	.001	0.00020	<0.0040
Calcium	5.0	.013	.099		
Chromium	0.010	.0007	.002	0.00020	<0.010
Cobalt	0.050	.0006	.0026		
Copper	0.010	.0007	.0059		
Iron	0.10	.0033	.032		
Lead	0.10	.002	.0018	-0.00050	<0.10
Lithium	0.050	.0015	.0073		
Magnesium	5.0	.025	.14		
Manganese	0.015	.0001	.0014		
Molybdenum	0.020	.0006	.0036		
Nickel	0.010	.0008	.0017	0.00020	<0.010
Phosphorus	0.050	.007	.018		
Potassium	10	.035	.2		
Selenium	0.10	.0036	.0049	0.0015	<0.10
Silicon	0.20	.0022	.1		
Silver	0.010	.0006	.0019	0.00070	<0.010
Sodium	10	.014	.57		
Strontium	0.010	.0001	.001		
Sulfur	0.050	.0037	.045		
Thallium	0.10	.0052	.0018		
Tin	0.010	.0014	.0037		
Titanium	0.010	.0008	.0025		
Tungsten	0.050	.0013	.04		
Vanadium	0.050	.0005	.0018	-0.00030	<0.050
Zinc	0.020	.0003	.0069		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22

Metal	RL	IDL	MDL	MB raw	final
Zirconium	0.010	.0005	.0041		

Associated samples MP36893: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:				12/12/22						12/12/22	
Metal	JD56863-1 Original	MS	Spikelot MPSPK2	% Rec	QC Limits	JD56863-1 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum										
Antimony	0.0048	2.0	2.0	99.8	75-125	0.0048	1.9	2.0	94.8	75-125
Arsenic	0.0059	2.0	2.0	99.7	75-125	0.0059	2.0	2.0	99.7	75-125
Barium	0.63	2.6	2.0	98.5	75-125	0.63	2.6	2.0	98.5	75-125
Beryllium	0.00030	2.0	2.0	100.0	75-125	0.00030	2.0	2.0	100.0	75-125
Bismuth										
Boron										
Cadmium	0.0039	2.1	2.0	104.8	75-125	0.0039	2.0	2.0	99.8	75-125
Chromium	0.0014	1.9	2.0	94.9	75-125	0.0014	1.9	2.0	94.9	75-125
Cobalt										
Copper										
Iron										
Lead	0.011	1.9	2.0	94.5	75-125	0.011	1.9	2.0	94.5	75-125
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel	0.017	2.0	2.0	99.2	75-125	0.017	1.9	2.0	94.2	75-125
Phosphorus										
Potassium										
Selenium	0.0077	2.1	2.0	104.6	75-125	0.0077	2.1	2.0	104.6	75-125
Silicon										
Silver	0.0	0.26	0.25	104.0	75-125	0.0	0.26	0.25	104.0	75-125
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium	0.0024	2.0	2.0	99.9	75-125	0.0024	1.9	2.0	94.9	75-125
Zinc										
Zirconium										

Associated samples MP36893: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:					12/12/22			
Metal	JD56863-1 Original MS	Spikelot MPSPK2	% Rec	QC Limits	JD56863-1 Original MS	Spikelot MPSPK2	% Rec	QC Limits

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:			12/12/22				12/12/22	
Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum								
Antimony	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Arsenic	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Barium	2.0	2.0	100.0	80-120	2.0	2.0	100.0	80-120
Beryllium	2.0	2.0	100.0	80-120	2.0	2.0	100.0	80-120
Bismuth								
Boron								
Cadmium	1.9	2.0	95.0	80-120	2.0	2.0	100.0	80-120
Calcium								
Chromium	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Cobalt								
Copper								
Iron								
Lead	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Lithium								
Magnesium								
Manganese								
Molybdenum								
Nickel	2.0	2.0	100.0	80-120	2.0	2.0	100.0	80-120
Phosphorus								
Potassium								
Selenium	1.9	2.0	95.0	80-120	2.0	2.0	100.0	80-120
Silicon								
Silver	0.24	0.25	96.0	80-120	0.25	0.25	100.0	80-120
Sodium								
Strontium								
Sulfur								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium	2.0	2.0	100.0	80-120	1.9	2.0	95.0	80-120
Zinc								

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22 12/12/22

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium								

Associated samples MP36893: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893 Methods: SW846 6010D
Matrix Type: LEACHATE Units: ug/l

Prep Date: 12/12/22

Metal	JD56863-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	4.80	0.00	100.0(a)	0-10
Arsenic	5.90	16.7	183.1(a)	0-10
Barium	630	658	4.5	0-10
Beryllium	0.300	0.00	100.0(a)	0-10
Bismuth				
Boron				
Cadmium	3.90	3.10	20.5 (a)	0-10
Chromium	1.40	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	11.3	12.3	8.8	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	16.6	18.3	10.2 (a)	0-10
Phosphorus				
Potassium				
Selenium	7.70	0.00	100.0(a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium	2.40	2.90	20.8 (a)	0-10
Zinc				
Zirconium				

Associated samples MP36893: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36893 Methods: SW846 6010D
Matrix Type: LEACHATE Units: ug/l

Prep Date: 12/12/22

	JD56863-1		QC
Metal	Original SDL 1:5	%DIF	Limits

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36899 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00020	.000024	.000095	-0.000030	<0.00020

Associated samples MP36899: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36899 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22

Metal	JD56863-1 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	0.0020	0.0020	100.0	75-125

Associated samples MP36899: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36899 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22

Metal	JD56863-1 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0020	0.0020	100.0	0.0	20

Associated samples MP36899: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56827
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36899 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/12/22

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0020	0.0020	100.0	80-120

Associated samples MP36899: JD56827-1, JD56827-2, JD56827-3, JD56827-4, JD56827-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-002; PO# 340-009117

SGS Job Number: JD56929

Sampling Date: 12/08/22

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: **31**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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EHS.US.CustomerCare@sgs.com

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Sample Summary

GHD Services Inc.

Job No: JD56929

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-002; PO# 340-009117

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD56929-1	12/08/22	09:05		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-4
JD56929-1A	12/08/22	09:05		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-4
JD56929-2	12/08/22	10:05		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-5
JD56929-2A	12/08/22	10:05		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-5
JD56929-3	12/08/22	11:20		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-8
JD56929-3A	12/08/22	11:20		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-8
JD56929-4	12/08/22	13:30		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-10
JD56929-4A	12/08/22	13:30		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-10
JD56929-5	12/08/22	14:30		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-7
JD56929-5A	12/08/22	14:30		12/09/22	SO	Soil	12599404-120822-S-MTK-WC-7

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD56929
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	1/4/2023 9:38:48 AM

On 12/09/2022, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD56929 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

Metals Analysis By Method SW846 6010D

Matrix: LEACHATE **Batch ID:** MP37194

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56929-1MS, JD56929-1MSD, JD56929-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Beryllium, Silver, Vanadium are outside control limits for sample MP37194-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP37194-SD1 for Nickel: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP37189

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56929-1MS, JD56929-1MSD were used as the QC samples for metals.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD56929
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 12/08/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD56929-1	**12599404-120822-S-MTK-WC-4**					
Barium		0.63	0.20		mg/l	SW846 6010D
Cadmium		0.0063	0.0040		mg/l	SW846 6010D
Nickel		0.026	0.010		mg/l	SW846 6010D
JD56929-2	**12599404-120822-S-MTK-WC-5**					
Barium		0.21	0.20		mg/l	SW846 6010D
Cadmium		0.018	0.0040		mg/l	SW846 6010D
JD56929-3	**12599404-120822-S-MTK-WC-8**					
Barium		0.56	0.20		mg/l	SW846 6010D
Cadmium		0.0054	0.0040		mg/l	SW846 6010D
Nickel		0.029	0.010		mg/l	SW846 6010D
JD56929-4	**12599404-120822-S-MTK-WC-10**					
Barium		0.44	0.20		mg/l	SW846 6010D
Cadmium		0.018	0.0040		mg/l	SW846 6010D
JD56929-5	**12599404-120822-S-MTK-WC-7**					
Barium		0.47	0.20		mg/l	SW846 6010D
Cadmium		0.0063	0.0040		mg/l	SW846 6010D
Nickel		0.030	0.010		mg/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 12599404-120822-S-MTK-WC-4
Lab Sample ID: JD56929-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/08/22
Date Received: 12/09/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	0.63	D005	100	0.20	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.0063	D006	1.0	0.0040	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/30/22	12/30/22	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.026			0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53519
(2) Instrument QC Batch: MA53540
(3) Prep QC Batch: MP37189
(4) Prep QC Batch: MP37194

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120822-S-MTK-WC-5
Lab Sample ID: JD56929-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/08/22
Date Received: 12/09/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	0.21	D005	100	0.20	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.018	D006	1.0	0.0040	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/30/22	12/30/22	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 0.010			0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53519
(2) Instrument QC Batch: MA53540
(3) Prep QC Batch: MP37189
(4) Prep QC Batch: MP37194

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120822-S-MTK-WC-8
Lab Sample ID: JD56929-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/08/22
Date Received: 12/09/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	0.56	D005	100	0.20	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.0054	D006	1.0	0.0040	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/30/22	12/30/22	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.029			0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53519
(2) Instrument QC Batch: MA53540
(3) Prep QC Batch: MP37189
(4) Prep QC Batch: MP37194

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120822-S-MTK-WC-10
Lab Sample ID: JD56929-4
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/08/22
Date Received: 12/09/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	0.44	D005	100	0.20	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.018	D006	1.0	0.0040	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/30/22	12/30/22	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 0.010			0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53519
(2) Instrument QC Batch: MA53540
(3) Prep QC Batch: MP37189
(4) Prep QC Batch: MP37194

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Report of Analysis

Client Sample ID: 12599404-120822-S-MTK-WC-7
Lab Sample ID: JD56929-5
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 12/08/22
Date Received: 12/09/22
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.10			0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	0.47	D005	100	0.20	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	< 0.0020			0.0020	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	0.0063	D006	1.0	0.0040	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	12/30/22	12/30/22	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	0.030			0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	< 0.050			0.050	mg/l	1	12/30/22	01/03/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA53519
(2) Instrument QC Batch: MA53540
(3) Prep QC Batch: MP37189
(4) Prep QC Batch: MP37194

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SO
SME

Fx: 5844-7368-9738

L

SGS CHAIN OF CUSTODY

JD56929

PROJECT INFO
PROJECT: San Jacinto Waste Pits
P.O. #: —
QUOTE #: —
SITE REF: Marc Kemper 772-233-3016
TURN AROUND TIME: Standard
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☐ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
GHD#12599404

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS: 5551 Corporate Blvd #200, Baton Rouge LA 70808
PHONE: EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

PRESERVATIVE: 1

ANALYSIS & METHOD

	SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	~~M1613B~~	~~M8290A~~	~~M1668A~~	~~M1668C~~	~~HR-PAH~~	~~M1699~~	~~PFAS 537.1~~	TPH TX 1005			QC MS	QC MSD	QC DUP	QTY	REMARKS
1	12599404-120822-S-MTK-WC-4	12/8/22	0905	C	S	1								X							
2	-WC-5		1005			1								X							
3	-WC-8		1120			1								X							D13
4	-WC-10		1330			1								X							4H5
5	-WC-7		1430			1								X							1408

12.08.22

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	12/8/22	1700	Fx
RELINQUISHED BY (2): Fx	DATE: 12/9/22	TIME: 1000	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:
COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: TEMP: °C
TRACKING #:

Page ____ of ____

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY | Initial Assessment Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.sgs.com/ehs
Label Verification AK 4B
Member of the SGS Group (SGS SA)

3.2°C

5.1
5

JD56929: Chain of Custody
Page 1 of 4

SGS Sample Receipt Summary

Job Number: JD56929 **Client:** GHD **Project:**

Date / Time Received: 12/9/2022 10:00:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.2);

Cooler Temps (Corrected) °C: Cooler 1: (3.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control _Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments 1). All sample GRO not collected to 5035 specifications. Lab will prep from intact GRO volume for medium level VOA analysis within hold time.

Responded to by: Kelly Ramos

Response Date: 12/10/2022

Please place on hold, TX 1005 should not be prepped the same as GRO

Job Change Order: JD56929

Requested Date: 12/12/2022 **Received Date:** 12/9/2022

Account Name: GHD Services Inc. **Due Date:** 12/12/2022

Project Description: SJRWP - PCFSE, Harris County, TX **Deliverable:** COMMBN

C/O Initiated By: KELLY.RAM **PM:** KR **TAT (Days):** 7

==========

Sample #: JD56929-1 thru 5 **Change:**

Dept: Please remove from hold and run for TCLPE, TCLPM, EBE, ENI, ESB,

TAT: 7

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Sample #: JD56929-1 thru 5 **Change:**

Dept: Please relog for TCLPE on A sample - need to leach two liters to send Wilmington!

TAT: 7

==========

Above Changes Per: Marc Kemper **Date/Time:** 12/12/2022

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

JD56929: Chain of Custody
Page 4 of 4

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37189 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/30/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00020	.000024	.000095	0.000078	<0.00020

Associated samples MP37189: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37189 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/30/22

Metal	JD56929-1 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	0.0022	0.0020	110.0	75-125

Associated samples MP37189: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37189 Methods: SW846 7470A
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/30/22

Metal	JD56929-1 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0022	0.0020	110.0	0.0	20

Associated samples MP37189: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37189
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 12/30/22

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0022	0.0020	110.0	80-120

Associated samples MP37189: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/30/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.20	.016	.046		
Antimony	0.10	.0025	.0047	-0.00080	<0.10
Arsenic	0.10	.002	.0028	-0.00080	<0.10
Barium	0.20	.0004	.013	0.00010	<0.20
Beryllium	0.0020	.0001	.0005	0.0	<0.0020
Bismuth	0.020	.0036	.004		
Boron	0.10	.0019	.063		
Cadmium	0.0040	.0004	.001	0.00030	<0.0040
Calcium	5.0	.0056	.099		
Chromium	0.010	.0005	.002	0.00060	<0.010
Cobalt	0.050	.0005	.0026		
Copper	0.010	.001	.0059		
Iron	0.10	.011	.032		
Lead	0.10	.0012	.0018	-0.00020	<0.10
Lithium	0.050	.0023	.0073		
Magnesium	5.0	.065	.14		
Manganese	0.015	.0002	.0014		
Molybdenum	0.020	.0004	.0036		
Nickel	0.010	.0003	.0017	0.00010	<0.010
Phosphorus	0.050	.0041	.018		
Potassium	10	.055	.2		
Selenium	0.10	.0035	.0049	0.0013	<0.10
Silicon	0.20	.0016	.1		
Silver	0.010	.0011	.0019	-0.00010	<0.010
Sodium	10	.011	.57		
Strontium	0.010	.0001	.001		
Sulfur	0.050	.0044	.045		
Thallium	0.10	.0025	.0018		
Tin	0.010	.001	.0037		
Titanium	0.010	.0004	.0025		
Tungsten	0.050	.0028	.04		
Vanadium	0.050	.0006	.0018	0.0	<0.050
Zinc	0.020	.0001	.0069		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/30/22

Metal	RL	IDL	MDL	MB raw	final
Zirconium	0.010	.0004	.0041		

Associated samples MP37194: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/30/22

Metal	JD56929-1 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony	0.0	1.9	2.0	95.0	75-125
Arsenic	0.0086	2.0	2.0	99.6	75-125
Barium	0.63	2.5	2.0	93.5	75-125
Beryllium	0.0016	1.9	2.0	94.9	75-125
Bismuth					
Boron					
Cadmium	0.0063	2.0	2.0	99.7	75-125
Chromium	0.0	1.9	2.0	95.0	75-125
Cobalt					
Copper					
Iron					
Lead	0.018	1.9	2.0	94.1	75-125
Lithium					
Magnesium					
Molybdenum					
Nickel	0.026	1.9	2.0	93.7	75-125
Phosphorus					
Potassium					
Selenium	0.0	2.1	2.0	105.0	75-125
Silicon					
Silver	0.0059	0.27	0.25	105.6	75-125
Strontium					
Sulfur					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium	0.0035	1.9	2.0	94.8	75-125
Zinc					
Zirconium					

Associated samples MP37194: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194 Methods: SW846 6010D
Matrix Type: LEACHATE Units: mg/l

Prep Date: 12/30/22

Metal	JD56929-1 Original MS	Spikelot MPSPK2	% Rec	QC Limits

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/30/22

Metal	JD56929-1 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	1.9	2.0	95.0	0.0	20
Arsenic	0.0086	2.0	2.0	99.6	0.0	20
Barium	0.63	2.5	2.0	93.5	0.0	20
Beryllium	0.0016	1.9	2.0	94.9	0.0	20
Bismuth						
Boron						
Cadmium	0.0063	2.0	2.0	99.7	0.0	20
Chromium	0.0	1.9	2.0	95.0	0.0	20
Cobalt						
Copper						
Iron						
Lead	0.018	1.9	2.0	94.1	0.0	20
Lithium						
Magnesium						
Molybdenum						
Nickel	0.026	1.9	2.0	93.7	0.0	20
Phosphorus						
Potassium						
Selenium	0.0	2.1	2.0	105.0	0.0	20
Silicon						
Silver	0.0059	0.27	0.25	105.6	0.0	20
Strontium						
Sulfur						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium	0.0035	1.9	2.0	94.8	0.0	20
Zinc						
Zirconium						

Associated samples MP37194: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date: 12/30/22

Metal	JD56929-1 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:			12/30/22				12/30/22	
Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum								
Antimony	1.8	2.0	90.0	80-120	1.7	2.0	85.0	80-120
Arsenic	1.8	2.0	90.0	80-120	1.9	2.0	95.0	80-120
Barium	1.9	2.0	95.0	80-120	1.8	2.0	90.0	80-120
Beryllium	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Bismuth								
Boron								
Cadmium	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Calcium								
Chromium	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Cobalt								
Copper								
Iron								
Lead	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Lithium								
Magnesium								
Manganese								
Molybdenum								
Nickel	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Phosphorus								
Potassium								
Selenium	1.9	2.0	95.0	80-120	2.0	2.0	100.0	80-120
Silicon								
Silver	0.24	0.25	96.0	80-120	0.25	0.25	100.0	80-120
Sodium								
Strontium								
Sulfur								
Thallium								
Tin								
Titanium								
Tungsten								
Vanadium	1.9	2.0	95.0	80-120	1.9	2.0	95.0	80-120
Zinc								

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: mg/l

Prep Date:		12/30/22				12/30/22	
Metal	BSP Result	Spikelot MPSPK2 % Rec	QC Limits	BSP Result	Spikelot MPSPK2 % Rec	QC Limits	
Zirconium							

Associated samples MP37194: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194
Matrix Type: LEACHATE

Methods: SW846 6010D
Units: ug/l

Prep Date: 12/30/22

Metal	JD56929-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	8.60	0.00	100.0(a)	0-10
Barium	627	644	2.7	0-10
Beryllium	1.60	2.10	31.3 (a)	0-10
Bismuth				
Boron				
Cadmium	6.30	6.70	6.3	0-10
Calcium				
Chromium	0.00	2.90	NC	0-10
Cobalt				
Copper				
Iron				
Lead	18.3	19.7	7.7	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	25.6	28.6	11.7*(b)	0-10
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	5.90	7.40	25.4 (a)	0-10
Strontium				
Sulfur				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium	3.50	8.60	145.7(a)	0-10
Zinc				
Zirconium				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56929
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP37194 Methods: SW846 6010D
Matrix Type: LEACHATE Units: ug/l

Prep Date: 12/30/22

	JD56929-1		QC
Metal	Original SDL 1:5	%DIF	Limits

Associated samples MP37194: JD56929-1, JD56929-2, JD56929-3, JD56929-4, JD56929-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12592446;EMPCO-Sugarland Station/Terminal

12599404

SGS Job Number: LA85803

Sampling Date: 12/02/22

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
clay.clark@ghd.com

ATTN: Clay Clark

Total number of pages in report: **18**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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Test results relate only to samples analyzed.

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Sample Summary

GHD Services Inc.

Job No: LA85803

12592446;EMPCO-Sugarland Station/Terminal
Project No: 12599404

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies:							
Organics ND = Not detected above the RL							
LA85803-1	12/02/22	09:00		12/03/22	SO	Soil	12599404-120222-5-MTK-WC-26
LA85803-2	12/02/22	10:00		12/03/22	SO	Soil	12599404-120222-5-MTK-WC-23
LA85803-3	12/02/22	11:00		12/03/22	SO	Soil	12599404-120222-5-MTK-WC-22
LA85803-4	12/02/22	13:15		12/03/22	SO	Soil	12599404-120222-5-MTK-WC-21
LA85803-5	12/02/22	14:05		12/03/22	SO	Soil	12599404-120222-5-MTK-WC-20
LA85803-6	12/02/22	15:20		12/03/22	SO	Soil	12599404-120222-5-MTK-WC-19

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA85803
Account: GHD Services Inc.
Project: 12592446;EMPCO-Sugarland Station/Terminal
Collected: 12/02/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA85803-1	**12599404-120222-5-MTK-WC-26**					
No hits reported in this sample.						
LA85803-2	**12599404-120222-5-MTK-WC-23**					
No hits reported in this sample.						
LA85803-3	**12599404-120222-5-MTK-WC-22**					
TPH (> C12-C28)		42.7	25		mg/kg	TNRCC 1005
TPH (C6-C35)		42.7	25		mg/kg	TNRCC 1005
LA85803-4	**12599404-120222-5-MTK-WC-21**					
No hits reported in this sample.						
LA85803-5	**12599404-120222-5-MTK-WC-20**					
No hits reported in this sample.						
LA85803-6	**12599404-120222-5-MTK-WC-19**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-120222-5-MTK-WC-26		
Lab Sample ID:	LA85803-1	**Date Sampled:**	12/02/22
Matrix:	SO - Soil	**Date Received:**	12/03/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	80.0 [a]
Project:	12592446;EMPCO-Sugarland Station/Terminal		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124450.D	1	12/07/22 19:38	KM	12/06/22 08:30	OP21856	GJJ2450
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	24	mg/kg	
	TPH (> C12-C28)	ND	24	mg/kg	
	TPH (> C28-C35)	ND	24	mg/kg	
	TPH (C6-C35)	ND	24	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		70-130%
98-08-8	aaa-Trifluorotoluene	112%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120222-5-MTK-WC-23		
Lab Sample ID:	LA85803-2	**Date Sampled:**	12/02/22
Matrix:	SO - Soil	**Date Received:**	12/03/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	80.5 [a]
Project:	12592446;EMPCO-Sugarland Station/Terminal		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124451.D	1	12/07/22 20:04	KM	12/06/22 08:30	OP21856	GJJ2450
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	103%		70-130%
98-08-8	aaa-Trifluorotoluene	111%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120222-5-MTK-WC-22		
Lab Sample ID:	LA85803-3	**Date Sampled:**	12/02/22
Matrix:	SO - Soil	**Date Received:**	12/03/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	76.7 [a]
Project:	12592446;EMPCO-Sugarland Station/Terminal		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124466.D	1	12/08/22 19:50	KM	12/06/22 08:30	OP21856	GJJ2451
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	42.7	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	42.7	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	106%		70-130%
98-08-8	aaa-Trifluorotoluene	118%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120222-5-MTK-WC-21		
Lab Sample ID:	LA85803-4	**Date Sampled:**	12/02/22
Matrix:	SO - Soil	**Date Received:**	12/03/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	73.5 [a]
Project:	12592446;EMPCO-Sugarland Station/Terminal		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124453.D	1	12/07/22 20:56	KM	12/06/22 08:30	OP21856	GJJ2450
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		70-130%
98-08-8	aaa-Trifluorotoluene	120%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120222-5-MTK-WC-20		
Lab Sample ID:	LA85803-5	**Date Sampled:**	12/02/22
Matrix:	SO - Soil	**Date Received:**	12/03/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	80.2 [a]
Project:	12592446;EMPCO-Sugarland Station/Terminal		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124455.D	1	12/07/22 21:47	KM	12/06/22 08:30	OP21856	GJJ2450
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	24	mg/kg	
	TPH (> C12-C28)	ND	24	mg/kg	
	TPH (> C28-C35)	ND	24	mg/kg	
	TPH (C6-C35)	ND	24	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		70-130%
98-08-8	aaa-Trifluorotoluene	117%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-120222-5-MTK-WC-19
Lab Sample ID: LA85803-6
Matrix: SO - Soil
Method: TNRCC 1005 TX1005
Project: 12592446;EMPCO-Sugarland Station/Terminal

Date Sampled: 12/02/22
Date Received: 12/03/22
Percent Solids: 80.9 [a]

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124456.D	1	12/07/22 22:13	KM	12/06/22 08:30	OP21856	GJJ2450
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		70-130%
98-08-8	aaa-Trifluorotoluene	121%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LA85803

SGS

CHAIN OF CUSTODY

PROJECT INFO
PROJECT: 12599404
P.O. #:
QUOTE #:
SITE REF: Marc Kemper
TURN AROUND TIME: Standard TAT
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☐ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
See SSOW

PRESERVATIVE
None

ANALYSIS & METHOD

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD Services Inc
CONTACT: Wells Richard
ADDRESS: 5551 Corporate Blvd #200, Baton Rouge LA 70808
PHONE: 225-454-4363 EMAIL: wells.richard.com

INVOICE TO (☐ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

	SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	TPH									MS MSD	MS/ DUP	REMARKS
1	12599404-120222-S-MTK-WC-26	12/2/22	0900	1	S	X								1			TPH collected in bulk jar,
2	-WC-23		1000	1	S	X								1			not per TNRCC Method
3	-WC-22		1100	1	S	X								1			
4	-WC-21		1315	1	S	X								1			
5	-WC-20		1405	1	S	X								1			CS ON cooler (S.4 IR001)
6	-WC-19		1520	1	S	X								1			
–	Temp Blank	–	–	1	W									–			YM-30 (7D-3)
																	YL-34 (B)
																	Client d/o.

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY: DATE: TIME:
[signature]	12/3/22	1130	[signature]	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER: TEMP: °C
				TRACKING #:

Page ____ of ____

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4.1
4

LA85803: Chain of Custody
Page 1 of 3

SGS Sample Receipt Summary

Job Number: LA85803 **Client:** GHD **Project:** 12599404

Date / Time Received: 12/3/2022 11:30:00 AM **Delivery Method:** CLIENT DROP OFF **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (5.4/5.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	IR001;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Problem Resolution

Job Number: LA85803

CSR: _____ **Response Date:** _____

Response:

LA85803: Chain of Custody
Page 3 of 3

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA85803
Account: CRALABR GHD Services Inc.
Project: 12592446;EMPCO-Sugarland Station/Terminal

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21856-MB	JF124434.D	1	12/07/22	KM	12/06/22	OP21856	GJJ2450

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85803-1, LA85803-2, LA85803-3, LA85803-4, LA85803-5, LA85803-6

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	111%	70-130%
98-08-8	aaa-Trifluorotoluene	121%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA85803
Account: CRALABR GHD Services Inc.
Project: 12592446;EMPCO-Sugarland Station/Terminal

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21856-BS	JF124435.D	1	12/07/22	KM	12/06/22	OP21856	GJJ2450
OP21856-BSD	JF124436.D	1	12/07/22	KM	12/06/22	OP21856	GJJ2450

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85803-1, LA85803-2, LA85803-3, LA85803-4, LA85803-5, LA85803-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	307	123	299	120	3	75-125/20
	TPH (> C12-C28)	250	332	99 [a]	402	119 [a]	19	75-125/20
	TPH (C6-C35)	500	639	95 [a]	701	104 [a]	9	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	110%	105%	70-130%
98-08-8	aaa-Trifluorotoluene	120%	114%	70-130%

(a) Recovery corrected for spike concentration confirmed by spike screen.

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12599404;San Jacinto Waste Pits

SGS Job Number: LA85838

Sampling Date: 12/05/22

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathy Shaw

Total number of pages in report: 17

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

GHD Services Inc.

Job No: LA85838

12599404;San Jacinto Waste Pits

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the RL							
LA85838-1	12/05/22	09:00		12/06/22	SO	Soil	12599404-120522-5-MTK-WC-18
LA85838-2	12/05/22	10:15		12/06/22	SO	Soil	12599404-120522-5-MTK-WC-17
LA85838-3	12/05/22	11:15		12/06/22	SO	Soil	12599404-120522-5-MTK-WC-25
LA85838-4	12/05/22	14:25		12/06/22	SO	Soil	12599404-120522-5-MTK-WC-24

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA85838
Account: GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits
Collected: 12/05/22

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA85838-1	**12599404-120522-5-MTK-WC-18**					
No hits reported in this sample.						
LA85838-2	**12599404-120522-5-MTK-WC-17**					
No hits reported in this sample.						
LA85838-3	**12599404-120522-5-MTK-WC-25**					
No hits reported in this sample.						
LA85838-4	**12599404-120522-5-MTK-WC-24**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-120522-5-MTK-WC-18		
Lab Sample ID:	LA85838-1	**Date Sampled:**	12/05/22
Matrix:	SO - Soil	**Date Received:**	12/06/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	74.4 [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124526.D	1	12/14/22 18:25	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	107%		70-130%
98-08-8	aaa-Trifluorotoluene	113%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120522-5-MTK-WC-17		
Lab Sample ID:	LA85838-2	**Date Sampled:**	12/05/22
Matrix:	SO - Soil	**Date Received:**	12/06/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	79.2 [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124527.D	1	12/14/22 18:51	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	107%		70-130%
98-08-8	aaa-Trifluorotoluene	121%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120522-5-MTK-WC-25		
Lab Sample ID:	LA85838-3	**Date Sampled:**	12/05/22
Matrix:	SO - Soil	**Date Received:**	12/06/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	79.3 [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124528.D	1	12/14/22 19:17	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.4 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	24	mg/kg	
	TPH (> C12-C28)	ND	24	mg/kg	
	TPH (> C28-C35)	ND	24	mg/kg	
	TPH (C6-C35)	ND	24	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		70-130%
98-08-8	aaa-Trifluorotoluene	115%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120522-5-MTK-WC-24		
Lab Sample ID:	LA85838-4	**Date Sampled:**	12/05/22
Matrix:	SO - Soil	**Date Received:**	12/06/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	80.9 [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124529.D	1	12/14/22 19:43	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		70-130%
98-08-8	aaa-Trifluorotoluene	109%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LA85838

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Juan Waste Pits
P.O. #:
QUOTE #:
SITE REF:
TURN AROUND TIME: Standard TAT
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☐ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
#1599404

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD Services Inc
CONTACT: Wells Richard
ADDRESS: 5551 Corporate Blvd #200
PHONE: 225-754-4363 EMAIL: Wells.Richard@ghd.com

INVOICE TO (✓CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

	SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE: None	ANALYSIS & METHOD: TPH TX1005	MS MSD	MS/ DUP	REMARKS
1	[illegible]-WC-18	12/5/22	0900	1	S		X			TPH collected in both jars for TX 1005
2	-WC-17		1015	1	S		X			
3	-WC-25		1115	1	S		X			
4	-WC-24		1425	1	S		X			
	Temp Blank									0.5°C T-26 (TN002) YSI (9)
								12.05.22		

COLLECTED/RELINQUISHED BY (1): GHD	DATE: 12/5/22	TIME: 17:00	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE: TIME:
RELINQUISHED BY (2):	DATE: 12/6	TIME: 0910	RECEIVED BY:	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT	
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT	
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER:	TEMP. °C
				TRACKING #:	

SGS NORTH AMERICA INC. ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment
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LA85838: Chain of Custody
Page 1 of 4

SAMPLE ACCEPTANCE POLICY

The Sample Acceptance Policy is a NELAC requirement that outlines the circumstances under which samples are accepted or rejected. Data from any samples that do not meet the following criteria are qualified in a manner that clearly defines the nature and substance of the variation. The most relevant ones are captured on the sample receipt login form.

The following information should be provided, at minimum, as well as other areas of concern:

- Sample identification, date/time and location of collection
- Preservation type
- Collector's name
- Sample type
- Unique ID (indelible ink) on the water-resistant container label
- Use of appropriate containers (Teflon®-lined top glass amber or protected from light)
- Adherence to specified holding times
- Adequate sample volume (enough for a repeat analysis)

When samples are received in condition that could possibly alter the sample integrity including some of the above requirements, SGS will contact the client for resolution of the issues. Generally, SGS will assess the sample condition and offer an opinion on the suitability of the samples submitted for analysis.

Please note that samples will be disposed of 90 days following the issuance of a report unless an archiving request is noted. If samples are archived charges may be assessed after 90 days in the freezer or 12 months in cold storage.

NELAC REQUIREMENTS

Under NELAC, we are required to inform our clients who request analyses by SW846 methodology that either a matrix spike (MS)/matrix spike duplicate (MSD) set, or a MS/sample duplicate (DUP) set be analyzed with each prep batch. The samples chosen for this purpose must be clearly identified on the documentation accompanying the samples.

Our COC is modified so that this identification can be made easily. Indicate by marking "yes" or 'X" in the box next to samples which require MS/MSD and/or sample duplicate tests. THESE QC SAMPLES ARE BILLABLE AT THE UNIT RATE.

SGS will provide batch QC for any projects that DO NOT provide the necessary sample volumes if at all possible. SGS will narrate any projects that do not have the required matrix spike (MS)/matrix spike duplicate (MSD) set, or a MS/sample duplicate (DUP) set.

Thank you for your attention and cooperation.

TERMS & CONDITIONS

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

CONTACTS

SGS NORTH AMERICA INC.
ENVIRONMENT, HEALTH & SAFETY

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SGS-00055 (01/16)
WHITE - Retained by Lab
YELLOW - Retained by Client

WHEN YOU NEED TO BE SURE SGS

LA85838: Chain of Custody
Page 2 of 4

SGS Sample Receipt Summary

Job Number: LA85838 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 12/6/2022 9:10:00 AM **Delivery Method:** SGS **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (2.6/2.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	IR002;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Problem Resolution

Job Number: LA85838

CSR: _____ **Response Date:** _____

Response:

LA85838: Chain of Custody
Page 4 of 4

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA85838
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21914-MB	JF124522.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85838-1, LA85838-2, LA85838-3, LA85838-4

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	74%	70-130%
98-08-8	aaa-Trifluorotoluene	92%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA85838
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21914-BS	JF124523.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456
OP21914-BSD	JF124524.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85838-1, LA85838-2, LA85838-3, LA85838-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	263	105	215	86	20	75-125/20
	TPH (> C12-C28)	250	233	93	253	101	8	75-125/20
	TPH (> C28-C35)		ND		ND		nc	75-125/20
	TPH (C6-C35)	500	496	99	468	94	6	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	109%	107%	70-130%
98-08-8	aaa-Trifluorotoluene	118%	117%	70-130%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12599404;San Jacinto Waste Pits

SGS Job Number: LA85924

Sampling Date: 12/06/22

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathy Shaw

Total number of pages in report: **20**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: LA85924

12599404;San Jacinto Waste Pits

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies:							
Organics ND = Not detected above the RL							
LA85924-1	12/06/22	08:40		12/07/22	SO	Soil	12599404-120622-MTK-WC-1
LA85924-2	12/06/22	09:40		12/07/22	SO	Soil	12599404-120622-MTK-WC-2
LA85924-3	12/06/22	10:40		12/07/22	SO	Soil	12599404-120622-MTK-WC-16
LA85924-4	12/06/22	13:30		12/07/22	SO	Soil	12599404-120622-MTK-WC-15
LA85924-5	12/06/22	14:10		12/07/22	SO	Soil	12599404-120622-MTK-WC-14
LA85924-6	12/06/22	15:15		12/07/22	SO	Soil	12599404-120622-MTK-WC-13

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA85924
Account: GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits
Collected: 12/06/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA85924-1	**12599404-120622-MTK-WC-1**					
No hits reported in this sample.						
LA85924-2	**12599404-120622-MTK-WC-2**					
No hits reported in this sample.						
LA85924-3	**12599404-120622-MTK-WC-16**					
TPH (> C12-C28)		237	33		mg/kg	TNRCC 1005
TPH (> C28-C35)		98.3	33		mg/kg	TNRCC 1005
TPH (C6-C35)		336	33		mg/kg	TNRCC 1005
LA85924-4	**12599404-120622-MTK-WC-15**					
TPH (> C12-C28)		44.5	34		mg/kg	TNRCC 1005
TPH (> C28-C35)		51.1	34		mg/kg	TNRCC 1005
TPH (C6-C35)		95.6	34		mg/kg	TNRCC 1005
LA85924-5	**12599404-120622-MTK-WC-14**					
No hits reported in this sample.						
LA85924-6	**12599404-120622-MTK-WC-13**					
TPH (> C12-C28)		82.8	34		mg/kg	TNRCC 1005
TPH (C6-C35)		82.8	34		mg/kg	TNRCC 1005

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-120622-MTK-WC-1		
Lab Sample ID:	LA85924-1	**Date Sampled:**	12/06/22
Matrix:	SO - Soil	**Date Received:**	12/07/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	61.5
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124531.D	1	12/14/22 20:35	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	40	mg/kg	
	TPH (> C12-C28)	ND	40	mg/kg	
	TPH (> C28-C35)	ND	40	mg/kg	
	TPH (C6-C35)	ND	40	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	112%		70-130%
98-08-8	aaa-Trifluorotoluene	124%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120622-MTK-WC-2		
Lab Sample ID:	LA85924-2	**Date Sampled:**	12/06/22
Matrix:	SO - Soil	**Date Received:**	12/07/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	74.7
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124533.D	1	12/14/22 21:26	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	33	mg/kg	
	TPH (> C12-C28)	ND	33	mg/kg	
	TPH (> C28-C35)	ND	33	mg/kg	
	TPH (C6-C35)	ND	33	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	112%		70-130%
98-08-8	aaa-Trifluorotoluene	122%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120622-MTK-WC-16		
Lab Sample ID:	LA85924-3	**Date Sampled:**	12/06/22
Matrix:	SO - Soil	**Date Received:**	12/07/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	72.6
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124534.D	1	12/14/22 21:52	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	33	mg/kg	
	TPH (> C12-C28)	237	33	mg/kg	
	TPH (> C28-C35)	98.3	33	mg/kg	
	TPH (C6-C35)	336	33	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		70-130%
98-08-8	aaa-Trifluorotoluene	121%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120622-MTK-WC-15		
Lab Sample ID:	LA85924-4	**Date Sampled:**	12/06/22
Matrix:	SO - Soil	**Date Received:**	12/07/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	71.3
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124535.D	1	12/14/22 22:18	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	34	mg/kg	
	TPH (> C12-C28)	44.5	34	mg/kg	
	TPH (> C28-C35)	51.1	34	mg/kg	
	TPH (C6-C35)	95.6	34	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	103%		70-130%
98-08-8	aaa-Trifluorotoluene	116%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120622-MTK-WC-14		
Lab Sample ID:	LA85924-5	**Date Sampled:**	12/06/22
Matrix:	SO - Soil	**Date Received:**	12/07/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	76.2
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124536.D	1	12/14/22 22:44	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.4 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	32	mg/kg	
	TPH (> C12-C28)	ND	32	mg/kg	
	TPH (> C28-C35)	ND	32	mg/kg	
	TPH (C6-C35)	ND	32	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		70-130%
98-08-8	aaa-Trifluorotoluene	121%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120622-MTK-WC-13		
Lab Sample ID:	LA85924-6	**Date Sampled:**	12/06/22
Matrix:	SO - Soil	**Date Received:**	12/07/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	71.2
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124537.D	1	12/14/22 23:10	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	34	mg/kg	
	TPH (> C12-C28)	82.8	34	mg/kg	
	TPH (> C28-C35)	ND	34	mg/kg	
	TPH (C6-C35)	82.8	34	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	106%		70-130%
98-08-8	aaa-Trifluorotoluene	119%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS CHAIN OF CUSTODY

LA 85924

PROJECT INFO
PROJECT: San Jacinto Waste Pits
~~PO #~~: PN 12599404
QUOTE #:
SITE REF:
TURN AROUND TIME: See remarks
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☐ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

PRESERVATIVE: None

ANALYSIS & METHOD: TPH TX 1005

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD Services Inc
CONTACT: Wells Richard
ADDRESS: 5551 Corporate Blvd #200, Baton Rouge, LA 70808
PHONE: 225-454-4363 EMAIL: Wells.Richard@GHD.com

INVOICE TO (☐ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

	SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	TPH	MS MSD	MS/ DUP	REMARKS
1	12599404-1206-22-S-MTIC-WC-1	12/6/22	08:40	1	S	X			WC-1 & WC-2 are 5-day TAT
2	-WC-2	12/6/22	09:40	1	S	X			
3	-WC-16	12/6/22	1040	1	S	X			All other samples are standard
4	-WC-15	12/6/22	1330	1	S	X			TAT
5	-WC-14	12/6/22	1410	1	S	X			
6	-WC-13	12/6/22	1515	1	S	X			TPH collected in bulk jar for
	Temp Blank	—	—	1	W				TX 1005
	RUSH								(7) LSBC Temp: 1.6 IR001 RM-42 B2

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY: DATE: TIME:
[signature]	12/6/22	1700	FedEx	12/7/22 9:40
RELINQUISHED BY (2): FedEx	DATE: 12/7/22	TIME: 9:40	RECEIVED BY: Mark Reed	COOLER SEAL: ☑ INTACT ☐ BROKEN ☐ ABSENT
				CONTAINER SEALS: ☑ INTACT ☐ BROKEN ☐ ABSENT
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER: TEMP: °C
				TRACKING #:

Page ____ of ____ SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

LA85924: Chain of Custody
Page 1 of 5

SAMPLE ACCEPTANCE POLICY

The Sample Acceptance Policy is a NELAC requirement that outlines the circumstances under which samples are accepted or rejected. Data from any samples that do not meet the following criteria are qualified in a manner that clearly defines the nature and substance of the variation. The most relevant ones are captured on the sample receipt login form.

The following information should be provided, at minimum, as well as other areas of concern:

- Sample identification, date/time and location of collection
- Preservation type
- Collector's name
- Sample type
- Unique ID (indelible ink) on the water-resistant container label
- Use of appropriate containers (Teflon®-lined top glass amber or protected from light)
- Adherence to specified holding times
- Adequate sample volume (enough for a repeat analysis)

When samples are received in condition that could possibly alter the sample integrity including some of the above requirements, SGS will contact the client for resolution of the issues. Generally, SGS will assess the sample condition and offer an opinion on the suitability of the samples submitted for analysis.

Please note that samples will be disposed of 90 days following the issuance of a report unless an archiving request is noted. If samples are archived charges may be assessed after 90 days in the freezer or 12 months in cold storage.

NELAC REQUIREMENTS

Under NELAC, we are required to inform our clients who request analyses by SW846 methodology that either a matrix spike (MS)/matrix spike duplicate (MSD) set, or a MS/sample duplicate (DUP) set be analyzed with each prep batch. The samples chosen for this purpose must be clearly identified on the documentation accompanying the samples.

Our COC is modified so that this identification can be made easily. Indicate by marking "yes" or 'X" in the box next to samples which require MS/MSD and/or sample duplicate tests. THESE QC SAMPLES ARE BILLABLE AT THE UNIT RATE.

SGS will provide batch QC for any projects that DO NOT provide the necessary sample volumes if at all possible. SGS will narrate any projects that do not have the required matrix spike (MS)/matrix spike duplicate (MSD) set, or a MS/sample duplicate (DUP) set.

Thank you for your attention and cooperation.

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CONTACTS

SGS NORTH AMERICA INC.
ENVIRONMENT, HEALTH & SAFETY

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SGS-00058 (01/16)
WHITE - Retained by Lab
YELLOW - Retained by Client

WHEN YOU NEED TO BE SURE SGS

LA85924: Chain of Custody
Page 3 of 5

SGS Sample Receipt Summary

Job Number: LA85924 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 12/7/2022 9:40:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (1.6/1.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	IR001;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Problem Resolution

Job Number: LA85924

CSR: _____ **Response Date:** _____

Response:

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA85924
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21914-MB	JF124522.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85924-1, LA85924-2, LA85924-3, LA85924-4, LA85924-5, LA85924-6

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	74%	70-130%
98-08-8	aaa-Trifluorotoluene	92%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA85924
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21914-BS	JF124523.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456
OP21914-BSD	JF124524.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85924-1, LA85924-2, LA85924-3, LA85924-4, LA85924-5, LA85924-6

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	263	105	215	86	20	75-125/20
	TPH (> C12-C28)	250	233	93	253	101	8	75-125/20
	TPH (> C28-C35)		ND		ND		nc	75-125/20
	TPH (C6-C35)	500	496	99	468	94	6	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	109%	107%	70-130%
98-08-8	aaa-Trifluorotoluene	118%	117%	70-130%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12599404;San Jacinto Waste Pits

SGS Job Number: LA85970

Sampling Date: 12/07/22

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathy Shaw

Total number of pages in report: **18**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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Sample Summary

GHD Services Inc.

Job No: LA85970

12599404;San Jacinto Waste Pits

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the RL							
LA85970-1	12/07/22	09:30		12/08/22	SO	Soil	12599404-120722-S-MTK-WC-12
LA85970-2	12/07/22	10:20		12/08/22	SO	Soil	12599404-120722-S-MTK-WC-11
LA85970-3	12/07/22	11:20		12/08/22	SO	Soil	12599404-120722-S-MTK-WC-9
LA85970-4	12/07/22	13:25		12/08/22	SO	Soil	12599404-120722-S-MTK-WC-6
LA85970-5	12/07/22	14:30		12/08/22	SO	Soil	12599404-120722-S-MTK-WC-3

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA85970
Account: GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits
Collected: 12/07/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA85970-1	**12599404-120722-S-MTK-WC-12**					
TPH (C6-C12)		79.6	32		mg/kg	TNRCC 1005
TPH (> C12-C28)		2040	32		mg/kg	TNRCC 1005
TPH (> C28-C35)		613	32		mg/kg	TNRCC 1005
TPH (C6-C35)		2740	32		mg/kg	TNRCC 1005
LA85970-2	**12599404-120722-S-MTK-WC-11**					
TPH (C6-C12)		159	32		mg/kg	TNRCC 1005
TPH (> C12-C28)		109	32		mg/kg	TNRCC 1005
TPH (> C28-C35)		135	32		mg/kg	TNRCC 1005
TPH (C6-C35)		402	32		mg/kg	TNRCC 1005
LA85970-3	**12599404-120722-S-MTK-WC-9**					
No hits reported in this sample.						
LA85970-4	**12599404-120722-S-MTK-WC-6**					
No hits reported in this sample.						
LA85970-5	**12599404-120722-S-MTK-WC-3**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-120722-S-MTK-WC-12		
Lab Sample ID:	LA85970-1	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/08/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	77.1
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124538.D	1	12/14/22 23:36	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	79.6	32	mg/kg	
	TPH (> C12-C28)	2040	32	mg/kg	
	TPH (> C28-C35)	613	32	mg/kg	
	TPH (C6-C35)	2740	32	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		70-130%
98-08-8	aaa-Trifluorotoluene	119%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120722-S-MTK-WC-11		
Lab Sample ID:	LA85970-2	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/08/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	77.5
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124539.D	1	12/15/22 00:02	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	159	32	mg/kg	
	TPH (> C12-C28)	109	32	mg/kg	
	TPH (> C28-C35)	135	32	mg/kg	
	TPH (C6-C35)	402	32	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	110%		70-130%
98-08-8	aaa-Trifluorotoluene	110%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120722-S-MTK-WC-9		
Lab Sample ID:	LA85970-3	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/08/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	75.0
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124540.D	1	12/15/22 00:28	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	33	mg/kg	
	TPH (> C12-C28)	ND	33	mg/kg	
	TPH (> C28-C35)	ND	33	mg/kg	
	TPH (C6-C35)	ND	33	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	110%		70-130%
98-08-8	aaa-Trifluorotoluene	121%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120722-S-MTK-WC-6		
Lab Sample ID:	LA85970-4	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/08/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	70.5
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124541.D	1	12/15/22 00:53	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	35	mg/kg	
	TPH (> C12-C28)	ND	35	mg/kg	
	TPH (> C28-C35)	ND	35	mg/kg	
	TPH (C6-C35)	ND	35	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	111%		70-130%
98-08-8	aaa-Trifluorotoluene	118%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120722-S-MTK-WC-3		
Lab Sample ID:	LA85970-5	**Date Sampled:**	12/07/22
Matrix:	SO - Soil	**Date Received:**	12/08/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	68.2
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124542.D	1	12/15/22 01:19	LL	12/14/22 09:00	OP21914	GJJ2456
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	36	mg/kg	
	TPH (> C12-C28)	ND	36	mg/kg	
	TPH (> C28-C35)	ND	36	mg/kg	
	TPH (C6-C35)	ND	36	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	116%		70-130%
98-08-8	aaa-Trifluorotoluene	122%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS CHAIN OF CUSTODY

LA 85970

PROJECT INFO
PROJECT: San Jacinto Waste Pits
~~PO #~~ GHD PN 12599404
QUOTE #
SITE REF
TURN AROUND TIME: Standard
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES: ☐ DoD ☐ EDD/Version ☐ State of Origin

SPECIAL INSTRUCTIONS / COMMENTS

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS: 5551 Corporate Blvd #200, Baton Rouge LA, 70808
PHONE: EMAIL: wells.richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

PRESERVATIVE: None

ANALYSIS & METHOD

	SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	M1613B	M8290A	M1668A	M1668C	HR-PAH	M1699	PFAS-537.1	TPH TX 1005	QC MS	QC MSD	QC SUP	QTY	REMARKS
1	12599404-120722-S-MTK-WC-12	12/7/22	0930	C	S	1								X					TPH samples collected in
2	-WC-11	12/7/22	1020	C	S	1								X					bulk jar for TX 1005
3	-WC-9	12/7/22	1120	C	S	1								X					
4	-WC-6	12/7/22	1325	C	S	1								X					See SSOW
5	-WC-3	12/7/22	1430	C	S	1								X					

12.07.22

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	12/7/22	1700	FedEx
RELINQUISHED BY (2): FedEx	DATE: 12/8/22	TIME: 9:40	RECEIVED BY: Mark Reed
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:
COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: TEMP. °C
TRACKING #:

Page ___ of ___ CSbc Temp 1.3 IP001 RM-30 #9

LA85970: Chain of Custody
Page 1 of 4

ORIGIN ID:HBYA (000) 000-0000
GHD SERVICES INC.
11004 E 51ST ST
TULSA, OK 74146
UNITED STATES US

SHIP DATE: 07DEC22
ACTWGT: 37.80 LB
CAD: 6755022/SSFO2341
DIMS: 23x14x14 IN
BILL THIRD PARTY

TO ATTN: SAMPLE RECEIVING
SGS NORTH AMERICA
500 AMBASSADOR CAFFERY PKWY

SCOTT LA 70583
(000) 000-0000 REF:
INV:
PO:
DEPT:

FedEx
Express
REL#
3785346

THU - 08 DEC 10:30A
PRIORITY OVERNIGHT

TRK# 0201 3918 2587 2249

XH LFTA

70583
LA-US LFT

LA85970: Chain of Custody
Page 2 of 4

SGS Sample Receipt Summary

Job Number: LA85970 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 12/8/2022 9:40:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (1.3/1.3);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Thermometer ID:	IR001;	
3. Cooler media:	Ice (direct contact)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	☑
2. Trip Blank listed on COC:	☐	☐	☑
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Problem Resolution

Job Number: LA85970

CSR: _____ **Response Date:** _____

Response:

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA85970
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21914-MB	JF124522.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85970-1, LA85970-2, LA85970-3, LA85970-4, LA85970-5

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	74%	70-130%
98-08-8	aaa-Trifluorotoluene	92%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA85970
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21914-BS	JF124523.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456
OP21914-BSD	JF124524.D	1	12/14/22	LL	12/14/22	OP21914	GJJ2456

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA85970-1, LA85970-2, LA85970-3, LA85970-4, LA85970-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	263	105	215	86	20	75-125/20
	TPH (> C12-C28)	250	233	93	253	101	8	75-125/20
	TPH (> C28-C35)		ND		ND		nc	75-125/20
	TPH (C6-C35)	500	496	99	468	94	6	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	109%	107%	70-130%
98-08-8	aaa-Trifluorotoluene	118%	117%	70-130%

* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12599404;San Jacinto Waste Pits

SGS Job Number: LA86010

Sampling Date: 12/08/22

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathy Shaw

Total number of pages in report: **20**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Rebecca Hebert 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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Test results relate only to samples analyzed.

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Sample Summary

GHD Services Inc.

Job No: LA86010

12599404;San Jacinto Waste Pits

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the RL							
LA86010-1	12/08/22	09:05		12/09/22	SO	Soil	12599404-120822-S-MK-WC-4
LA86010-2	12/08/22	10:05		12/09/22	SO	Soil	12599404-120822-S-MK-WC-5
LA86010-3	12/08/22	11:20		12/09/22	SO	Soil	12599404-120822-S-MK-WC-8
LA86010-4	12/08/22	13:30		12/09/22	SO	Soil	12599404-120822-S-MK-WC-10
LA86010-5	12/08/22	14:30		12/09/22	SO	Soil	12599404-120822-S-MK-WC-7

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA86010
Account: GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits
Collected: 12/08/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

LA86010-1 **12599404-120822-S-MK-WC-4**

No hits reported in this sample.

LA86010-2 **12599404-120822-S-MK-WC-5**

No hits reported in this sample.

LA86010-3 **12599404-120822-S-MK-WC-8**

No hits reported in this sample.

LA86010-4 **12599404-120822-S-MK-WC-10**

No hits reported in this sample.

LA86010-5 **12599404-120822-S-MK-WC-7**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-120822-S-MK-WC-4		
Lab Sample ID:	LA86010-1	**Date Sampled:**	12/08/22
Matrix:	SO - Soil	**Date Received:**	12/09/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124551.D	1	12/17/22 12:44	KM	12/16/22 10:30	OP21929	GJJ2457
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12) [b]	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35) [b]	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	125%		70-130%
98-08-8	aaa-Trifluorotoluene	128%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120822-S-MK-WC-5		
Lab Sample ID:	LA86010-2	**Date Sampled:**	12/08/22
Matrix:	SO - Soil	**Date Received:**	12/09/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124552.D	1	12/17/22 13:10	KM	12/16/22 10:30	OP21929	GJJ2457
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12) [b]	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35) [b]	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	119%		70-130%
98-08-8	aaa-Trifluorotoluene	123%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120822-S-MK-WC-8		
Lab Sample ID:	LA86010-3	**Date Sampled:**	12/08/22
Matrix:	SO - Soil	**Date Received:**	12/09/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124553.D	1	12/17/22 13:36	KM	12/16/22 10:30	OP21929	GJJ2457
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12) [b]	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35) [b]	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		70-130%
98-08-8	aaa-Trifluorotoluene	125%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120822-S-MK-WC-10		
Lab Sample ID:	LA86010-4	**Date Sampled:**	12/08/22
Matrix:	SO - Soil	**Date Received:**	12/09/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124554.D	1	12/17/22 14:02	KM	12/16/22 10:30	OP21929	GJJ2457
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12) [b]	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35) [b]	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	119%		70-130%
98-08-8	aaa-Trifluorotoluene	126%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-120822-S-MK-WC-7		
Lab Sample ID:	LA86010-5	**Date Sampled:**	12/08/22
Matrix:	SO - Soil	**Date Received:**	12/09/22
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF124555.D	1	12/17/22 14:28	KM	12/16/22 10:30	OP21929	GJJ2457
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12) [b]	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35) [b]	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	128%		70-130%
98-08-8	aaa-Trifluorotoluene	134% [c]		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.
(b) Associated CCV outside of control limits high, sample was ND.
(c) Outside control limits biased high. Sample ND.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LA86010

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto Waste Pits
PO #: —
QUOTE #: —
SITE/REF: Marc Kemper 772-233-3016
TURN AROUND TIME: Standard
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☐ EDD/Version
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
GHD# 12599404

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS: 5551 Corporate Blvd #200, Baton Rouge LA 70808
PHONE: EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

PRESERVATIVE

ANALYSIS & METHOD

	SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	M1613B	M8290A	M1668A	M1668C	HR-PAH	M1699	PFAS 537.1	TCLP Dioxin/Furan 1311/1613B	TCLP Metals 1311/6020B	TCLP Mercury 1311/7470A	QC MS	QC MSD	QC DUP	QTY	REMARKS
1	12599404-120822-S-MTK-WC-4	11/8/22	0905	C	S	2								X	X	X					
2	-WC-5		1005			2								X	X	X					
3	-WC-8		1120			2								X	X	X					
4	-WC-10		1330			2								X	X	X					
5	-WC-7		1430			2								X	X	X					

12.08.22

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	12/8/22	1700	Feltre
RELINQUISHED BY (2): Feltre	DATE: 12/9/22	TIME: 9:50	RECEIVED BY: Mark Reed
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:
COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: TEMP: °C
TRACKING #:

CS6c Temp: 3.1 IR001 WS-48 (7) C2

Page ___ of ___

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.sgs.com/ehs
Member of the SGS Group (SGS SA)

LA86010: Chain of Custody
Page 1 of 6

ORIGIN ID:HBYA (772) 233-3016
GHD SERVICES INC.
11004 E 51ST ST
TULSA, OK 74146
UNITED STATES US

SHIP DATE: 08DEC22
ACTWGT: 22.65 LB
CAD: 6755022/SSFO2341
DIMS: 16x11x11 IN
BILL THIRD PARTY

TO ATTN SAMPLE RECIEVING
SGS – NORTH AMERICA INC – SCOTT
500 AMBASSADOR CAFFERY PKWY

SCOTT LA 70583
(337) 237-4776
REF:
DEPT:

FedEx Express

TRK# 0201 3918 8519 7812

FRI – 09 DEC 10:30A
PRIORITY OVERNIGHT

XH LFTA

70583
LA-US LFT

LA86010: Chain of Custody
Page 2 of 6

SGS Sample Receipt Summary

Job Number: LA86010 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 12/9/2022 9:50:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (3.1/3.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	IR001;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

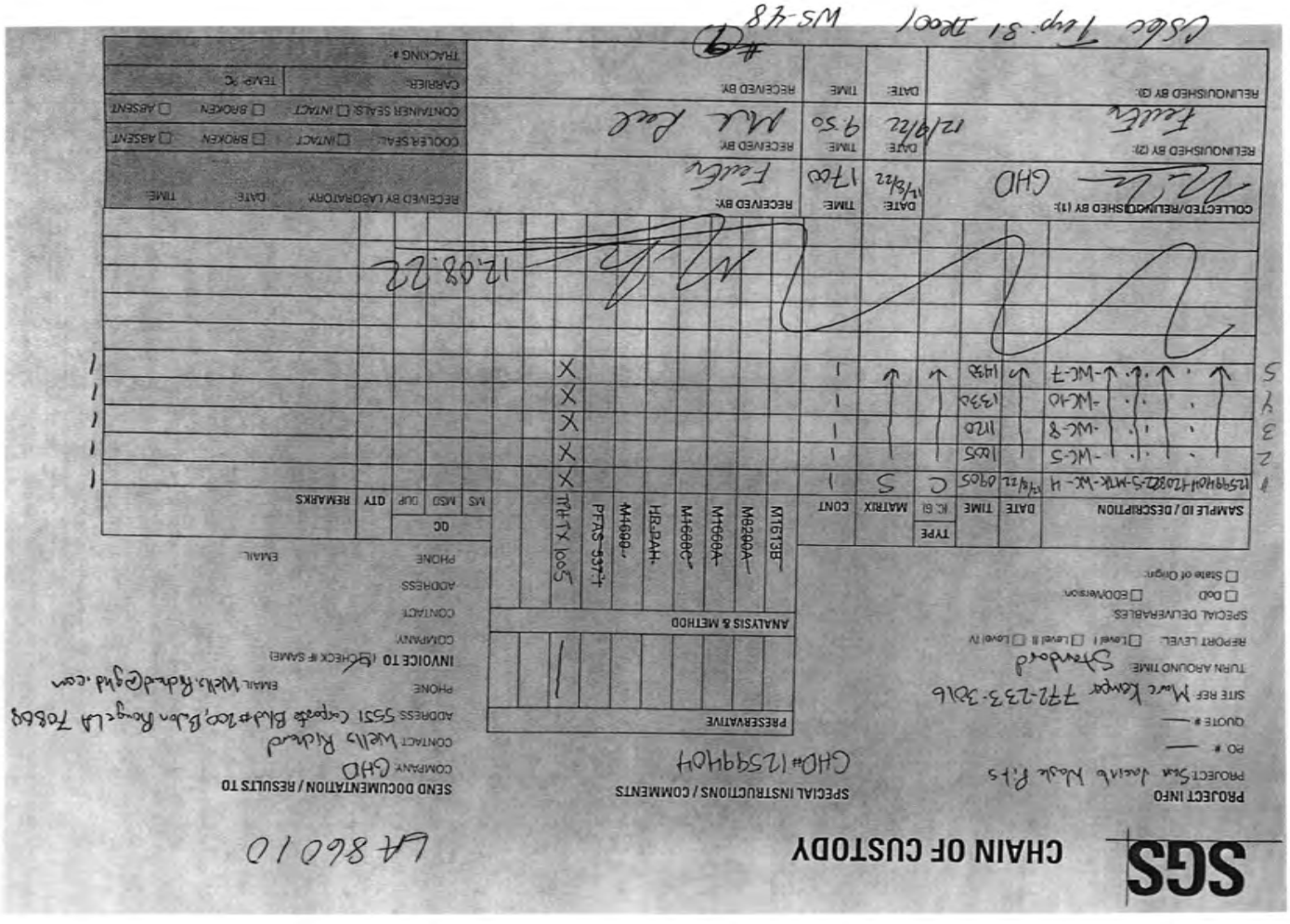
Comments

Problem Resolution

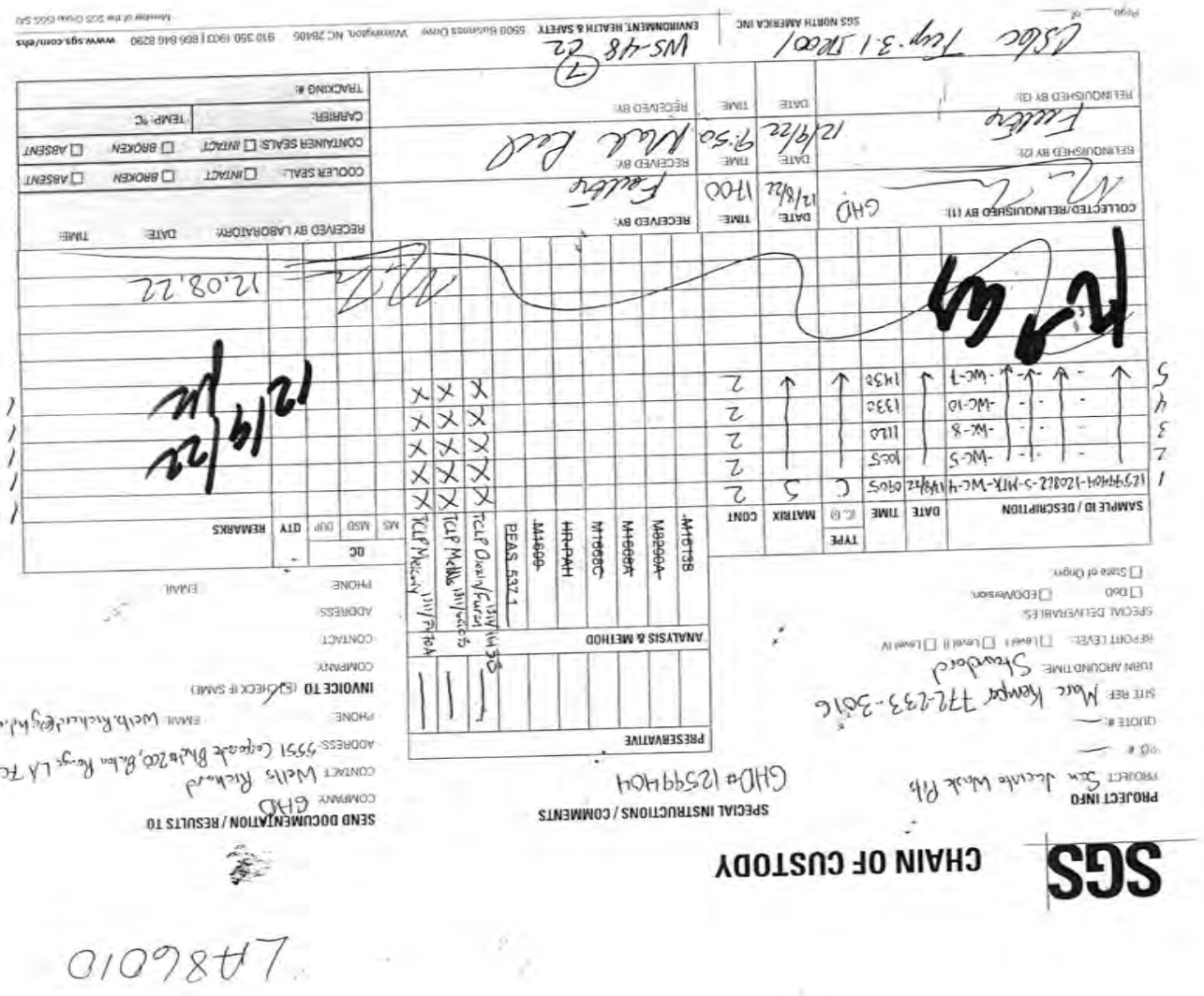
Job Number: LA86010

CSR: _____ **Response Date:** _____

Response:



LA86010: Chain of Custody
Page 5 of 6



LA86010: Chain of Custody
Page 6 of 6

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA86010
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21929-MB	JF124548.D	1	12/17/22	KM	12/16/22	OP21929	GJJ2457

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA86010-1, LA86010-2, LA86010-3, LA86010-4, LA86010-5

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	129%	70-130%
98-08-8	aaa-Trifluorotoluene	129%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA86010
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21929-BS	JF124597.D	1	12/20/22	KM	12/16/22	OP21929	GJJ2458
OP21929-BSD	JF124550.D	1	12/17/22	KM	12/16/22	OP21929	GJJ2457

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA86010-1, LA86010-2, LA86010-3, LA86010-4, LA86010-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	248	99	248	99	108*	75-125/20
	TPH (> C12-C28)	250	271	108	288	115	68*	75-125/20
	TPH (C6-C35)	500	519	104	536	107	90*	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	114%	116%	70-130%
98-08-8	aaa-Trifluorotoluene	120%	123%	70-130%

* = Outside of Control Limits.

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-101923-3-MTK-CARBON-1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	25-Oct-2023
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.99 L	Lab Sample ID	B8666_20587_DF_001	Date Extracted:	25-Oct-2023
Date Collected:	19-Oct-2023	pH:	5	QC Batch No:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:53:53

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.46			ES 2378-TCDD	80.7	
12378-PeCDD	ND	2.74			ES 12378-PeCDD	75.5	
123478-HxCDD	ND	1.69			ES 123478-HxCDD	82.7	
123678-HxCDD	ND	1.66			ES 123678-HxCDD	86.7	
123789-HxCDD	ND	1.8			ES 123789-HxCDD	84.4	
1234678-HpCDD	ND	2			ES 1234678-HpCDD	83.7	
OCDD	ND	3.9			ES OCDD	67.7	
2378-TCDF	ND	2.05			ES 2378-TCDF	80.7	
12378-PeCDF	ND	1.61			ES 12378-PeCDF	75.1	
23478-PeCDF	ND	1.66			ES 23478-PeCDF	73.7	
123478-HxCDF	ND	1.68			ES 123478-HxCDF	98.3	
123678-HxCDF	ND	1.47			ES 123678-HxCDF	107	
234678-HxCDF	ND	1.79			ES 234678-HxCDF	103	
123789-HxCDF	ND	2.09			ES 123789-HxCDF	91.9	
1234678-HpCDF	ND	0.969			ES 1234678-HpCDF	96.4	
1234789-HpCDF	ND	1.26			ES 1234789-HpCDF	85.1	
OCDF	ND	2.33			ES OCDF	78.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	97.7	
Total TCDD	ND	2.46	ND				
Total PeCDD	ND	2.74	ND				
Total HxCDD	ND	1.71	ND				
Total HpCDD	ND	2	ND				
Total TCDF	ND	2.05	ND				
Total PeCDF	ND	1.63	ND				
Total HxCDF	ND	1.74	ND				
Total HpCDF	ND	1.1	ND				
Total PCDD/Fs	**ND**		**ND**				
ITEF TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.1	3.1	3.1				
TEQ: ND=DL	6.21	6.21	6.21				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 12599404-101923-3-MTK-CARBON-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	25-Oct-2023
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.99 L	Lab Sample ID:	B8666_20587_DF_001	Date Extracted:	25-Oct-2023
Date Collected:	19-Oct-2023	pH:	5	QC Batch No.:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:53:53

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.46)		12479/12468D	(2.74)		124679/124689D	(1.71)		1234679D	(2)	
1379D	(2.46)		12469D	(2.74)		123468D	(1.71)		1234678D	(2)	
1369D	(2.46)		12368D	(2.74)		123679/123689D	(1.71)				
1469D	(2.46)		12478D	(2.74)		123469D	(1.71)				
1247D...[4]	(2.46)		12379D	(2.74)		123478D	(1.69)				
1378D	(2.46)		12369D...[3]	(2.74)		123678D	(1.66)				
1268D	(2.46)		12346/12347D	(2.74)		123467D	(1.71)				
1478D	(2.46)		12378D	(2.74)		123789D	(1.8)		**Conc.**	0	
1279D	(2.46)		12367D	(2.74)					**EMPC**	0	
1234/1269D	(2.46)		12389D	(2.74)							
1236D	(2.46)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.46)										
1239D	(2.46)								OCDD	(3.9)	
2378D	(2.46)										
1278D	(2.46)										
1267D	(2.46)										
1289D	(2.46)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613
www.us.sgs.com

ITEF TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.1	3.1
TEQ: ND=DL	6.21	6.21

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 163-141-YZG

Report Created: 30-Oct-2023 10:43 Analyst: TF

Sample ID: 12599404-101923-3-MTK-CARBON-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	25-Oct-2023
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.99 L	Lab Sample ID:	B8666_20587_DF_001	Date Extracted:	25-Oct-2023
Date Collected:	19-Oct-2023	pH:	5	QC Batch No.:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:53:53

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.05)		13468/12468F	(2.11)		123468F	(1.74)		1234678F	(0.969)	
1468F	(2.05)		13678F...[3]	(1.63)		124678/134678F	(1.74)		1234679F	(1.1)	
2468F	(2.05)		12368F...[3]	(1.63)		134679F	(1.74)		1234689F	(1.1)	
1346/1246F	(2.05)		14678F	(1.63)		124679F	(1.74)		1234789F	(1.26)	
1347F...[3]	(2.05)		13479F	(1.63)		124689F	(1.74)				
1348F	(2.05)		13469/12479F	(1.63)		123467F	(1.74)				
1248F...[3]	(2.05)		12346F	(1.63)		123478F	(1.68)				
1268F	(2.05)		23468/12469F	(1.63)		123678F	(1.47)				
1467F	(2.05)		12347F	(1.63)		123479F	(1.74)				
1478F	(2.05)		12348F	(1.63)		123469F	(1.74)				
1369/1237F	(2.05)		12378F	(1.61)		123679F	(1.74)				
2467F	(2.05)		12678/12367F	(1.63)		234678F	(1.79)		**Conc.**	0	
2368F	(2.05)		12379F	(1.63)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.05)		12679F	(1.63)		123689F	(1.74)				
1278F	(2.05)		23467/12369F	(1.63)		123789F	(2.09)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.05)		23478F	(1.66)		123789/123489F	0				
1267F	(2.05)		23478/12489F	0		123489F	(1.74)		OCDF	(2.33)	
2346/1249F	(2.05)		12489F	(1.63)							
2347/1279F	(2.05)		12349F	(1.63)							
2348F	(2.05)		12389F	(1.63)							
2378F	(2.05)										
2367/3467F	(2.05)										
1269F	(2.05)										
1239F	(2.05)										
1289F	(2.05)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 163-141-YZG

Report Created: 30-Oct-2023 10:43 Analyst: TF

Sample ID: 12599404-101923-3-MTK-CARBON-1 TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B8666_20587_DF_001
Cliend Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.99 L	QC Batch No.:	20587
Date Collected:	19-Oct-2023	Split:	-	Date Extracted:	25-Oct-2023
Date Received:	25-Oct-2023	Dilution:	-	Date Analyzed:	28-Oct-2023 10:53
Lab Project No:	B8666	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2.46)		2.46	(2.46)	(2.46)	(2.46)
12378-PeCDD	(2.74)		2.74	(1.37)	(2.74)	(2.74)
123478-HxCDD	(1.69)		1.69	(0.169)	(0.169)	(0.169)
123678-HxCDD	(1.66)		1.66	(0.166)	(0.166)	(0.166)
123789-HxCDD	(1.8)		1.8	(0.18)	(0.18)	(0.18)
1234678-HpCDD	(2)		2	(0.02)	(0.02)	(0.02)
OCDD	(3.9)		3.9	(0.0039)	(0.00039)	(0.00117)
2378-TCDF	(2.05)		2.05	(0.205)	(0.205)	(0.205)
12378-PeCDF	(1.61)		1.61	(0.0804)	(0.0804)	(0.0482)
23478-PeCDF	(1.66)		1.66	(0.828)	(0.828)	(0.497)
123478-HxCDF	(1.68)		1.68	(0.168)	(0.168)	(0.168)
123678-HxCDF	(1.47)		1.47	(0.147)	(0.147)	(0.147)
234678-HxCDF	(1.79)		1.79	(0.179)	(0.179)	(0.179)
123789-HxCDF	(2.09)		2.09	(0.209)	(0.209)	(0.209)
1234678-HpCDF	(0.969)		0.969	(0.00969)	(0.00969)	(0.00969)
1234789-HpCDF	(1.26)		1.26	(0.0126)	(0.0126)	(0.0126)
OCDF	(2.33)		2.33	(0.00233)	(0.000233)	(0.000698)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	3.1	3.78	3.6
EMPC = 0, ND = DL	6.21	7.57	7.21
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	3.1	3.78	3.6
EMPC = EMPC, ND = DL	6.21	7.57	7.21
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 163-141-YZG

SGS North America - DF v0.99

Sample ID: 12599404-101923-3-MTK-CARBON-TCLP LB — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	25-Oct-2023
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.97 L	Lab Sample ID	B8666_20587_DF_002	Date Extracted:	25-Oct-2023
Date Collected:	23-Oct-2023	pH:	5	QC Batch No:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:40:13

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.68			ES 2378-TCDD	88.9	
12378-PeCDD	ND	2.84			ES 12378-PeCDD	77.6	
123478-HxCDD	ND	2.71			ES 123478-HxCDD	87.3	
123678-HxCDD	ND	2.47			ES 123678-HxCDD	94.6	
123789-HxCDD	ND	3.02			ES 123789-HxCDD	89.7	
1234678-HpCDD	ND	2.27			ES 1234678-HpCDD	87	
OCDD	ND	4.12			ES OCDD	71.9	
2378-TCDF	ND	1.89			ES 2378-TCDF	87	
12378-PeCDF	ND	1.95			ES 12378-PeCDF	77.9	
23478-PeCDF	ND	1.82			ES 23478-PeCDF	79	
123478-HxCDF	ND	1.74			ES 123478-HxCDF	106	
123678-HxCDF	ND	1.39			ES 123678-HxCDF	112	
234678-HxCDF	ND	1.56			ES 234678-HxCDF	107	
123789-HxCDF	ND	1.99			ES 123789-HxCDF	98	
1234678-HpCDF	ND	1.18			ES 1234678-HpCDF	99	
1234789-HpCDF	ND	1.37			ES 1234789-HpCDF	94.2	
OCDF	ND	2.69			ES OCDF	86.5	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	90.1	
Total TCDD	ND	2.68	ND				
Total PeCDD	ND	2.84	ND				
Total HxCDD	ND	2.73	ND				
Total HpCDD	ND	2.27	ND				
Total TCDF	ND	1.89	ND				
Total PeCDF	ND	1.88	ND				
Total HxCDF	ND	1.65	ND				
Total HpCDF	ND	1.27	ND				
Total PCDD/Fs	**ND**		**ND**				
ITEF TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.42	3.42	3.42				
TEQ: ND=DL	6.83	6.83	6.83				

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Sample ID: 12599404-101923-3-MTK-CARBON-TCLP LB Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	25-Oct-2023
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.97 L	Lab Sample ID:	B8666_20587_DF_002	Date Extracted:	25-Oct-2023
Date Collected:	23-Oct-2023	pH:	5	QC Batch No.:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:40:13

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.68)		12479/12468D	(2.84)		124679/124689D	(2.73)		1234679D	(2.27)	
1379D	(2.68)		12469D	(2.84)		123468D	(2.73)		1234678D	(2.27)	
1369D	(2.68)		12368D	(2.84)		123679/123689D	(2.73)				
1469D	(2.68)		12478D	(2.84)		123469D	(2.73)				
1247D...[4]	(2.68)		12379D	(2.84)		123478D	(2.71)				
1378D	(2.68)		12369D...[3]	(2.84)		123678D	(2.47)				
1268D	(2.68)		12346/12347D	(2.84)		123467D	(2.73)				
1478D	(2.68)		12378D	(2.84)		123789D	(3.02)		**Conc.**	0	
1279D	(2.68)		12367D	(2.84)					**EMPC**	0	
1234/1269D	(2.68)		12389D	(2.84)							
1236D	(2.68)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.68)										
1239D	(2.68)								OCDD	(4.12)	
2378D	(2.68)										
1278D	(2.68)										
1267D	(2.68)										
1289D	(2.68)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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ITEF TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.42	3.42
TEQ: ND=DL	6.83	6.83

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 366-031-PBY

Report Created: 30-Oct-2023 10:43 Analyst: TF

Sample ID: 12599404-101923-3-MTK-CARBON-TCLP LB Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	25-Oct-2023
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.97 L	Lab Sample ID:	B8666_20587_DF_002	Date Extracted:	25-Oct-2023
Date Collected:	23-Oct-2023	pH:	5	QC Batch No.:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:40:13

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(1.89)		13468/12468F	(2.38)		123468F	(1.65)		1234678F	(1.18)	
1468F	(1.89)		13678F...[3]	(1.88)		124678/134678F	(1.65)		1234679F	(1.27)	
2468F	(1.89)		12368F...[3]	(1.88)		134679F	(1.65)		1234689F	(1.27)	
1346/1246F	(1.89)		14678F	(1.88)		124679F	(1.65)		1234789F	(1.37)	
1347F...[3]	(1.89)		13479F	(1.88)		124689F	(1.65)				
1348F	(1.89)		13469/12479F	(1.88)		123467F	(1.65)				
1248F...[3]	(1.89)		12346F	(1.88)		123478F	(1.74)				
1268F	(1.89)		23468/12469F	(1.88)		123678F	(1.39)				
1467F	(1.89)		12347F	(1.88)		123479F	(1.65)				
1478F	(1.89)		12348F	(1.88)		123469F	(1.65)				
1369/1237F	(1.89)		12378F	(1.95)		123679F	(1.65)				
2467F	(1.89)		12678/12367F	(1.88)		234678F	(1.56)		**Conc.**	0	
2368F	(1.89)		12379F	(1.88)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(1.89)		12679F	(1.88)		123689F	(1.65)				
1278F	(1.89)		23467/12369F	(1.88)		123789F	(1.99)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(1.89)		23478F	(1.82)		123789/123489F	0				
1267F	(1.89)		23478/12489F	0		123489F	(1.65)		OCDF	(2.69)	
2346/1249F	(1.89)		12489F	(1.88)							
2347/1279F	(1.89)		12349F	(1.88)							
2348F	(1.89)		12389F	(1.88)							
2378F	(1.89)										
2367/3467F	(1.89)										
1269F	(1.89)										
1239F	(1.89)										
1289F	(1.89)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 366-031-PBY

Report Created: 30-Oct-2023 10:43 Analyst: TF

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Sample ID: 12599404-101923-3-MTK-CARBON-T(TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B8666_20587_DF_002
Cliend Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	0.97 L	QC Batch No.:	20587
Date Collected:	23-Oct-2023	Split:	-	Date Extracted:	25-Oct-2023
Date Received:	25-Oct-2023	Dilution:	-	Date Analyzed:	28-Oct-2023 11:40
Lab Project No:	B8666	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2.68)		2.68	(2.68)	(2.68)	(2.68)
12378-PeCDD	(2.84)		2.84	(1.42)	(2.84)	(2.84)
123478-HxCDD	(2.71)		2.71	(0.271)	(0.271)	(0.271)
123678-HxCDD	(2.47)		2.47	(0.247)	(0.247)	(0.247)
123789-HxCDD	(3.02)		3.02	(0.302)	(0.302)	(0.302)
1234678-HpCDD	(2.27)		2.27	(0.0227)	(0.0227)	(0.0227)
OCDD	(4.12)		4.12	(0.00412)	(0.000412)	(0.00124)
2378-TCDF	(1.89)		1.89	(0.189)	(0.189)	(0.189)
12378-PeCDF	(1.95)		1.95	(0.0974)	(0.0974)	(0.0584)
23478-PeCDF	(1.82)		1.82	(0.909)	(0.909)	(0.545)
123478-HxCDF	(1.74)		1.74	(0.174)	(0.174)	(0.174)
123678-HxCDF	(1.39)		1.39	(0.139)	(0.139)	(0.139)
234678-HxCDF	(1.56)		1.56	(0.156)	(0.156)	(0.156)
123789-HxCDF	(1.99)		1.99	(0.199)	(0.199)	(0.199)
1234678-HpCDF	(1.18)		1.18	(0.0118)	(0.0118)	(0.0118)
1234789-HpCDF	(1.37)		1.37	(0.0137)	(0.0137)	(0.0137)
OCDF	(2.69)		2.69	(0.00269)	(0.000269)	(0.000808)

TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	3.42	4.13	3.92
EMPC = 0, ND = DL	6.83	8.25	7.85
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	3.42	4.13	3.92
EMPC = EMPC, ND = DL	6.83	8.25	7.85
EMPC = EMPC, < J-level = 0	0	0	0

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Checkcode: 366-031-PBY

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Sample ID: Method Blank B8666_20587 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	n/a
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20587_DF_TLX	Date Extracted:	25-Oct-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:07:34

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.03			ES 2378-TCDD	90.7	
12378-PeCDD	ND	2.18			ES 12378-PeCDD	85.1	
123478-HxCDD	ND	2.46			ES 123478-HxCDD	90.6	
123678-HxCDD	ND	2.57			ES 123678-HxCDD	91.9	
123789-HxCDD	ND	2.5			ES 123789-HxCDD	94.1	
1234678-HpCDD	ND	2.43			ES 1234678-HpCDD	84.1	
OCDD	ND	4.37			ES OCDD	69.9	
2378-TCDF	ND	3.21			ES 2378-TCDF	90.9	
12378-PeCDF	ND	1.65			ES 12378-PeCDF	86.1	
23478-PeCDF	ND	1.56			ES 23478-PeCDF	86.8	
123478-HxCDF	ND	3.09			ES 123478-HxCDF	106	
123678-HxCDF	ND	2.72			ES 123678-HxCDF	118	
234678-HxCDF	ND	2.77			ES 234678-HxCDF	110	
123789-HxCDF	ND	3.66			ES 123789-HxCDF	102	
1234678-HpCDF	ND	1.21			ES 1234678-HpCDF	98.3	
1234789-HpCDF	ND	1.79			ES 1234789-HpCDF	89.7	
OCDF	ND	2.82			ES OCDF	78.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95.4	
Total TCDD	ND	2.03	ND				
Total PeCDD	ND	2.18	ND				
Total HxCDD	ND	2.51	ND				
Total HpCDD	ND	2.43	ND				
Total TCDF	ND	3.21	ND				
Total PeCDF	ND	1.61	ND				
Total HxCDF	4.25		4.25				
Total HpCDF	ND	1.47	ND				
Total PCDD/Fs	**4.25**		**4.25**				
ITEF TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.17	3.17	3.17				
TEQ: ND=DL	6.34	6.34	6.34				

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Sample ID: Method Blank B8666_20587 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	n/a
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_20587_DF_TLX	Date Extracted:	25-Oct-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:07:34

Tetra-Dioxins	Conc. (pg/L)	Qualifiers
1368D	(2.03)	
1379D	(2.03)	
1369D	(2.03)	
1469D	(2.03)	
1247D...[4]	(2.03)	
1378D	(2.03)	
1268D	(2.03)	
1478D	(2.03)	
1279D	(2.03)	
1234/1269D	(2.03)	
1236D	(2.03)	
1237/1238D	(2.03)	
1239D	(2.03)	
2378D	(2.03)	
1278D	(2.03)	
1267D	(2.03)	
1289D	(2.03)	
Conc.	0	
EMPC	0	

Penta-Dioxins	Conc. (pg/L)	Qualifiers
12479/12468D	(2.18)	
12469D	(2.18)	
12368D	(2.18)	
12478D	(2.18)	
12379D	(2.18)	
12369D...[3]	(2.18)	
12346/12347D	(2.18)	
12378D	(2.18)	
12367D	(2.18)	
12389D	(2.18)	
Conc.	0	
EMPC	0	

Hexa-Dioxins	Conc (pg/L)	Qualifiers
124679/124689D	(2.51)	
123468D	(2.51)	
123679/123689D	(2.51)	
123469D	(2.51)	
123478D	(2.46)	
123678D	(2.57)	
123467D	(2.51)	
123789D	(2.5)	
Conc.	0	
EMPC	0	

Hepta-Dioxins	Conc (pg/L)	Qualifiers
1234679D	(2.43)	
1234678D	(2.43)	
Conc.	0	
EMPC	0	

Octa-Dioxin	Conc (pg/L)	Qualifiers
OCDD	(4.37)	

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Tel: +1 910 794-1613
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ITEF TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.17	3.17
TEQ: ND=DL	6.34	6.34

	Conc.	EMPC
Total PCDD/Fs	4.25	4.25

Checkcode: 354-298-TLJ

Report Created: 30-Oct-2023 10:43 Analyst: TF

Sample ID: Method Blank B8666_20587 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	n/a
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_20587_DF_TLX	Date Extracted:	25-Oct-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:07:34

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(3.21)		13468/12468F	(1.21)		123468F	(3.03)		1234678F	(1.21)	
1468F	(3.21)		13678F...[3]	(1.61)		124678/134678F	4.25	J	1234679F	(1.47)	
2468F	(3.21)		12368F...[3]	(1.61)		134679F	(3.03)		1234689F	(1.47)	
1346/1246F	(3.21)		14678F	(1.61)		124679F	(3.03)		1234789F	(1.79)	
1347F...[3]	(3.21)		13479F	(1.61)		124689F	(3.03)				
1348F	(3.21)		13469/12479F	(1.61)		123467F	(3.03)				
1248F...[3]	(3.21)		12346F	(1.61)		123478F	(3.09)				
1268F	(3.21)		23468/12469F	(1.61)		123678F	(2.72)				
1467F	(3.21)		12347F	(1.61)		123479F	(3.03)				
1478F	(3.21)		12348F	(1.61)		123469F	(3.03)				
1369/1237F	(3.21)		12378F	(1.65)		123679F	(3.03)				
2467F	(3.21)		12678/12367F	(1.61)		234678F	(2.77)		**Conc.**	0	
2368F	(3.21)		12379F	(1.61)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(3.21)		12679F	(1.61)		123689F	(3.03)				
1278F	(3.21)		23467/12369F	(1.61)		123789F	(3.66)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(3.21)		23478F	(1.56)		123789/123489F	0				
1267F	(3.21)		23478/12489F	0		123489F	(3.03)		OCDF	(2.82)	
2346/1249F	(3.21)		12489F	(1.61)							
2347/1279F	(3.21)		12349F	(1.61)							
2348F	(3.21)		12389F	(1.61)							
2378F	(3.21)										
2367/3467F	(3.21)										
1269F	(3.21)										
1239F	(3.21)										
1289F	(3.21)										
Conc.	0		**Conc.**	0		**Conc.**	4.25				
EMPC	0		**EMPC**	0		**EMPC**	4.25				

Checkcode: 354-298-TLJ

Report Created: 30-Oct-2023 10:43 Analyst: TF

Sample ID: Method Blank B8666_20587 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_20587_DF_TLX
Cliend Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	1.00 L	QC Batch No.:	20587
Date Collected:	n/a	Split:	-	Date Extracted:	25-Oct-2023
Date Received:	n/a	Dilution:	-	Date Analyzed:	28-Oct-2023 10:07
Lab Project No:	B8666	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2.03)		2.03	(2.03)	(2.03)	(2.03)
12378-PeCDD	(2.18)		2.18	(1.09)	(2.18)	(2.18)
123478-HxCDD	(2.46)		2.46	(0.246)	(0.246)	(0.246)
123678-HxCDD	(2.57)		2.57	(0.257)	(0.257)	(0.257)
123789-HxCDD	(2.5)		2.5	(0.25)	(0.25)	(0.25)
1234678-HpCDD	(2.43)		2.43	(0.0243)	(0.0243)	(0.0243)
OCDD	(4.37)		4.37	(0.00437)	(0.000437)	(0.00131)
2378-TCDF	(3.21)		3.21	(0.321)	(0.321)	(0.321)
12378-PeCDF	(1.65)		1.65	(0.0827)	(0.0827)	(0.0496)
23478-PeCDF	(1.56)		1.56	(0.78)	(0.78)	(0.468)
123478-HxCDF	(3.09)		3.09	(0.309)	(0.309)	(0.309)
123678-HxCDF	(2.72)		2.72	(0.272)	(0.272)	(0.272)
234678-HxCDF	(2.77)		2.77	(0.277)	(0.277)	(0.277)
123789-HxCDF	(3.66)		3.66	(0.366)	(0.366)	(0.366)
1234678-HpCDF	(1.21)		1.21	(0.0121)	(0.0121)	(0.0121)
1234789-HpCDF	(1.79)		1.79	(0.0179)	(0.0179)	(0.0179)
OCDF	(2.82)		2.82	(0.00282)	(0.000282)	(0.000847)

TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	3.17	3.71	3.54
EMPC = 0, ND = DL	6.34	7.43	7.09
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	3.17	3.71	3.54
EMPC = EMPC, ND = DL	6.34	7.43	7.09
EMPC = EMPC, < J-level = 0	0	0	0

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Checkcode: 354-298-TLJ

SGS North America - DF v0.99

Sample ID: 0_20587_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	n/a
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20587_DF	Date Extracted:	25-Oct-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	7:48:38

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	13.2				ES 2378-TCDD	90	
12378-PeCDD	55.6				ES 12378-PeCDD	83.4	
123478-HxCDD	58.5				ES 123478-HxCDD	88.6	
123678-HxCDD	61.3				ES 123678-HxCDD	90.9	
123789-HxCDD	55.7				ES 123789-HxCDD	95.3	
1234678-HpCDD	58.8				ES 1234678-HpCDD	83.9	
OCDD	111				ES OCDD	72.2	
2378-TCDF	11.9				ES 2378-TCDF	91.6	
12378-PeCDF	55.4				ES 12378-PeCDF	84.1	
23478-PeCDF	58.4				ES 23478-PeCDF	83.3	
123478-HxCDF	58				ES 123478-HxCDF	99.7	
123678-HxCDF	56.6				ES 123678-HxCDF	111	
234678-HxCDF	54				ES 234678-HxCDF	110	
123789-HxCDF	54.1				ES 123789-HxCDF	101	
1234678-HpCDF	56.6				ES 1234678-HpCDF	100	
1234789-HpCDF	55.6				ES 1234789-HpCDF	92.3	
OCDF	107				ES OCDF	83.9	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.7	
Total TCDD	61		61				
Total PeCDD	83		83				
Total HxCDD	191		191				
Total HpCDD	71.5		71.5				
Total TCDF	67.8		67.8				
Total PeCDF	136		136				
Total HxCDF	237		237				
Total HpCDF	112		112				
Total PCDD/Fs	**1,180**		**1,180**				
ITEF TEQs							
TEQ: ND=0	116		116				
TEQ: ND=DL/2	116	0.233	116				
TEQ: ND=DL	116	0.466	116				

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Sample ID: 0_20587_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8666	Date Received:	n/a
Project ID:	San Jacinto Southern Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20587_DF	Date Extracted:	25-Oct-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20587	Date Analyzed:	28-Oct-2023
		Split:	-	Dilution:	-	Time Analyzed:	8:34:57

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.9				ES 2378-TCDD	87.8	
12378-PeCDD	54.4				ES 12378-PeCDD	80.5	
123478-HxCDD	58.9				ES 123478-HxCDD	87.9	
123678-HxCDD	61.4				ES 123678-HxCDD	92.1	
123789-HxCDD	59.5				ES 123789-HxCDD	87	
1234678-HpCDD	57				ES 1234678-HpCDD	84.1	
OCDD	116				ES OCDD	76.8	
2378-TCDF	12.4				ES 2378-TCDF	89.7	
12378-PeCDF	56.1				ES 12378-PeCDF	85	
23478-PeCDF	59				ES 23478-PeCDF	80.3	
123478-HxCDF	58				ES 123478-HxCDF	101	
123678-HxCDF	56.6				ES 123678-HxCDF	109	
234678-HxCDF	56.8				ES 234678-HxCDF	104	
123789-HxCDF	54.2				ES 123789-HxCDF	99.6	
1234678-HpCDF	56				ES 1234678-HpCDF	98.9	
1234789-HpCDF	56.7				ES 1234789-HpCDF	94	
OCDF	113				ES OCDF	86.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.2	
Total TCDD	59.2		59.2				
Total PeCDD	81.4		81.4				
Total HxCDD	196		196				
Total HpCDD	70.6		70.6				
Total TCDF	69		69				
Total PeCDF	138		138				
Total HxCDF	239		239				
Total HpCDF	113		113				
Total PCDD/Fs	**1,200**		**1,200**				
ITEF TEQs							
TEQ: ND=0	116		116				
TEQ: ND=DL/2	116	0.219	116				
TEQ: ND=DL	116	0.439	116				

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Sample DUP

Method 1613B

Sample ID: 0_20587_OPR001

Analyte	OPR1_20587_DF pg/uL	OPR2_20587_DF (DUP) pg/uL	RPD
2,3,7,8-TCDD	13.2	12.9	2.6%
1,2,3,7,8-PeCDD	55.6	54.4	2.1%
1,2,3,4,7,8-HxCDD	58.5	58.9	0.8%
1,2,3,6,7,8-HxCDD	61.3	61.4	0.1%
1,2,3,7,8,9-HxCDD	55.7	59.5	6.6%
1,2,3,4,6,7,8-HpCDD	58.8	57	3.1%
OCDD	111	116	4.2%
2,3,7,8-TCDF	11.9	12.4	4.1%
1,2,3,7,8-PeCDF	55.4	56.1	1.3%
2,3,4,7,8-PeCDF	58.4	59	1.0%
1,2,3,4,7,8-HxCDF	58	58	0.0%
1,2,3,6,7,8-HxCDF	56.6	56.6	0.1%
2,3,4,6,7,8-HxCDF	54	56.8	5.0%
1,2,3,7,8,9-HxCDF	54.1	54.2	0.2%
1,2,3,4,6,7,8-HpCDF	56.6	56	1.0%
1,2,3,4,7,8,9-HpCDF	55.6	56.7	1.9%
OCDF	107	113	6.0%
Totals			
Total TCDD	61	59.2	2.9%
Total PeCDD	83	81.4	1.9%
Total HxCDD	191	196	2.5%
Total HpCDD	71.5	70.6	1.2%
Total TCDF	67.8	69	1.7%
Total PeCDF	136	138	1.2%
Total HxCDF	237	239	1.0%
Total HpCDF	112	113	0.5%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*25-Oct-23 at 11:08*
AP Project name:	*B8666*
Requested TAT:	*3 business days*
Projected due date:	*30-Oct-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto Southern Impoundment*
Project PO#:	*340-009117*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-101923-3-MTK-CARBON-1	B8666_001	Leachate	2	1-Liter Amber	19-Oct-23	09:00	4.9	1	7003 7832 8418
12599404-101923-3-MTK-CARBON-TCLP LB	B8666_002	Leachate Blank	2	1-Liter Amber	23-Oct-23	15:30	4.9	1	7003 7832 8418

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 25 Oct 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

CHAIN OF CUSTODY

B8666

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD75174X

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 2235 Route 130
City: Dayton State: NJ Zip: 08810
Project Contact: Kelly.Ramos@sgs.com E-mail:
Phone #: 732-329-0200 Fax #:
Sampler(s) Name(s): Phone:

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	TCLP Dioxin/Furans 1613	LAB USE ONLY
1X	12599404-101923-3-MTK-CARBON-1		10/19/23	9:00:00 AM		SO										X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other 10

Emergency & Rush T/A data available VIA Labiink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Send leachate volume and leachate blank along with remaining soil jars SGS Wilmington. SGS Wilmington will report and bill GHD

Sample Custody must be documented below each time samples change possession, including courier delivery.

1 Relinquished by Sampler:	Date Time: 10.24.23 17:00	Received By: 1	Relinquished By: 2	Date Time: 10/25/23 11:08	Received By: 2 ANNLEY ONEILL
3 Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5 Relinquished by:	Date Time:	Received By: 5	Custody Seal #	[X] Intact [ ] Not Intact	Preserved where applicable [ ] On Ice [X] Cooler Temp. 4.9°C

B8666

Date / Time: 10/24/2023 12:27:09 PM
CSR: KELLYR
Job #: JD75174X
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 10

Sub Lab: SGS - Wilmington, NC
Address: 5500 Business Drive
City: Wilmington
State: NC Zip: 28405
Contact:
Phone: (910) 794-1613

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD75174-1X	12599404-101923-3-MTK-CARBON-1	TCLP Dioxin/Furans 1613			10/19/2023	9:00:00 AM	

Comments: Send leachate volume and leachate blank along with remaining soil jars SGS Wilmington. SGS Wilmington will report and bill GHD

Sample Management Receipt: Ashley Oxendine Date: 10/25/2023 11:08

SGS

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

NOTE: Only one lot of fluid 1 or fluid 2 may be used per sheet. Lots shown on page 2.

TC Batch ID: TCO783

B866610

TCLPE

Samples		Container			Leaching Dates		Leaching Times				Extracted Masses			Preliminary Evaluation*					Extraction Fluid					
Sample ID	PS?* (Y/N)	No.	Type	Rot.	Started	Stopped	Start	Earliest Stop	Latest Stop	Actual Stop	Grams Total	%SOL	Grams Solid	Buffer TV	Step1 pH	Step 1 spin	Buffer TV	Step2 pH	Fluid #	pH	Pass?	Vol. (mL)	Buffer TV	Final pH
PH Buffer														4.00	4.00		4.00	4.00	#1 pH = 4.93 ± 0.05 #2 pH = 2.88 ± 0.05				4.00	4.00
PH Buffer														7.00	7.00		7.00	7.00					7.00	7.00
PH Buffer														10.00	10.02		10.00	10.02					10.00	10.00
[redacted]	N	86	M/E	9	23-Oct-23	24-Oct-23	15:30	7:30	11:30	9:30	NA	NA	NA	NA	NA	NA	NA	NA	1	4.93	YES	2000	NA	4.88
LB (fluid #2)	N	NA	M/E	9	23-Oct-23	24-Oct-23	15:30	7:30	11:30		NA	NA	NA	NA	NA	NA	NA	NA	2	2.89	YES	2000	NA	
JD75174-1	N	18	M/E	9	23-Oct-23	24-Oct-23	15:30	7:30	11:30	9:30	100.02	100	100.02	NA	7.33	5 mins	NA	1.98	1	4.93	YES	2000.5	NA	5.25
JD75174-1	N	46	M/E	9	23-Oct-23	24-Oct-23	15:30	7:30	11:30	9:30	100.56	100	100.56	NA	7.33	5 mins	NA	1.98	1	4.93	YES	2011.2	NA	5.25
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00	4.02		2.00	2.00					4.00	4.02
PH Buffer														10.00	10.03		4.00	4.02					10.00	10.03
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
												100	0.00	NA		5 mins	NA		1	4.93	YES		NA	
PH Buffer														4.00			2.00						4.00	
PH Buffer														10.00			4.00						7.00	

Comments and additional information continued on the next page. (*PS=particle sizing)

Data Reviewer / Date: _____ Set-up analyst: _____ Take-down analyst: _____

SGS ACCUTEST

TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR METALS & EXTRACTABLES, METHOD SW846 1311 (TCLPE)

B8666

TC Batch ID: TC0783

Temperature ranges during leaching. (Must be from 21-25 °C, and recorded for each leaching period).

Balance ID: B54

pH meter ID: PH 67

	Uncorrected Temperatures			Corrected Temperatures		
Probe ID	Minimum	Maximum	CF	Minimum	Maximum	For rotator(s)
56418			0	0.00	0.00	7 & 8
50266	21.00	21.00	0	21.00	21.00	9 & 10
56717			0	0.00	0.00	4
45776			0	0.00	0.00	5
49504			0	0.00	0.00	11 & 12

Rotator revolution rates. (Must be from 28-32 rpm, and check weekly for all rotators).

Rotator ID:	Rate:	Last measured:
4	32	14-Oct-23
5	29	14-Oct-23
7	28	14-Oct-23
8	NA	22-Apr-21
9	32	14-Oct-23
10	32	14-Oct-23
11	NA	7-Sep-21
12	28	14-Oct-23

***Preliminary Evaluation Temperature (49.5-50.4 °C, heat for 10 min)**

Thermometer ID:		996283
Expiration:		1-Aug-24
Recorded temperature:		50
Heating time:	Start:	
	End:	

Reagent Information	Reagent ID or Manufacturer Lot	Expiration Date
Reagent		
Extraction fluid 1	GNE10-72724-TCLP	1-Nov-2023
Extraction fluid 2	GNE10-72725-TCLP	1-Nov-2023
TCLP filters	Env. Exp. Lot 115066-2038-AG	N/A
Filter acid-rinse solution	GNE10-72726-TCLP	18-Apr-2024
pH 2 buffer	FISHER 210051	1-Jul-2024
pH 4 buffer	FISHER 215966	1-Nov-2023
pH 7 buffer	FISHER 215965	1-Nov-2024
pH 10 buffer	FISHER 210276	1-Jul-2024
pH 12 buffer	N/A	N/A
pH 13 buffer	RICCA 2107D21	1-Jul-2024
Nitric acid, concentrated	REAGENTS 8203522	31-Jan-2024
Nitric acid, 1N		
1N HCl	GNE6-70547-TCLP	12/2/2022

B8666

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE REC
SGS NORTH AMERICA
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 24OCT23
ACTWGT: 23.30 LB
CAD: 0655474/CAFE3751

BILL SENDER

TO **SAMPLE RECEIVING**
SGS EHS WILMINGTON
5500 BUSINESS DRIVE

10/25/2023
11:08
4.9°

WILMINGTON NC 28405
(910) 794-1613 REF:
INV:
PO: DEPT:

5B5C1/BCBB/FE2D

FedEx
Express

E

J233023051201uv

WED - 25 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 **7003 7832 8418**

G5 ILMA

28405
NC-US **RDU**

Part # 156148-434 MTW EXP 07/24

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

October 31, 2023

Wells Richard
GHD
2237 S. Acadian Thruway
Suite 701
Baton Rouge, LA 70808

Work Order: **HS23101281**

Laboratory Results for: **San Jacinto RWP S Impoundment**

Dear Wells Richard,

ALS Environmental received 1 sample(s) on Oct 19, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Anna Kinchen
Project Manager

Client: GHD
Project: San Jacinto RWP S Impoundment
Work Order: HS23101281

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23101281-01	12599404-101923-S-MTK-Carbon-1	Soil		19-Oct-2023 09:00	19-Oct-2023 16:25	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **CASE NARRATIVE**
Project: San Jacinto RWP S Impoundment
Work Order: HS23101281

GC Semivolatiles by Method TX1005

Batch ID: 202273

Sample ID: LCSD-202273

- The RPD between the LCS and LCSD was outside of the control limit.

Metals by Method SW7470A

Batch ID: 202372

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW1311/6020

Batch ID: 202341

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto RWP S Impoundment WorkOrder:HS23101281
Sample ID: 12599404-101923-S-MTK-Carbon-1 Lab ID:HS23101281-01
Collection Date: 19-Oct-2023 09:00 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TEXAS TPH BY TX1005		**Method:TX1005**			Prep:TX1005PR / 20-Oct-2023		Analyst: DB
nC6 to nC12	< 7.3		7.3	49	mg/Kg	1	24-Oct-2023 04:52
>nC12 to nC28	**38**	J	**9.6**	**49**	**mg/Kg**	1	24-Oct-2023 04:52
>nC28 to nC35	< 9.6		9.6	49	mg/Kg	1	24-Oct-2023 04:52
Total Petroleum Hydrocarbon	**38.0**	J	**7.3**	**49**	**mg/Kg**	1	24-Oct-2023 04:52
Surr: 2-Fluorobiphenyl	*74.5*			*70-130*	*%REC*	*1*	*24-Oct-2023 04:52*
Surr: Trifluoromethyl benzene	*118*			*70-130*	*%REC*	*1*	*24-Oct-2023 04:52*
TCLP METALS BY SW6020A		**Method:SW1311/6020**		Leache:SW1311 / 21-Oct-2023	Prep:SW3010A / 21-Oct-2023		Analyst: MSC
Antimony	< 0.00400		0.00400	0.0500	mg/L	1	23-Oct-2023 13:36
Arsenic	**0.00735**	J	**0.00400**	**0.0500**	**mg/L**	1	23-Oct-2023 13:36
Barium	**0.404**		**0.0190**	**0.200**	**mg/L**	1	23-Oct-2023 13:36
Beryllium	< 0.00200		0.00200	0.0200	mg/L	1	23-Oct-2023 13:36
Cadmium	< 0.00200		0.00200	0.0500	mg/L	1	23-Oct-2023 13:36
Chromium	< 0.00400		0.00400	0.0500	mg/L	1	23-Oct-2023 13:36
Lead	< 0.00600		0.00600	0.0500	mg/L	1	23-Oct-2023 13:36
Nickel	**0.0202**	J	**0.00600**	**0.0500**	**mg/L**	1	23-Oct-2023 13:36
Selenium	< 0.0110		0.0110	0.0500	mg/L	1	23-Oct-2023 13:36
Silver	< 0.00200		0.00200	0.0500	mg/L	1	23-Oct-2023 13:36
Vanadium	< 0.00600		0.00600	0.0500	mg/L	1	23-Oct-2023 13:36
TCLP MERCURY BY SW7470A		**Method:SW7470A**		Leache:SW1311 / 21-Oct-2023	Prep:SW7470A / 23-Oct-2023		Analyst: JS
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	23-Oct-2023 12:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

Batch ID: 202273 **Start Date:** 20 Oct 2023 09:00 **End Date:** 20 Oct 2023 09:00
Method: TX 1005 PREP **Prep Code:** TX 1005_S PR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23101281-01		10.23 (g)	10 (mL)	0.9775	8-oz glass, Neat

Batch ID: 202338 **Start Date:** 20 Oct 2023 15:00 **End Date:** 20 Oct 2023 15:00
Method: TCLP MERCURY EXTRACTION BY SW1311 **Prep Code:** 1311LHG EXT

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23101281-01		100 (grams)	2000 (mL)	20	8-oz glass, Neat

Batch ID: 202339 **Start Date:** 20 Oct 2023 15:00 **End Date:** 20 Oct 2023 15:00
Method: TCLP METALS EXTRACTION BY SW1311 **Prep Code:** 1311LM EXT

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23101281-01		100 (grams)	2000 (mL)	20	8-oz glass, Neat

Batch ID: 202341 **Start Date:** 21 Oct 2023 10:00 **End Date:** 21 Oct 2023 10:00
Method: TCLP LEACHATE DIGESTION BY SW3010A **Prep Code:** 3010A_TCLP

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23101281-01		1 (mL)	10 (mL)	10	8-oz glass, Neat

Batch ID: 202372 **Start Date:** 23 Oct 2023 08:00 **End Date:** 23 Oct 2023 08:00
Method: MERCURY TCLP PREP BY SW7470A **Prep Code:** 1311_HGPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23101281-01		10 (mL)	10 (mL)	1	8-oz glass, Neat

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 202273 (0)	**Test Name :** TEXAS TPH BY TX1005				**Matrix:** Soil	
HS23101281-01	12599404-101923-S-MTK-Carbon-1	19 Oct 2023 09:00		20 Oct 2023 09:00	24 Oct 2023 04:52	1
Batch ID: 202341 (0)	**Test Name :** TCLP METALS BY SW6020A				**Matrix:** Soil	
HS23101281-01	12599404-101923-S-MTK-Carbon-1	19 Oct 2023 09:00	21 Oct 2023 08:00	21 Oct 2023 10:00	23 Oct 2023 13:36	1
Batch ID: 202372 (0)	**Test Name :** TCLP MERCURY BY SW7470A				**Matrix:** Soil	
HS23101281-01	12599404-101923-S-MTK-Carbon-1	19 Oct 2023 09:00	21 Oct 2023 08:00	23 Oct 2023 08:00	23 Oct 2023 12:35	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202273 (0) **Instrument: FID-12** **Method: TEXAS TPH BY TX1005**

MBLK Sample ID: **MBLK-202273** Units: **mg/Kg** Analysis Date: **24-Oct-2023 01:20**
Client ID: Run ID: **FID-12_449900** SeqNo: **7628590** PrepDate: **20-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	< 7.4	50								
>nC12 to nC28	< 9.8	50								
>nC28 to nC35	< 9.8	50								
Total Petroleum Hydrocarbon	< 7.4	50								
Surr: 2-Fluorobiphenyl	*21.86*	*0*	*25*	*0*	*87.5*	*70 - 130*				
Surr: Trifluoromethyl benzene	*22.25*	*0*	*25*	*0*	*89.0*	*70 - 130*				

LCS Sample ID: **LCS-202273** Units: **mg/Kg** Analysis Date: **24-Oct-2023 01:51**
Client ID: Run ID: **FID-12_449900** SeqNo: **7628591** PrepDate: **20-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	243.6	50	250	0	97.4	75 - 125				
>nC12 to nC28	212.7	50	250	0	85.1	75 - 125				
Surr: 2-Fluorobiphenyl	*25.04*	*0*	*25*	*0*	*100*	*70 - 130*				
Surr: Trifluoromethyl benzene	*21.52*	*0*	*25*	*0*	*86.1*	*70 - 130*				

LCSD Sample ID: **LCSD-202273** Units: **mg/Kg** Analysis Date: **24-Oct-2023 02:21**
Client ID: Run ID: **FID-12_449900** SeqNo: **7628592** PrepDate: **20-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	232.8	50	250	0	93.1	75 - 125	243.6	4.53	20	
>nC12 to nC28	246.6	50	250	0	98.6	75 - 125	212.7	14.7	20	
Surr: 2-Fluorobiphenyl	*32.11*	*0*	*25*	*0*	*128*	*70 - 130*	*25.04*	*24.7*	*20*	R
Surr: Trifluoromethyl benzene	*23.69*	*0*	*25*	*0*	*94.7*	*70 - 130*	*21.52*	*9.56*	*20*	

MS Sample ID: **HS23101173-01MS** Units: **mg/Kg** Analysis Date: **24-Oct-2023 03:22**
Client ID: Run ID: **FID-12_449900** SeqNo: **7628594** PrepDate: **20-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	229	49	246.3	0	93.0	75 - 125				
>nC12 to nC28	241.4	49	246.3	0	98.0	75 - 125				
Surr: 2-Fluorobiphenyl	*26.42*	*0*	*24.63*	*0*	*107*	*70 - 130*				
Surr: Trifluoromethyl benzene	*20.55*	*0*	*24.63*	*0*	*83.4*	*70 - 130*				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202273 (0) **Instrument: FID-12** **Method: TEXAS TPH BY TX1005**

MSD Sample ID: **HS23101173-01MSD** Units: **mg/Kg** Analysis Date: **24-Oct-2023 03:52**
Client ID: Run ID: **FID-12_449900** SeqNo: **7628595** PrepDate: **20-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	234.9	49	243.7	0	96.4	75 - 125	229	2.55	20	
>nC12 to nC28	208.7	49	243.7	0	85.7	75 - 125	241.4	14.5	20	
Surr: 2-Fluorobiphenyl	*23.22*	*0*	*24.37*	*0*	*95.3*	*70 - 130*	*26.42*	*12.9*	*20*	
Surr: Trifluoromethyl benzene	*20.88*	*0*	*24.37*	*0*	*85.7*	*70 - 130*	*20.55*	*1.58*	*20*	

The following samples were analyzed in this batch: HS23101281-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202341 (0) **Instrument: ICPMS06** **Method: TCLP METALS BY SW6020A**

MBLK Sample ID: **MBLKT2-202181** Units: **mg/L** Analysis Date: **23-Oct-2023 11:24**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626564** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	< 0.00400	0.0500								
Arsenic	< 0.00400	0.0500								
Barium	< 0.0190	0.200								
Beryllium	< 0.00200	0.0200								
Cadmium	< 0.00200	0.0500								
Chromium	< 0.00400	0.0500								
Lead	< 0.00600	0.0500								
Nickel	< 0.00600	0.0500								
Selenium	< 0.0110	0.0500								
Silver	< 0.00200	0.0500								
Vanadium	< 0.00600	0.0500								

MBLK Sample ID: **MBLKT4-202339** Units: **mg/L** Analysis Date: **23-Oct-2023 11:28**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626566** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	< 0.00400	0.0500								
Arsenic	< 0.00400	0.0500								
Barium	< 0.0190	0.200								
Beryllium	< 0.00200	0.0200								
Cadmium	< 0.00200	0.0500								
Chromium	< 0.00400	0.0500								
Lead	< 0.00600	0.0500								
Nickel	< 0.00600	0.0500								
Selenium	< 0.0110	0.0500								
Silver	< 0.00200	0.0500								
Vanadium	< 0.00600	0.0500								

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202341 (0) **Instrument: ICPMS06** **Method: TCLP METALS BY SW6020A**

MBLK Sample ID: **MBLKT3-202303** Units: **mg/L** Analysis Date: **23-Oct-2023 11:26**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626565** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	< 0.00400	0.0500								
Arsenic	< 0.00400	0.0500								
Barium	< 0.0190	0.200								
Beryllium	< 0.00200	0.0200								
Cadmium	< 0.00200	0.0500								
Chromium	< 0.00400	0.0500								
Lead	< 0.00600	0.0500								
Nickel	< 0.00600	0.0500								
Selenium	< 0.0110	0.0500								
Silver	< 0.00200	0.0500								
Vanadium	< 0.00600	0.0500								

MBLK Sample ID: **MBLKT1-202299** Units: **mg/L** Analysis Date: **23-Oct-2023 11:22**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626563** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	< 0.00400	0.0500								
Arsenic	< 0.00400	0.0500								
Barium	< 0.0190	0.200								
Beryllium	< 0.00200	0.0200								
Cadmium	< 0.00200	0.0500								
Chromium	< 0.00400	0.0500								
Lead	< 0.00600	0.0500								
Nickel	< 0.00600	0.0500								
Selenium	< 0.0110	0.0500								
Silver	< 0.00200	0.0500								
Vanadium	< 0.00600	0.0500								

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202341 (0) **Instrument: ICPMS06** **Method: TCLP METALS BY SW6020A**

MBLK Sample ID: **MBLK-202341** Units: **mg/L** Analysis Date: **23-Oct-2023 11:20**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626562** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	< 0.000400	0.00500								
Arsenic	< 0.000400	0.00500								
Barium	< 0.00190	0.0200								
Beryllium	< 0.000200	0.00200								
Cadmium	< 0.000200	0.00500								
Chromium	< 0.000400	0.00500								
Lead	< 0.000600	0.00500								
Nickel	< 0.000600	0.00500								
Selenium	< 0.00110	0.00500								
Silver	< 0.000200	0.00500								
Vanadium	< 0.000600	0.00500								

LCS Sample ID: **LCS-202341** Units: **mg/L** Analysis Date: **23-Oct-2023 11:30**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626567** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04373	0.00500	0.05	0	87.5	80 - 120				
Arsenic	0.0487	0.00500	0.05	0	97.4	80 - 120				
Barium	0.04667	0.0200	0.05	0	93.3	80 - 120				
Beryllium	0.04543	0.00200	0.05	0	90.9	80 - 120				
Cadmium	0.04644	0.00500	0.05	0	92.9	80 - 120				
Chromium	0.04741	0.00500	0.05	0	94.8	80 - 120				
Lead	0.04729	0.00500	0.05	0	94.6	80 - 120				
Nickel	0.04625	0.00500	0.05	0	92.5	80 - 120				
Selenium	0.04733	0.00500	0.05	0	94.7	80 - 120				
Silver	0.04635	0.00500	0.05	0	92.7	80 - 120				
Vanadium	0.0466	0.00500	0.05	0	93.2	80 - 120				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202341 (0) **Instrument: ICPMS06** **Method: TCLP METALS BY SW6020A**

MS Sample ID: **HS23101239-01MS** Units: **mg/L** Analysis Date: **23-Oct-2023 12:58**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626759** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4153	0.0500	0.5	0.00246	82.6	80 - 120				
Arsenic	0.4714	0.0500	0.5	0.00678	92.9	80 - 120				
Barium	0.9067	0.200	0.5	0.4529	90.8	80 - 120				
Beryllium	0.4382	0.0200	0.5	0.00001	87.6	80 - 120				
Cadmium	0.4404	0.0500	0.5	0.00013	88.1	80 - 120				
Chromium	0.4887	0.0500	0.5	0.04636	88.5	80 - 120				
Lead	0.4345	0.0500	0.5	0.00047	86.8	80 - 120				
Nickel	0.4243	0.0500	0.5	0.00626	83.6	80 - 120				
Selenium	0.4717	0.0500	0.5	0.00235	93.9	80 - 120				
Silver	0.4248	0.0500	0.5	0.00008	84.9	80 - 120				
Vanadium	0.4596	0.0500	0.5	0.01951	88.0	80 - 120				

MSD Sample ID: **HS23101239-01MSD** Units: **mg/L** Analysis Date: **23-Oct-2023 13:00**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626754** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.4399	0.0500	0.5	0.00246	87.5	80 - 120	0.4153	5.76	20	
Arsenic	0.5022	0.0500	0.5	0.00678	99.1	80 - 120	0.4714	6.33	20	
Barium	1.001	0.200	0.5	0.4529	110	80 - 120	0.9067	9.87	20	
Beryllium	0.4748	0.0200	0.5	0.00001	95.0	80 - 120	0.4382	8.02	20	
Cadmium	0.4756	0.0500	0.5	0.00013	95.1	80 - 120	0.4404	7.67	20	
Chromium	0.5146	0.0500	0.5	0.04636	93.6	80 - 120	0.4887	5.16	20	
Lead	0.473	0.0500	0.5	0.00047	94.5	80 - 120	0.4345	8.49	20	
Nickel	0.4517	0.0500	0.5	0.00626	89.1	80 - 120	0.4243	6.25	20	
Selenium	0.5024	0.0500	0.5	0.00235	100	80 - 120	0.4717	6.3	20	
Silver	0.465	0.0500	0.5	0.00008	93.0	80 - 120	0.4248	9.03	20	
Vanadium	0.4867	0.0500	0.5	0.01951	93.4	80 - 120	0.4596	5.72	20	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202341 (0) **Instrument: ICPMS06** **Method: TCLP METALS BY SW6020A**

PDS Sample ID: **HS23101239-01PDS** Units: **mg/L** Analysis Date: **23-Oct-2023 13:02**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626755** PrepDate: **21-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.7994	0.0500	1	0.00246	79.7	75 - 125				
Arsenic	0.9773	0.0500	1	0.00678	97.1	75 - 125				
Beryllium	0.9161	0.0200	1	0.00001	91.6	75 - 125				
Cadmium	0.9297	0.0500	1	0.00013	93.0	75 - 125				
Chromium	0.9236	0.0500	1	0.04636	87.7	75 - 125				
Lead	0.927	0.0500	1	0.00047	92.7	75 - 125				
Nickel	0.8884	0.0500	1	0.00626	88.2	75 - 125				
Selenium	0.9609	0.0500	1	0.00235	95.9	75 - 125				
Silver	0.9436	0.0500	1	0.00008	94.4	75 - 125				
Vanadium	0.9123	0.0500	1	0.01951	89.3	75 - 125				

SD Sample ID: **HS23101239-01SD** Units: **mg/L** Analysis Date: **23-Oct-2023 12:56**
Client ID: Run ID: **ICPMS06_449817** SeqNo: **7626758** PrepDate: **21-Oct-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	< 0.0200	0.250					0.00246	0	10	
Arsenic	< 0.0200	0.250					0.00678	0	10	
Barium	0.4728	1.00					0.4529	0	10	J
Beryllium	< 0.0100	0.100					0.00001	0	10	
Cadmium	< 0.0100	0.250					0.00013	0	10	
Chromium	0.0601	0.250					0.04636	0	10	J
Lead	< 0.0300	0.250					0.00047	0	10	
Nickel	< 0.0300	0.250					0.00626	0	10	
Selenium	< 0.0550	0.250					0.00235	0	10	
Silver	< 0.0100	0.250					0.00008	0	10	
Vanadium	0.03703	0.250					0.01951	0	10	J

The following samples were analyzed in this batch: HS23101281-01

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Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202372 (0) **Instrument: HG04** **Method: TCLP MERCURY BY SW7470A**

MBLK Sample ID: **MBLKT2-202179** Units: **mg/L** Analysis Date: **23-Oct-2023 12:02**
Client ID: Run ID: **HG04_449826** SeqNo: **7626650** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

MBLK Sample ID: **MBLKT4-202338** Units: **mg/L** Analysis Date: **23-Oct-2023 12:05**
Client ID: Run ID: **HG04_449826** SeqNo: **7626652** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

MBLK Sample ID: **MBLKT6-202180** Units: **mg/L** Analysis Date: **23-Oct-2023 12:09**
Client ID: Run ID: **HG04_449826** SeqNo: **7626654** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

MBLK Sample ID: **MBLKT5-202300** Units: **mg/L** Analysis Date: **23-Oct-2023 12:07**
Client ID: Run ID: **HG04_449826** SeqNo: **7626653** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

MBLK Sample ID: **MBLKT3-202302** Units: **mg/L** Analysis Date: **23-Oct-2023 12:04**
Client ID: Run ID: **HG04_449826** SeqNo: **7626651** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

MBLK Sample ID: **MBLKT1-202298** Units: **mg/L** Analysis Date: **23-Oct-2023 12:00**
Client ID: Run ID: **HG04_449826** SeqNo: **7626649** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

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Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: HS23101281

QC BATCH REPORT

Batch ID: 202372 (0) **Instrument: HG04** **Method: TCLP MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-202372** Units: **mg/L** Analysis Date: **23-Oct-2023 11:49**
Client ID: Run ID: **HG04_449826** SeqNo: **7626647** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

LCS Sample ID: **LCS-202372** Units: **mg/L** Analysis Date: **23-Oct-2023 11:59**
Client ID: Run ID: **HG04_449826** SeqNo: **7626648** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00498	0.000200	0.005	0	99.6	80 - 120				

MS Sample ID: **HS23101041-03MS** Units: **mg/L** Analysis Date: **23-Oct-2023 12:19**
Client ID: Run ID: **HG04_449826** SeqNo: **7626659** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00547	0.000200	0.005	0.00001	109	75 - 125				

MSD Sample ID: **HS23101041-03MSD** Units: **mg/L** Analysis Date: **23-Oct-2023 12:25**
Client ID: Run ID: **HG04_449826** SeqNo: **7626660** PrepDate: **23-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00473	0.000200	0.005	0.00001	94.4	75 - 125	0.00547	14.5	20	

The following samples were analyzed in this batch: HS23101281-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto RWP S Impoundment
WorkOrder: **HS23101281**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/L	Milligrams per Liter

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

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Sample Receipt Checklist

Work Order ID: HS23101281 **Date/Time Received:** **19-Oct-2023 16:25**

Client Name: GHD Baton Rouge **Received by:** **Malcolm Burleson**

Completed By:	/S/ Malcolm Burleson	19-Oct-2023 17:25	**Reviewed by:**	/S/ Jessica Monfore	23-Oct-2023 05:00
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **water** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:059466
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4uc 2.3c	ir31	
Cooler(s)/Kit(s):	m.blue		
Date/Time sample(s) sent to storage:	10192023		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
Spring City, PA +1 610 948 4903
Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 059466

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis
Purchase Order		Project Name	San Jacinto RWP-South Impoundment	A TCLP Metals (SW846/6010/7470) TCLP Prep SW-846 1311
Work Order	GHDSSOW:12599404-2023-006	Project Number	12599404	B TPH (TX 1005)
Company Name		Bill To Company	GHD	C TAL Metals (SW-846 6010A/7471A)
Send Report To	Wells, Richard	Invoice Attn		D Hex Chromium (SW-846 7196A)
Address	2237 S. Acadian Thruway Suite 701 ~~Baton Rouge, LA 70808~~	Address		E F
City/State/Zip	Baton Rouge / LA / 70808	City/State/Zip		G
Phone	225-296-6506	Phone		H
Fax		Fax		I
e-Mail Address	Wells.Richard@ghd.com	e-Mail Address		J

HS23101281
GHD
San Jacinto WP S Impoundment

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12599404-101923-S-MTK-Carbon-1	10/19/23	0900	S	—	2	X	X									
2	12599404-101923-S-MTK-Carbon-1	10/19/23	0900	S	—	1			X	X							✓
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

10/19/23

Sampler(s) Please Print & Sign: Marc Kemper
Shipment Method: In Person
Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☒ 3 BD ☐ 2 BD ☐ 1 BD
Results Due Date:

Relinquished by: | Date: 10/19/23 | Time: 1625 | Received by:
Relinquished by: | Date: | Time: | Received by (Laboratory):
Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

Notes: Hold 1 Jar for TAL/Hex Chromium

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
M. Bixler	1R3	☐ Level II Std QC ☐ TRRP Checklist
	2. 1.1	☐ Level III Std QC/Raw Data ☐ TRRP Level IV
	-0.1C	☐ Level IV SW846/CLP
		☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12599404;San Jacinto Waste Pits

SGS Job Number: LA92821

Sampling Date: 08/03/23

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathy Shaw

Total number of pages in report: **14**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Kesavalu Bagawandoss
General Manager

Client Service contact: Rebecca Hebert 337-237-4775
Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: LA92821

12599404;San Jacinto Waste Pits

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
LA92821-1	08/03/23	11:00		08/04/23	SO	Soil	12599404-080323-MTK-S-RESIDUAL-1

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the RL

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA92821
Account: GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits
Collected: 08/03/23

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA92821-1	**12599404-080323-MTK-S-RESIDUAL-1**					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-080323-MTK-S-RESIDUAL-1		
Lab Sample ID:	LA92821-1	**Date Sampled:**	08/03/23
Matrix:	SO - Soil	**Date Received:**	08/04/23
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF127958.D	1	08/05/23 03:49	LL	08/04/23 12:00	OP23262	GJJ2566
Run #2							

	Initial Weight	Final Volume
Run #1	3.80 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	66	mg/kg	
	TPH (> C12-C28)	ND	66	mg/kg	
	TPH (> C28-C35)	ND	66	mg/kg	
	TPH (C6-C35)	ND	66	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	104%		70-130%
98-08-8	aaa-Trifluorotoluene	101%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LA92821

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: Sam Jacinto Waste Pits Sound Impoundment
P.O. #:
QUOTE #:
SITE REF: 12599404
TURN AROUND TIME: 1-Day TAT (fastest possible)
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
12599404-2022-01

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD Services Inc
CONTACT: Wells Richard
ADDRESS: 2237 S Acadian Thruway Suite 701, Baton Rouge LA 70808
PHONE:
EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE:
EMAIL:

PRESERVATIVE

ANALYSIS & METHOD

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	TX 1005	TX 1006	QC MS	QC MSD	QC DUP	QTY	REMARKS
12599404-08X323 MTK-S-Residual-1	8/3/23	1100	C	S	3	X	X					-4oz Jar for extra volume if needed
Temp Blank	–	–	–	W	1							-Hold Tx 1006

3

RUSH

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
[signature] GHD	8/3/23	12:00	FedEx
RELINQUISHED BY (2): FedEx	DATE: 8/4/23	TIME: 10:00	RECEIVED BY: [signature] 8/4/23 10:00
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:
COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: TEMP: °C
TRACKING #:

Page 1 of 1 Csbc Tmp 4.4 #001 RS40 #9

SGS NORTH AMERICA INC ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.sgs.com/ehs
Member of the SGS Group (SGS SA)

LA92821: Chain of Custody
Page 1 of 4

NOTES

SAMPLE ACCEPTANCE POLICY

The Sample Acceptance Policy is a NELAC requirement that outlines the circumstances under which samples are accepted or rejected. Data from any samples that do not meet the following criteria are qualified in a manner that clearly defines the nature and substance of the variation. The most relevant ones are captured on the sample receipt login form.

The following information should be provided, at minimum, as well as other areas of concern:

- Sample identification, date/time and location of collection
- Preservation type
- Collector's name
- Sample type
- Unique ID (indelible ink) on the water-resistant container label
- Use of appropriate containers (Teflon®-lined top glass amber or protected from light)
- Adherence to specified holding times
- Adequate sample volume (enough for a repeat analysis)

When samples are received in condition that could possibly alter the sample integrity including some of the above requirements, SGS will contact the client for resolution of the issues. Generally, SGS will assess the sample condition and offer an opinion on the suitability of the samples submitted for analysis.

Please note that samples will be disposed of 90 days following the issuance of a report unless an archiving request is noted. If samples are archived charges may be assessed after 90 days in the freezer or 12 months in cold storage.

NELAC REQUIREMENTS

Under NELAC, we are required to inform our clients who request analyses by SW846 methodology that either a matrix spike (MS)/matrix spike duplicate (MSD) set, or a MS/sample duplicate (DUP) set be analyzed with each prep batch. The samples chosen for this purpose must be clearly identified on the documentation accompanying the samples.

Our COC is modified so that this identification can be made easily. Indicate by marking "yes" or "X" in the box next to samples which require MS/MSD and/or sample duplicate tests. THESE QC SAMPLES ARE BILLABLE AT THE UNIT RATE.

SGS will provide batch QC for any projects that DO NOT provide the necessary sample volumes if at all possible. SGS will narrate any projects that do not have the required matrix spike (MS)/matrix spike duplicate (MSD) set, or a MS/sample duplicate (DUP) set.

Thank you for your attention and cooperation.

TERMS & CONDITIONS

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via:

CONTACTS

SGS NORTH AMERICA INC.
ENVIRONMENT, HEALTH & SAFETY
5500 Business Drive, Wilmington, NC 28405
Phone: +1 910 350 1903 | +1 910 794 1613
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www.sgs.com

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SGS-00055 (01/18)
WHITE - Returned by Lab
YELLOW - Retained by Client

WHEN YOU NEED TO BE SURE SGS

ORIGIN ID:HBYA (772) 233-3016
GHD SERVICES INC.
11004 E 51ST ST
TULSA, OK 74146
UNITED STATES US

SHIP DATE: 03AUG23
ACTWGT: 29.90 LB
CAD: 6755021/SSFO2422
DIMS: 16x11x16 IN
BILL THIRD PARTY

TO ATTN: SAMPLE RECIEVING
SGS – NORTH AMERICA
500 AMBASSADOR CAFFERY PKWY

SCOTT LA 70583
(772) 233-3016
INV:
PO:
REF:
DEPT:

FedEx Express

TRK# 0201 7820 3129 9250

FRI – 04 AUG 10:30A
PRIORITY OVERNIGHT
AHS
70583
LA-US LFT

XH LFTA

LA92821: Chain of Custody
Page 3 of 4

SGS Sample Receipt Summary

Job Number: LA92821 **Client:** GHD **Project:** SAN JACINTO WASTE

Date / Time Received: 8/4/2023 10:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 7820 3129 9250

Cooler Temps (Raw Measured) °C: Cooler 1: (4.4);

Cooler Temps (Corrected) °C: Cooler 1: (4.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: _____ pH 12+: _____ Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA92821
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23262-MB	JF127955.D	1	08/05/23	LL	08/04/23	OP23262	GJJ2566

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA92821-1

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	103%	70-130%
98-08-8	aaa-Trifluorotoluene	107%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA92821
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23262-BS1	JF127956.D	1	08/05/23	LL	08/04/23	OP23262	GJJ2566
OP23262-BSD1	JF127957.D	1	08/05/23	LL	08/04/23	OP23262	GJJ2566

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA92821-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	239	96	261	104	9	75-125/20
	TPH (> C12-C28)	250	215	86	232	93	8	75-125/20
	TPH (C6-C35)	500	455	91	494	99	8	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	104%	112%	70-130%
98-08-8	aaa-Trifluorotoluene	101%	110%	70-130%

* = Outside of Control Limits.

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	20-054-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.3)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020019
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Ohio	87785
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	460214
Washington	C913

Rev. 12-Oct-2021

Sample ID: 12599404-112122-S-MTK-Source Aggregate-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.17 g	Lab Sample ID	B7330_19675_DF_001-R1	Date Extracted:	28-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	91.6 %	QC Batch No:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	20:31:31

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.326			ES 2378-TCDD	86.6	
12378-PeCDD	ND	0.29			ES 12378-PeCDD	94.6	
123478-HxCDD	ND	0.265			ES 123478-HxCDD	88.9	
123678-HxCDD	ND	0.276			ES 123678-HxCDD	87.3	
123789-HxCDD	ND	0.279			ES 123789-HxCDD	88.3	
1234678-HpCDD	0.696			J B	ES 1234678-HpCDD	93.9	
OCDD	5.81			J B	ES OCDD	86.8	
2378-TCDF	ND	0.176			ES 2378-TCDF	84.2	
12378-PeCDF	ND	0.178			ES 12378-PeCDF	102	
23478-PeCDF	ND	0.19			ES 23478-PeCDF	97.2	
123478-HxCDF	ND	0.165			ES 123478-HxCDF	82	
123678-HxCDF	ND	0.143			ES 123678-HxCDF	91.6	
234678-HxCDF	ND	0.173			ES 234678-HxCDF	84.1	
123789-HxCDF	ND	0.196			ES 123789-HxCDF	76.1	
1234678-HpCDF	ND	0.11			ES 1234678-HpCDF	115	
1234789-HpCDF	ND	0.179			ES 1234789-HpCDF	83.4	
OCDF	ND	0.321			ES OCDF	73.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.3	
Total TCDD	ND	0.326	ND		CS 12347-PeCDD	99.2	
Total PeCDD	ND	0.29	ND		CS 12346-PeCDF	109	
Total HxCDD	ND	0.272	ND		CS 123469-HxCDF	92.1	
Total HpCDD	2.07		2.07		CS 1234689-HpCDF	100	
Total TCDF	ND	0.176	ND				
Total PeCDF	ND	0.184	ND				
Total HxCDF	ND	0.167	ND				
Total HpCDF	ND	0.137	ND				
Total PCDD/Fs	**7.88**		**7.88**				
WHO-2005 TEQs							
TEQ: ND=0	0.0087		0.0087				
TEQ: ND=DL/2	0.433	0.425	0.433				
TEQ: ND=DL	0.858	0.851	0.858				

SGS
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Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: 12599404-112122-S-MTK-Source Aggregate-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.17 g	Lab Sample ID:	B7330_19675_DF_001-R1	Date Extracted:	28-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	91.6 %	QC Batch No.:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	20:31:31

Tetra-Dioxins	Conc. (pg/g)	Qualifiers	Penta-Dioxins	Conc. (pg/g)	Qualifiers	Hexa-Dioxins	Conc (pg/g)	Qualifiers	Hepta-Dioxins	Conc (pg/g)	Qualifiers
1368D	(0.326)		12479/12468D	(0.29)		124679/124689D	(0.272)		1234679D	1.37	J B
1379D	(0.326)		12469D	(0.29)		123468D	(0.272)		1234678D	0.696	J B
1369D	(0.326)		12368D	(0.29)		123679/123689D	(0.272)				
1469D	(0.326)		12478D	(0.29)		123469D	(0.272)				
1247D...[4]	(0.326)		12379D	(0.29)		123478D	(0.265)				
1378D	(0.326)		12369D...[3]	(0.29)		123678D	(0.276)				
1268D	(0.326)		12346/12347D	(0.29)		123467D	(0.272)				
1478D	(0.326)		12378D	(0.29)		123789D	(0.279)		Conc.	2.07	
1279D	(0.326)		12367D	(0.29)					EMPC	2.07	
1234/1269D	(0.326)		12389D	(0.29)							
1236D	(0.326)								Octa-Dioxin	Conc (pg/g)	Qualifiers
1237/1238D	(0.326)										
1239D	(0.326)								OCDD	5.81	J B
2378D	(0.326)										
1278D	(0.326)										
1267D	(0.326)										
1289D	(0.326)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0				

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Tel: +1 910 794-1613
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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0087	0.0087
TEQ: ND=DL/2	0.433	0.433
TEQ: ND=DL	0.858	0.858

	Conc.	EMPC
Total PCDD/Fs	7.88	7.88

Checkcode: 526-379-YKN

Report Created: 30-Nov-2022 11:59 Analyst: pw

Sample ID: 12599404-112122-S-MTK-Source Aggregate-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.17 g	Lab Sample ID:	B7330_19675_DF_001-R1	Date Extracted:	28-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	91.6 %	QC Batch No.:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	20:31:31

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.176)		13468/12468F	(0.174)		123468F	(0.167)		1234678F	(0.11)	
1468F	(0.176)		13678F...[3]	(0.184)		124678/134678F	(0.167)		1234679F	(0.137)	
2468F	(0.176)		12368F...[3]	(0.184)		134679F	(0.167)		1234689F	(0.137)	
1346/1246F	(0.176)		14678F	(0.184)		124679F	(0.167)		1234789F	(0.179)	
1347F...[3]	(0.176)		13479F	(0.184)		124689F	(0.167)				
1348F	(0.176)		13469/12479F	(0.184)		123467F	(0.167)				
1248F...[3]	(0.176)		12346F	(0.184)		123478F	(0.165)				
1268F	(0.176)		23468/12469F	(0.184)		123678F	(0.143)				
1467F	(0.176)		12347F	(0.184)		123479F	(0.167)				
1478F	(0.176)		12348F	(0.184)		123469F	(0.167)				
1369/1237F	(0.176)		12378F	(0.178)		123679F	(0.167)				
2467F	(0.176)		12678/12367F	(0.184)		234678F	(0.173)		**Conc.**	0	
2368F	(0.176)		12379F	(0.184)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(0.176)		12679F	(0.184)		123689F	(0.167)				
1278F	(0.176)		23467/12369F	(0.184)		123789F	(0.196)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(0.176)		23478F	(0.19)		123789/123489F	0			**(pg/g)**	
1267F	(0.176)		23478/12489F	0		123489F	(0.167)		OCDF	(0.321)	
2346/1249F	(0.176)		12489F	(0.184)							
2347/1279F	(0.176)		12349F	(0.184)							
2348F	(0.176)		12389F	(0.184)							
2378F	(0.176)										
2367/3467F	(0.176)										
1269F	(0.176)										
1239F	(0.176)										
1289F	(0.176)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 526-379-YKN

Report Created: 30-Nov-2022 11:59 Analyst: pw

Sample ID: 12599404-112122-S-MTK-Source Agg TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	B7330_19675_DF_001-R1
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.17 g	QC Batch No.:	19675
Date Collected:	21-Nov-2022	Split:	-	Date Extracted:	28-Nov-2022
Date Received:	22-Nov-2022	Dilution:	-	Date Analyzed:	29-Nov-2022 20:31
Lab Project No:	B7330	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.326)		0.326	(0.326)	(0.326)	(0.326)
12378-PeCDD	(0.29)		0.29	(0.145)	(0.29)	(0.29)
123478-HxCDD	(0.265)		0.265	(0.0265)	(0.0265)	(0.0265)
123678-HxCDD	(0.276)		0.276	(0.0276)	(0.0276)	(0.0276)
123789-HxCDD	(0.279)		0.279	(0.0279)	(0.0279)	(0.0279)
1234678-HpCDD	0.696	J B	0.183	0.00696	0.00696	0.00696
OCDD	5.81	J B	0.393	0.00581	0.000581	0.00174
2378-TCDF	(0.176)		0.176	(0.0176)	(0.0176)	(0.0176)
12378-PeCDF	(0.178)		0.178	(0.00889)	(0.00889)	(0.00534)
23478-PeCDF	(0.19)		0.19	(0.0951)	(0.0951)	(0.0571)
123478-HxCDF	(0.165)		0.165	(0.0165)	(0.0165)	(0.0165)
123678-HxCDF	(0.143)		0.143	(0.0143)	(0.0143)	(0.0143)
234678-HxCDF	(0.173)		0.173	(0.0173)	(0.0173)	(0.0173)
123789-HxCDF	(0.196)		0.196	(0.0196)	(0.0196)	(0.0196)
1234678-HpCDF	(0.11)		0.11	(0.0011)	(0.0011)	(0.0011)
1234789-HpCDF	(0.179)		0.179	(0.00179)	(0.00179)	(0.00179)
OCDF	(0.321)		0.321	(0.000321)	(0.0000321)	(0.0000962)

TEQ Summaries			
EMPC = 0, ND = 0	0.0128	0.00754	0.0087
EMPC = 0, ND = DL / 2	0.386	0.453	0.433
EMPC = 0, ND = DL	0.759	0.898	0.858
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.0128	0.00754	0.0087
EMPC = EMPC, ND = DL / 2	0.386	0.453	0.433
EMPC = EMPC, ND = DL	0.759	0.898	0.858
EMPC = EMPC, < J-level = 0	0	0	0

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Sample ID: 12599404-112122-S-MTK-Source Clay-1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.23 g	Lab Sample ID	B7330_19662_DF_002	Date Extracted:	22-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	82.3 %	QC Batch No:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	7:29:26

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.115			ES 2378-TCDD	87	
12378-PeCDD	ND	0.11			ES 12378-PeCDD	92.7	
123478-HxCDD	EMPC		0.346	J	ES 123478-HxCDD	91.6	
123678-HxCDD	EMPC		0.226	J	ES 123678-HxCDD	90.3	
123789-HxCDD	0.625			J	ES 123789-HxCDD	92.2	
1234678-HpCDD	10.5				ES 1234678-HpCDD	88	
OCDD	303				ES OCDD	94.3	
2378-TCDF	ND	0.0615			ES 2378-TCDF	90.7	
12378-PeCDF	ND	0.0744			ES 12378-PeCDF	97.4	
23478-PeCDF	ND	0.0695			ES 23478-PeCDF	95.8	
123478-HxCDF	ND	0.0653			ES 123478-HxCDF	75.2	
123678-HxCDF	ND	0.0606			ES 123678-HxCDF	79.8	
234678-HxCDF	ND	0.0689			ES 234678-HxCDF	77.2	
123789-HxCDF	ND	0.0747			ES 123789-HxCDF	74.8	
1234678-HpCDF	ND	0.0576			ES 1234678-HpCDF	84.2	
1234789-HpCDF	ND	0.0779			ES 1234789-HpCDF	73.6	
OCDF	ND	0.0912			ES OCDF	74.7	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	81.4	
Total TCDD	ND	0.115	ND		CS 12347-PeCDD	90.7	
Total PeCDD	ND	0.11	ND		CS 12346-PeCDF	99.1	
Total HxCDD	2.13		3.75		CS 123469-HxCDF	75.9	
Total HpCDD	24.5		24.5		CS 1234689-HpCDF	74.8	
Total TCDF	ND	0.0615	ND				
Total PeCDF	ND	0.072	ND				
Total HxCDF	ND	0.067	ND				
Total HpCDF	ND	0.0665	ND				
Total PCDD/Fs	**330**		**331**				
WHO-2005 TEQs							
TEQ: ND=0	0.258		0.315				
TEQ: ND=DL/2	0.399	0.16	0.457				
TEQ: ND=DL	0.541	0.319	0.598				

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Sample ID: 12599404-112122-S-MTK-Source Clay-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.23 g	Lab Sample ID:	B7330_19662_DF_002	Date Extracted:	22-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	82.3 %	QC Batch No.:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	7:29:26

Tetra-Dioxins	Conc. (pg/g)	Qualifiers	Penta-Dioxins	Conc. (pg/g)	Qualifiers	Hexa-Dioxins	Conc (pg/g)	Qualifiers	Hepta-Dioxins	Conc (pg/g)	Qualifiers
1368D	(0.115)		12479/12468D	(0.11)		124679/124689D	1.5	J	1234679D	14	
1379D	(0.115)		12469D	(0.11)		123468D	(0.12)		1234678D	10.5	
1369D	(0.115)		12368D	(0.11)		123679/123689D	[1.05]	J			
1469D	(0.115)		12478D	(0.11)		123469D	(0.12)				
1247D...[4]	(0.115)		12379D	(0.11)		123478D	[0.346]	J			
1378D	(0.115)		12369D...[3]	(0.11)		123678D	[0.226]	J			
1268D	(0.115)		12346/12347D	(0.11)		123467D	(0.12)				
1478D	(0.115)		12378D	(0.11)		123789D	0.625	J	**Conc.**	24.5	
1279D	(0.115)		12367D	(0.11)					**EMPC**	24.5	
1234/1269D	(0.115)		12389D	(0.11)							
1236D	(0.115)								**Octa-Dioxin**	**Conc (pg/g)**	**Qualifiers**
1237/1238D	(0.115)										
1239D	(0.115)								OCDD	303	
2378D	(0.115)										
1278D	(0.115)										
1267D	(0.115)										
1289D	(0.115)										
Conc.	0		**Conc.**	0		**Conc.**	2.13				
EMPC	0		**EMPC**	0		**EMPC**	3.75				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.258	0.315
TEQ: ND=DL/2	0.399	0.457
TEQ: ND=DL	0.541	0.598

	Conc.	EMPC
Total PCDD/Fs	330	331

Checkcode: 985-909-HXT

Report Created: 29-Nov-2022 11:31 Analyst: pw

Sample ID: 12599404-112122-S-MTK-Source Clay-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.23 g	Lab Sample ID:	B7330_19662_DF_002	Date Extracted:	22-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	82.3 %	QC Batch No.:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	7:29:26

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.0615)		13468/12468F	(0.107)		123468F	(0.067)		1234678F	(0.0576)	
1468F	(0.0615)		13678F...[3]	(0.072)		124678/134678F	(0.067)		1234679F	(0.0665)	
2468F	(0.0615)		12368F...[3]	(0.072)		134679F	(0.067)		1234689F	(0.0665)	
1346/1246F	(0.0615)		14678F	(0.072)		124679F	(0.067)		1234789F	(0.0779)	
1347F...[3]	(0.0615)		13479F	(0.072)		124689F	(0.067)				
1348F	(0.0615)		13469/12479F	(0.072)		123467F	(0.067)				
1248F...[3]	(0.0615)		12346F	(0.072)		123478F	(0.0653)				
1268F	(0.0615)		23468/12469F	(0.072)		123678F	(0.0606)				
1467F	(0.0615)		12347F	(0.072)		123479F	(0.067)				
1478F	(0.0615)		12348F	(0.072)		123469F	(0.067)				
1369/1237F	(0.0615)		12378F	(0.0744)		123679F	(0.067)				
2467F	(0.0615)		12678/12367F	(0.072)		234678F	(0.0689)		**Conc.**	0	
2368F	(0.0615)		12379F	(0.072)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(0.0615)		12679F	(0.072)		123689F	(0.067)				
1278F	(0.0615)		23467/12369F	(0.072)		123789F	(0.0747)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(0.0615)		23478F	(0.0695)		123789/123489F	0			**(pg/g)**	
1267F	(0.0615)		23478/12489F	0		123489F	(0.067)		OCDF	(0.0912)	
2346/1249F	(0.0615)		12489F	(0.072)							
2347/1279F	(0.0615)		12349F	(0.072)							
2348F	(0.0615)		12389F	(0.072)							
2378F	(0.0615)										
2367/3467F	(0.0615)										
1269F	(0.0615)										
1239F	(0.0615)										
1289F	(0.0615)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 985-909-HXT

Report Created: 29-Nov-2022 11:31 Analyst: pw

Sample ID: 12599404-112122-S-MTK-Source Cla TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	B7330_19662_DF_002
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.23 g	QC Batch No.:	19662
Date Collected:	21-Nov-2022	Split:	-	Date Extracted:	22-Nov-2022
Date Received:	22-Nov-2022	Dilution:	-	Date Analyzed:	26-Nov-2022 07:29
Lab Project No:	B7330	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.115)		0.115	(0.115)	(0.115)	(0.115)
12378-PeCDD	(0.11)		0.11	(0.055)	(0.11)	(0.11)
123478-HxCDD	[0.346]	J	0.117	[0.0346]	[0.0346]	[0.0346]
123678-HxCDD	[0.226]	J	0.123	[0.0226]	[0.0226]	[0.0226]
123789-HxCDD	0.625	J	0.121	0.0625	0.0625	0.0625
1234678-HpCDD	10.5		0.092	0.105	0.105	0.105
OCDD	303		0.142	0.303	0.0303	0.0909
2378-TCDF	(0.0615)		0.0615	(0.00615)	(0.00615)	(0.00615)
12378-PeCDF	(0.0744)		0.0744	(0.00372)	(0.00372)	(0.00223)
23478-PeCDF	(0.0695)		0.0695	(0.0347)	(0.0347)	(0.0208)
123478-HxCDF	(0.0653)		0.0653	(0.00653)	(0.00653)	(0.00653)
123678-HxCDF	(0.0606)		0.0606	(0.00606)	(0.00606)	(0.00606)
234678-HxCDF	(0.0689)		0.0689	(0.00689)	(0.00689)	(0.00689)
123789-HxCDF	(0.0747)		0.0747	(0.00747)	(0.00747)	(0.00747)
1234678-HpCDF	(0.0576)		0.0576	(0.000576)	(0.000576)	(0.000576)
1234789-HpCDF	(0.0779)		0.0779	(0.000779)	(0.000779)	(0.000779)
OCDF	(0.0912)		0.0912	(0.0000912)	(0.00000912)	(0.0000274)

TEQ Summaries			
EMPC = 0, ND = 0	0.47	0.198	0.258
EMPC = 0, ND = DL / 2	0.592	0.347	0.399
EMPC = 0, ND = DL	0.713	0.495	0.541
EMPC = 0, < J-level = 0	0.408	0.135	0.196
EMPC = EMPC, ND = 0	0.528	0.255	0.315
EMPC = EMPC, ND = DL / 2	0.649	0.404	0.457
EMPC = EMPC, ND = DL	0.77	0.553	0.598
EMPC = EMPC, < J-level = 0	0.408	0.135	0.196

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Sample ID: 12599404-112122-S-MTK-Source Sand-1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.25 g	Lab Sample ID	B7330_19662_DF_003	Date Extracted:	22-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	93.5 %	QC Batch No:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	8:16:04

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.104			ES 2378-TCDD	90.5	
12378-PeCDD	ND	0.173			ES 12378-PeCDD	90.6	
123478-HxCDD	ND	0.119			ES 123478-HxCDD	83.3	
123678-HxCDD	ND	0.119			ES 123678-HxCDD	86.9	
123789-HxCDD	ND	0.122			ES 123789-HxCDD	84.5	
1234678-HpCDD	1.35			J	ES 1234678-HpCDD	76.7	
OCDD	23				ES OCDD	77.1	
2378-TCDF	ND	0.0663			ES 2378-TCDF	93.2	
12378-PeCDF	ND	0.105			ES 12378-PeCDF	97.3	
23478-PeCDF	ND	0.101			ES 23478-PeCDF	94.3	
123478-HxCDF	ND	0.147			ES 123478-HxCDF	66.4	
123678-HxCDF	ND	0.147			ES 123678-HxCDF	67.1	
234678-HxCDF	ND	0.16			ES 234678-HxCDF	68.1	
123789-HxCDF	ND	0.173			ES 123789-HxCDF	65.3	
1234678-HpCDF	ND	0.148			ES 1234678-HpCDF	67.9	
1234789-HpCDF	ND	0.183			ES 1234789-HpCDF	62.2	
OCDF	ND	0.3			ES OCDF	61.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	87.1	
Total TCDD	ND	0.104	ND		CS 12347-PeCDD	93.8	
Total PeCDD	ND	0.173	ND		CS 12346-PeCDF	96.9	
Total HxCDD	ND		0.247		CS 123469-HxCDF	72.7	
Total HpCDD	3.01		3.01		CS 1234689-HpCDF	63.9	
Total TCDF	ND	0.0663	ND				
Total PeCDF	ND	0.103	ND				
Total HxCDF	ND	0.156	ND				
Total HpCDF	ND	0.164	ND				
Total PCDD/Fs	**26**		**26.2**				
WHO-2005 TEQs							
TEQ: ND=0	0.0204		0.0204				
TEQ: ND=DL/2	0.23	0.21	0.23				
TEQ: ND=DL	0.44	0.42	0.44				

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Sample ID: 12599404-112122-S-MTK-Source Sand-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.25 g	Lab Sample ID:	B7330_19662_DF_003	Date Extracted:	22-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	93.5 %	QC Batch No.:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	8:16:04

Tetra-Dioxins	Conc. (pg/g)	Qualifiers	Penta-Dioxins	Conc. (pg/g)	Qualifiers	Hexa-Dioxins	Conc (pg/g)	Qualifiers	Hepta-Dioxins	Conc (pg/g)	Qualifiers
1368D	(0.104)		12479/12468D	(0.173)		124679/124689D	[0.247]	J	1234679D	1.66	J
1379D	(0.104)		12469D	(0.173)		123468D	(0.12)		1234678D	1.35	J
1369D	(0.104)		12368D	(0.173)		123679/123689D	(0.12)				
1469D	(0.104)		12478D	(0.173)		123469D	(0.12)				
1247D...[4]	(0.104)		12379D	(0.173)		123478D	(0.119)				
1378D	(0.104)		12369D...[3]	(0.173)		123678D	(0.119)				
1268D	(0.104)		12346/12347D	(0.173)		123467D	(0.12)				
1478D	(0.104)		12378D	(0.173)		123789D	(0.122)		Conc.	3.01	
1279D	(0.104)		12367D	(0.173)					EMPC	3.01	
1234/1269D	(0.104)		12389D	(0.173)							
1236D	(0.104)								Octa-Dioxin	Conc (pg/g)	Qualifiers
1237/1238D	(0.104)										
1239D	(0.104)								OCDD	23	
2378D	(0.104)										
1278D	(0.104)										
1267D	(0.104)										
1289D	(0.104)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0.247				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0204	0.0204
TEQ: ND=DL/2	0.23	0.23
TEQ: ND=DL	0.44	0.44

	Conc.	EMPC
Total PCDD/Fs	26	26.2

Checkcode: 114-680-NPG

Report Created: 29-Nov-2022 11:31 Analyst: pw

Sample ID: 12599404-112122-S-MTK-Source Sand-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	22-Nov-2022
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.25 g	Lab Sample ID:	B7330_19662_DF_003	Date Extracted:	22-Nov-2022
Date Collected:	21-Nov-2022	% Solid:	93.5 %	QC Batch No.:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	8:16:04

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.0663)		13468/12468F	(0.0929)		123468F	(0.156)		1234678F	(0.148)	
1468F	(0.0663)		13678F...[3]	(0.103)		124678/134678F	(0.156)		1234679F	(0.164)	
2468F	(0.0663)		12368F...[3]	(0.103)		134679F	(0.156)		1234689F	(0.164)	
1346/1246F	(0.0663)		14678F	(0.103)		124679F	(0.156)		1234789F	(0.183)	
1347F...[3]	(0.0663)		13479F	(0.103)		124689F	(0.156)				
1348F	(0.0663)		13469/12479F	(0.103)		123467F	(0.156)				
1248F...[3]	(0.0663)		12346F	(0.103)		123478F	(0.147)				
1268F	(0.0663)		23468/12469F	(0.103)		123678F	(0.147)				
1467F	(0.0663)		12347F	(0.103)		123479F	(0.156)				
1478F	(0.0663)		12348F	(0.103)		123469F	(0.156)				
1369/1237F	(0.0663)		12378F	(0.105)		123679F	(0.156)				
2467F	(0.0663)		12678/12367F	(0.103)		234678F	(0.16)		**Conc.**	0	
2368F	(0.0663)		12379F	(0.103)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(0.0663)		12679F	(0.103)		123689F	(0.156)				
1278F	(0.0663)		23467/12369F	(0.103)		123789F	(0.173)		**Octa-Furan**	**Conc (pg/g)**	**Qualifiers**
1349F	(0.0663)		23478F	(0.101)		123789/123489F	0				
1267F	(0.0663)		23478/12489F	0		123489F	(0.156)		OCDF	(0.3)	
2346/1249F	(0.0663)		12489F	(0.103)							
2347/1279F	(0.0663)		12349F	(0.103)							
2348F	(0.0663)		12389F	(0.103)							
2378F	(0.0663)										
2367/3467F	(0.0663)										
1269F	(0.0663)										
1239F	(0.0663)										
1289F	(0.0663)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 114-680-NPG

Report Created: 29-Nov-2022 11:31 Analyst: pw

Sample ID: 12599404-112122-S-MTK-Source San TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	B7330_19662_DF_003
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.25 g	QC Batch No.:	19662
Date Collected:	21-Nov-2022	Split:	-	Date Extracted:	22-Nov-2022
Date Received:	22-Nov-2022	Dilution:	-	Date Analyzed:	26-Nov-2022 08:16
Lab Project No:	B7330	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.104)		0.104	(0.104)	(0.104)	(0.104)
12378-PeCDD	(0.173)		0.173	(0.0865)	(0.173)	(0.173)
123478-HxCDD	(0.119)		0.119	(0.0119)	(0.0119)	(0.0119)
123678-HxCDD	(0.119)		0.119	(0.0119)	(0.0119)	(0.0119)
123789-HxCDD	(0.122)		0.122	(0.0122)	(0.0122)	(0.0122)
1234678-HpCDD	1.35	J	0.117	0.0135	0.0135	0.0135
OCDD	23		0.322	0.023	0.0023	0.0069
2378-TCDF	(0.0663)		0.0663	(0.00663)	(0.00663)	(0.00663)
12378-PeCDF	(0.105)		0.105	(0.00527)	(0.00527)	(0.00316)
23478-PeCDF	(0.101)		0.101	(0.0507)	(0.0507)	(0.0304)
123478-HxCDF	(0.147)		0.147	(0.0147)	(0.0147)	(0.0147)
123678-HxCDF	(0.147)		0.147	(0.0147)	(0.0147)	(0.0147)
234678-HxCDF	(0.16)		0.16	(0.016)	(0.016)	(0.016)
123789-HxCDF	(0.173)		0.173	(0.0173)	(0.0173)	(0.0173)
1234678-HpCDF	(0.148)		0.148	(0.00148)	(0.00148)	(0.00148)
1234789-HpCDF	(0.183)		0.183	(0.00183)	(0.00183)	(0.00183)
OCDF	(0.3)		0.3	(0.0003)	(0.00003)	(0.0000901)

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TEQ Summaries			
EMPC = 0, ND = 0	0.0365	0.0158	0.0204
EMPC = 0, ND = DL / 2	0.214	0.237	0.23
EMPC = 0, ND = DL	0.392	0.457	0.44
EMPC = 0, < J-level = 0	0.023	0.0023	0.0069
EMPC = EMPC, ND = 0	0.0365	0.0158	0.0204
EMPC = EMPC, ND = DL / 2	0.214	0.237	0.23
EMPC = EMPC, ND = DL	0.392	0.457	0.44
EMPC = EMPC, < J-level = 0	0.023	0.0023	0.0069

Checkcode: 114-680-NPG

SGS North America - DF v0.99

Sample ID: Method Blank B7330_19662 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.00 g	Lab Sample ID	MB1_19662_DF_SDS	Date Extracted:	22-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	2:48:45

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.115			ES 2378-TCDD	92.3	
12378-PeCDD	ND	0.115			ES 12378-PeCDD	92.3	
123478-HxCDD	ND	0.077			ES 123478-HxCDD	87.6	
123678-HxCDD	ND	0.0804			ES 123678-HxCDD	89.4	
123789-HxCDD	ND	0.0817			ES 123789-HxCDD	87.9	
1234678-HpCDD	ND	0.0876			ES 1234678-HpCDD	83.9	
OCDD	ND	0.125			ES OCDD	86	
2378-TCDF	ND	0.0637			ES 2378-TCDF	87.3	
12378-PeCDF	ND	0.082			ES 12378-PeCDF	94.2	
23478-PeCDF	ND	0.0766			ES 23478-PeCDF	92.5	
123478-HxCDF	ND	0.0567			ES 123478-HxCDF	72.4	
123678-HxCDF	ND	0.0527			ES 123678-HxCDF	75.3	
234678-HxCDF	ND	0.0594			ES 234678-HxCDF	73.7	
123789-HxCDF	ND	0.0618			ES 123789-HxCDF	71.2	
1234678-HpCDF	ND	0.0455			ES 1234678-HpCDF	79.9	
1234789-HpCDF	ND	0.0625			ES 1234789-HpCDF	69	
OCDF	ND	0.115			ES OCDF	71.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.5	
Total TCDD	ND	0.115	ND		CS 12347-PeCDD	97.7	
Total PeCDD	ND	0.115	ND		CS 12346-PeCDF	99.6	
Total HxCDD	ND	0.0795	ND		CS 123469-HxCDF	77.6	
Total HpCDD	ND	0.0876	ND		CS 1234689-HpCDF	77.8	
Total TCDF	ND	0.0637	ND				
Total PeCDF	ND	0.0793	ND				
Total HxCDF	ND	0.0574	ND				
Total HpCDF	ND	0.0529	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.156	0.156	0.156				
TEQ: ND=DL	0.311	0.311	0.311				

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Sample ID: Method Blank B7330_19662 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.00 g	Lab Sample ID:	MB1_19662_DF_SDS	Date Extracted:	22-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No.:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	2:48:45

Tetra-Dioxins	Conc. (pg/g)	Qualifiers	Penta-Dioxins	Conc. (pg/g)	Qualifiers	Hexa-Dioxins	Conc (pg/g)	Qualifiers	Hepta-Dioxins	Conc (pg/g)	Qualifiers
1368D	(0.115)		12479/12468D	(0.115)		124679/124689D	(0.0795)		1234679D	(0.0876)	
1379D	(0.115)		12469D	(0.115)		123468D	(0.0795)		1234678D	(0.0876)	
1369D	(0.115)		12368D	(0.115)		123679/123689D	(0.0795)				
1469D	(0.115)		12478D	(0.115)		123469D	(0.0795)				
1247D...[4]	(0.115)		12379D	(0.115)		123478D	(0.077)				
1378D	(0.115)		12369D...[3]	(0.115)		123678D	(0.0804)				
1268D	(0.115)		12346/12347D	(0.115)		123467D	(0.0795)				
1478D	(0.115)		12378D	(0.115)		123789D	(0.0817)		Conc.	0	
1279D	(0.115)		12367D	(0.115)					EMPC	0	
1234/1269D	(0.115)		12389D	(0.115)							
1236D	(0.115)								Octa-Dioxin	Conc (pg/g)	Qualifiers
1237/1238D	(0.115)										
1239D	(0.115)								OCDD	(0.125)	
2378D	(0.115)										
1278D	(0.115)										
1267D	(0.115)										
1289D	(0.115)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	0.156	0.156
TEQ: ND=DL	0.311	0.311

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 411-718-FHS

Report Created: 29-Nov-2022 11:31 Analyst: pw

Sample ID: Method Blank B7330_19662 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.00 g	Lab Sample ID:	MB1_19662_DF_SDS	Date Extracted:	22-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No.:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	2:48:45

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.0637)		13468/12468F	(0.0807)		123468F	(0.0574)		1234678F	(0.0455)	
1468F	(0.0637)		13678F...[3]	(0.0793)		124678/134678F	(0.0574)		1234679F	(0.0529)	
2468F	(0.0637)		12368F...[3]	(0.0793)		134679F	(0.0574)		1234689F	(0.0529)	
1346/1246F	(0.0637)		14678F	(0.0793)		124679F	(0.0574)		1234789F	(0.0625)	
1347F...[3]	(0.0637)		13479F	(0.0793)		124689F	(0.0574)				
1348F	(0.0637)		13469/12479F	(0.0793)		123467F	(0.0574)				
1248F...[3]	(0.0637)		12346F	(0.0793)		123478F	(0.0567)				
1268F	(0.0637)		23468/12469F	(0.0793)		123678F	(0.0527)				
1467F	(0.0637)		12347F	(0.0793)		123479F	(0.0574)				
1478F	(0.0637)		12348F	(0.0793)		123469F	(0.0574)				
1369/1237F	(0.0637)		12378F	(0.082)		123679F	(0.0574)				
2467F	(0.0637)		12678/12367F	(0.0793)		234678F	(0.0594)		**Conc.**	0	
2368F	(0.0637)		12379F	(0.0793)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(0.0637)		12679F	(0.0793)		123689F	(0.0574)				
1278F	(0.0637)		23467/12369F	(0.0793)		123789F	(0.0618)		**Octa-Furan**	**Conc (pg/g)**	**Qualifiers**
1349F	(0.0637)		23478F	(0.0766)		123789/123489F	0				
1267F	(0.0637)		23478/12489F	0		123489F	(0.0574)		OCDF	(0.115)	
2346/1249F	(0.0637)		12489F	(0.0793)							
2347/1279F	(0.0637)		12349F	(0.0793)							
2348F	(0.0637)		12389F	(0.0793)							
2378F	(0.0637)										
2367/3467F	(0.0637)										
1269F	(0.0637)										
1239F	(0.0637)										
1289F	(0.0637)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 411-718-FHS

Report Created: 29-Nov-2022 11:31 Analyst: pw

Sample ID: Method Blank B7330_19662 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	MB1_19662_DF_SDS
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	10.00 g	QC Batch No.:	19662
Date Collected:	n/a	Split:	-	Date Extracted:	22-Nov-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	26-Nov-2022 02:48
Lab Project No:	B7330	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.115)		0.115	(0.115)	(0.115)	(0.115)
12378-PeCDD	(0.115)		0.115	(0.0577)	(0.115)	(0.115)
123478-HxCDD	(0.077)		0.077	(0.0077)	(0.0077)	(0.0077)
123678-HxCDD	(0.0804)		0.0804	(0.00804)	(0.00804)	(0.00804)
123789-HxCDD	(0.0817)		0.0817	(0.00817)	(0.00817)	(0.00817)
1234678-HpCDD	(0.0876)		0.0876	(0.000876)	(0.000876)	(0.000876)
OCDD	(0.125)		0.125	(0.000125)	(0.0000125)	(0.0000376)
2378-TCDF	(0.0637)		0.0637	(0.00637)	(0.00637)	(0.00637)
12378-PeCDF	(0.082)		0.082	(0.0041)	(0.0041)	(0.00246)
23478-PeCDF	(0.0766)		0.0766	(0.0383)	(0.0383)	(0.023)
123478-HxCDF	(0.0567)		0.0567	(0.00567)	(0.00567)	(0.00567)
123678-HxCDF	(0.0527)		0.0527	(0.00527)	(0.00527)	(0.00527)
234678-HxCDF	(0.0594)		0.0594	(0.00594)	(0.00594)	(0.00594)
123789-HxCDF	(0.0618)		0.0618	(0.00618)	(0.00618)	(0.00618)
1234678-HpCDF	(0.0455)		0.0455	(0.000455)	(0.000455)	(0.000455)
1234789-HpCDF	(0.0625)		0.0625	(0.000625)	(0.000625)	(0.000625)
OCDF	(0.115)		0.115	(0.000115)	(0.0000115)	(0.0000346)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	0.135	0.164	0.156
EMPC = 0, ND = DL	0.271	0.328	0.311
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	0.135	0.164	0.156
EMPC = EMPC, ND = DL	0.271	0.328	0.311
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 411-718-FHS

SGS North America - DF v0.99

Sample ID: Method Blank B7330_19675 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.00 g	Lab Sample ID	MB1_19675_DF_SDS	Date Extracted:	28-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	19:44:46

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.332			ES 2378-TCDD	88.8	
12378-PeCDD	ND	0.363			ES 12378-PeCDD	97.3	
123478-HxCDD	ND	0.253			ES 123478-HxCDD	83.8	
123678-HxCDD	ND	0.259			ES 123678-HxCDD	85.7	
123789-HxCDD	ND	0.246			ES 123789-HxCDD	83.5	
1234678-HpCDD	0.51			J	ES 1234678-HpCDD	88.7	
OCDD	EMPC		2.11	J	ES OCDD	80.4	
2378-TCDF	ND	0.179			ES 2378-TCDF	82.2	
12378-PeCDF	ND	0.167			ES 12378-PeCDF	106	
23478-PeCDF	ND	0.178			ES 23478-PeCDF	97.7	
123478-HxCDF	ND	0.192			ES 123478-HxCDF	81	
123678-HxCDF	ND	0.166			ES 123678-HxCDF	94.5	
234678-HxCDF	ND	0.196			ES 234678-HxCDF	83.8	
123789-HxCDF	ND	0.221			ES 123789-HxCDF	72.8	
1234678-HpCDF	ND	0.124			ES 1234678-HpCDF	117	
1234789-HpCDF	ND	0.179			ES 1234789-HpCDF	78.9	
OCDF	ND	0.329			ES OCDF	66.2	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	98	
Total TCDD	ND	0.332	ND		CS 12347-PeCDD	112	
Total PeCDD	ND	0.363	ND		CS 12346-PeCDF	114	
Total HxCDD	ND	0.252	ND		CS 123469-HxCDF	94.7	
Total HpCDD	0.51		0.903		CS 1234689-HpCDF	102	
Total TCDF	ND	0.179	ND				
Total PeCDF	ND	0.172	ND				
Total HxCDF	ND	0.191	ND				
Total HpCDF	ND	0.145	ND				
Total PCDD/Fs	**0.51**		**3.01**				
WHO-2005 TEQs							
TEQ: ND=0	0.0051		0.00573				
TEQ: ND=DL/2	0.469	0.465	0.47				
TEQ: ND=DL	0.933	0.931	0.934				

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Sample ID: Method Blank B7330_19675 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.00 g	Lab Sample ID:	MB1_19675_DF_SDS	Date Extracted:	28-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No.:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	19:44:46

Tetra-Dioxins	Conc. (pg/g)	Qualifiers	Penta-Dioxins	Conc. (pg/g)	Qualifiers	Hexa-Dioxins	Conc (pg/g)	Qualifiers	Hepta-Dioxins	Conc (pg/g)	Qualifiers
1368D	(0.332)		12479/12468D	(0.363)		124679/124689D	(0.252)		1234679D	[0.393]	J
1379D	(0.332)		12469D	(0.363)		123468D	(0.252)		1234678D	0.51	J
1369D	(0.332)		12368D	(0.363)		123679/123689D	(0.252)				
1469D	(0.332)		12478D	(0.363)		123469D	(0.252)				
1247D...[4]	(0.332)		12379D	(0.363)		123478D	(0.253)				
1378D	(0.332)		12369D...[3]	(0.363)		123678D	(0.259)				
1268D	(0.332)		12346/12347D	(0.363)		123467D	(0.252)				
1478D	(0.332)		12378D	(0.363)		123789D	(0.246)		**Conc.**	0.51	
1279D	(0.332)		12367D	(0.363)					**EMPC**	0.903	
1234/1269D	(0.332)		12389D	(0.363)							
1236D	(0.332)								**Octa-Dioxin**	**Conc (pg/g)**	**Qualifiers**
1237/1238D	(0.332)										
1239D	(0.332)								OCDD	[2.11]	J
2378D	(0.332)										
1278D	(0.332)										
1267D	(0.332)										
1289D	(0.332)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.0051	0.00573
TEQ: ND=DL/2	0.469	0.47
TEQ: ND=DL	0.933	0.934

	Conc.	EMPC
Total PCDD/Fs	0.51	3.01

Checkcode: 118-828-TCD

Report Created: 30-Nov-2022 11:59 Analyst: pw

Sample ID: Method Blank B7330_19675 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.00 g	Lab Sample ID:	MB1_19675_DF_SDS	Date Extracted:	28-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No.:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	19:44:46

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.179)		13468/12468F	(0.219)		123468F	(0.191)		1234678F	(0.124)	
1468F	(0.179)		13678F...[3]	(0.172)		124678/134678F	(0.191)		1234679F	(0.145)	
2468F	(0.179)		12368F...[3]	(0.172)		134679F	(0.191)		1234689F	(0.145)	
1346/1246F	(0.179)		14678F	(0.172)		124679F	(0.191)		1234789F	(0.179)	
1347F...[3]	(0.179)		13479F	(0.172)		124689F	(0.191)				
1348F	(0.179)		13469/12479F	(0.172)		123467F	(0.191)				
1248F...[3]	(0.179)		12346F	(0.172)		123478F	(0.192)				
1268F	(0.179)		23468/12469F	(0.172)		123678F	(0.166)				
1467F	(0.179)		12347F	(0.172)		123479F	(0.191)				
1478F	(0.179)		12348F	(0.172)		123469F	(0.191)				
1369/1237F	(0.179)		12378F	(0.167)		123679F	(0.191)				
2467F	(0.179)		12678/12367F	(0.172)		234678F	(0.196)		**Conc.**	0	
2368F	(0.179)		12379F	(0.172)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(0.179)		12679F	(0.172)		123689F	(0.191)				
1278F	(0.179)		23467/12369F	(0.172)		123789F	(0.221)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(0.179)		23478F	(0.178)		123789/123489F	0			**(pg/g)**	
1267F	(0.179)		23478/12489F	0		123489F	(0.191)		OCDF	(0.329)	
2346/1249F	(0.179)		12489F	(0.172)							
2347/1279F	(0.179)		12349F	(0.172)							
2348F	(0.179)		12389F	(0.172)							
2378F	(0.179)										
2367/3467F	(0.179)										
1269F	(0.179)										
1239F	(0.179)										
1289F	(0.179)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 118-828-TCD

Report Created: 30-Nov-2022 11:59 Analyst: pw

Sample ID: Method Blank B7330_19675 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	MB1_19675_DF_SDS
Cliend Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	5.00 g	QC Batch No.:	19675
Date Collected:	n/a	Split:	-	Date Extracted:	28-Nov-2022
Date Received:	n/a	Dilution:	-	Date Analyzed:	29-Nov-2022 19:44
Lab Project No:	B7330	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.332)		0.332	(0.332)	(0.332)	(0.332)
12378-PeCDD	(0.363)		0.363	(0.182)	(0.363)	(0.363)
123478-HxCDD	(0.253)		0.253	(0.0253)	(0.0253)	(0.0253)
123678-HxCDD	(0.259)		0.259	(0.0259)	(0.0259)	(0.0259)
123789-HxCDD	(0.246)		0.246	(0.0246)	(0.0246)	(0.0246)
1234678-HpCDD	0.51	J	0.265	0.0051	0.0051	0.0051
OCDD	[2.11]	J	0.474	[0.00211]	[0.000211]	[0.000633]
2378-TCDF	(0.179)		0.179	(0.0179)	(0.0179)	(0.0179)
12378-PeCDF	(0.167)		0.167	(0.00836)	(0.00836)	(0.00501)
23478-PeCDF	(0.178)		0.178	(0.089)	(0.089)	(0.0534)
123478-HxCDF	(0.192)		0.192	(0.0192)	(0.0192)	(0.0192)
123678-HxCDF	(0.166)		0.166	(0.0166)	(0.0166)	(0.0166)
234678-HxCDF	(0.196)		0.196	(0.0196)	(0.0196)	(0.0196)
123789-HxCDF	(0.221)		0.221	(0.0221)	(0.0221)	(0.0221)
1234678-HpCDF	(0.124)		0.124	(0.00124)	(0.00124)	(0.00124)
1234789-HpCDF	(0.179)		0.179	(0.00179)	(0.00179)	(0.00179)
OCDF	(0.329)		0.329	(0.000329)	(0.0000329)	(0.0000987)

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TEQ Summaries			
EMPC = 0, ND = 0	0.0051	0.0051	0.0051
EMPC = 0, ND = DL / 2	0.398	0.489	0.469
EMPC = 0, ND = DL	0.791	0.972	0.933
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.00721	0.00531	0.00573
EMPC = EMPC, ND = DL / 2	0.4	0.489	0.47
EMPC = EMPC, ND = DL	0.793	0.972	0.934
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 118-828-TCD

SGS North America - DF v0.99

Sample ID: 0_19662_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19662_DF	Date Extracted:	22-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	19662	Date Analyzed:	25-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	23:41:31

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	10.4				ES 2378-TCDD	81.2	
12378-PeCDD	45.8				ES 12378-PeCDD	82	
123478-HxCDD	47.7				ES 123478-HxCDD	82.7	
123678-HxCDD	51.6				ES 123678-HxCDD	81.7	
123789-HxCDD	47.5				ES 123789-HxCDD	81.9	
1234678-HpCDD	50.1				ES 1234678-HpCDD	80.1	
OCDD	104				ES OCDD	81.1	
2378-TCDF	10.2				ES 2378-TCDF	79.4	
12378-PeCDF	45.6				ES 12378-PeCDF	87.1	
23478-PeCDF	50.4				ES 23478-PeCDF	83.7	
123478-HxCDF	49.5				ES 123478-HxCDF	68.7	
123678-HxCDF	51				ES 123678-HxCDF	69.7	
234678-HxCDF	53.8				ES 234678-HxCDF	67.1	
123789-HxCDF	49.7				ES 123789-HxCDF	65.2	
1234678-HpCDF	49.9				ES 1234678-HpCDF	75.4	
1234789-HpCDF	49.5				ES 1234789-HpCDF	65.5	
OCDF	102				ES OCDF	65.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	84	
Total TCDD	46.8		46.8		CS 12347-PeCDD	91.5	
Total PeCDD	68		68		CS 12346-PeCDF	95.1	
Total HxCDD	160		160		CS 123469-HxCDF	77	
Total HpCDD	61.4		61.4		CS 1234689-HpCDF	75.6	
Total TCDF	52.4		52.4				
Total PeCDF	229		229				
Total HxCDF	330		330				
Total HpCDF	99.4		99.4				
Total PCDD/Fs	**1,250**		**1,250**				
WHO-2005 TEQs							
TEQ: ND=0	110		110				
TEQ: ND=DL/2	110	0.128	110				
TEQ: ND=DL	110	0.256	110				

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Sample ID: 0_19662_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19662_DF	Date Extracted:	22-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	19662	Date Analyzed:	26-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	0:28:16

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	10.5				ES 2378-TCDD	85	
12378-PeCDD	48.1				ES 12378-PeCDD	85.2	
123478-HxCDD	48.4				ES 123478-HxCDD	87.4	
123678-HxCDD	50				ES 123678-HxCDD	89.3	
123789-HxCDD	47.6				ES 123789-HxCDD	89.3	
1234678-HpCDD	51.7				ES 1234678-HpCDD	82.3	
OCDD	101				ES OCDD	85	
2378-TCDF	10.2				ES 2378-TCDF	84.4	
12378-PeCDF	47.9				ES 12378-PeCDF	92.2	
23478-PeCDF	50.1				ES 23478-PeCDF	91.3	
123478-HxCDF	50.5				ES 123478-HxCDF	72.5	
123678-HxCDF	49.7				ES 123678-HxCDF	75.2	
234678-HxCDF	52.2				ES 234678-HxCDF	73.2	
123789-HxCDF	48.1				ES 123789-HxCDF	69.7	
1234678-HpCDF	50.2				ES 1234678-HpCDF	79.2	
1234789-HpCDF	50.4				ES 1234789-HpCDF	67.5	
OCDF	98.3				ES OCDF	70.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	82.6	
Total TCDD	46.9		46.9		CS 12347-PeCDD	90.7	
Total PeCDD	71.3		71.3		CS 12346-PeCDF	97.5	
Total HxCDD	159		159		CS 123469-HxCDF	77.7	
Total HpCDD	63.8		63.8		CS 1234689-HpCDF	75.9	
Total TCDF	53.7		53.7				
Total PeCDF	233		233				
Total HxCDF	325		325				
Total HpCDF	101		101				
Total PCDD/Fs	**1,250**		**1,250**				
WHO-2005 TEQs							
TEQ: ND=0	112		112				
TEQ: ND=DL/2	112	0.0984	112				
TEQ: ND=DL	112	0.197	112				

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Sample DUP			Method 1613B
Sample ID: 0_19662_OPR001			
Analyte	**OPR1_19662_DF pg/uL**	**OPR2_19662_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	10.4	10.5	0.7%
1,2,3,7,8-PeCDD	45.8	48.1	4.7%
1,2,3,4,7,8-HxCDD	47.7	48.4	1.4%
1,2,3,6,7,8-HxCDD	51.6	50	3.2%
1,2,3,7,8,9-HxCDD	47.5	47.6	0.4%
1,2,3,4,6,7,8-HpCDD	50.1	51.7	3.3%
OCDD	104	101	3.3%
2,3,7,8-TCDF	10.2	10.2	0.3%
1,2,3,7,8-PeCDF	45.6	47.9	4.8%
2,3,4,7,8-PeCDF	50.4	50.1	0.6%
1,2,3,4,7,8-HxCDF	49.5	50.5	1.9%
1,2,3,6,7,8-HxCDF	51	49.7	2.5%
2,3,4,6,7,8-HxCDF	53.8	52.2	3.0%
1,2,3,7,8,9-HxCDF	49.7	48.1	3.3%
1,2,3,4,6,7,8-HpCDF	49.9	50.2	0.5%
1,2,3,4,7,8,9-HpCDF	49.5	50.4	1.7%
OCDF	102	98.3	3.4%
Totals			
Total TCDD	46.8	46.9	0.1%
Total PeCDD	68	71.3	4.8%
Total HxCDD	160	159	0.4%
Total HpCDD	61.4	63.8	4.0%
Total TCDF	52.4	53.7	2.5%
Total PeCDF	229	233	2.1%
Total HxCDF	330	325	1.6%
Total HpCDF	99.4	101	1.1%

Sample ID: 0_19675_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR1_19675_DF	Date Extracted:	28-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	17:24:46

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.1				ES 2378-TCDD	90.6	
12378-PeCDD	51.4				ES 12378-PeCDD	96.4	
123478-HxCDD	51.5				ES 123478-HxCDD	92.7	
123678-HxCDD	55.9				ES 123678-HxCDD	91.8	
123789-HxCDD	51.2				ES 123789-HxCDD	93.6	
1234678-HpCDD	54.3				ES 1234678-HpCDD	99.8	
OCDD	108				ES OCDD	95.8	
2378-TCDF	11.7				ES 2378-TCDF	88	
12378-PeCDF	53.2				ES 12378-PeCDF	104	
23478-PeCDF	55.8				ES 23478-PeCDF	100	
123478-HxCDF	54.9				ES 123478-HxCDF	88.8	
123678-HxCDF	54				ES 123678-HxCDF	98.7	
234678-HxCDF	55.7				ES 234678-HxCDF	93.2	
123789-HxCDF	53.2				ES 123789-HxCDF	84.4	
1234678-HpCDF	53				ES 1234678-HpCDF	120	
1234789-HpCDF	54.9				ES 1234789-HpCDF	92.5	
OCDF	107				ES OCDF	86.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.8	
Total TCDD	51.8		51.8		CS 12347-PeCDD	104	
Total PeCDD	77.1		77.1		CS 12346-PeCDF	110	
Total HxCDD	173		173		CS 123469-HxCDF	97.5	
Total HpCDD	67.4		67.4		CS 1234689-HpCDF	106	
Total TCDF	61.1		61.1				
Total PeCDF	216		216				
Total HxCDF	352		352				
Total HpCDF	108		108				
Total PCDD/Fs	**1,320**		**1,320**				
WHO-2005 TEQs							
TEQ: ND=0	121		121				
TEQ: ND=DL/2	121	0.171	121				
TEQ: ND=DL	121	0.343	121				

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Sample ID: 0_19675_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B7330	Date Received:	n/a
Project ID:	SJRWP-12599404-2022-001	Weight/Volume:	1 uL	Lab Sample ID	OPR2_19675_DF	Date Extracted:	28-Nov-2022
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	19675	Date Analyzed:	29-Nov-2022
		Split:	-	Dilution:	-	Time Analyzed:	18:11:25

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.3				ES 2378-TCDD	90.5	
12378-PeCDD	52.3				ES 12378-PeCDD	97.9	
123478-HxCDD	53.4				ES 123478-HxCDD	89.3	
123678-HxCDD	57.1				ES 123678-HxCDD	89.5	
123789-HxCDD	54.1				ES 123789-HxCDD	88.1	
1234678-HpCDD	57.3				ES 1234678-HpCDD	94.8	
OCDD	110				ES OCDD	95.3	
2378-TCDF	12.2				ES 2378-TCDF	85.7	
12378-PeCDF	55.3				ES 12378-PeCDF	101	
23478-PeCDF	58.3				ES 23478-PeCDF	99.4	
123478-HxCDF	57.7				ES 123478-HxCDF	84.5	
123678-HxCDF	56.6				ES 123678-HxCDF	91.5	
234678-HxCDF	59.2				ES 234678-HxCDF	89.4	
123789-HxCDF	54.2				ES 123789-HxCDF	82.7	
1234678-HpCDF	57.2				ES 1234678-HpCDF	112	
1234789-HpCDF	56.8				ES 1234789-HpCDF	90.9	
OCDF	108				ES OCDF	88	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95.3	
Total TCDD	51		51		CS 12347-PeCDD	107	
Total PeCDD	77.6		77.6		CS 12346-PeCDF	108	
Total HxCDD	179		179		CS 123469-HxCDF	97	
Total HpCDD	70.3		70.3		CS 1234689-HpCDF	103	
Total TCDF	61.4		61.4				
Total PeCDF	222		222				
Total HxCDF	363		363				
Total HpCDF	114		114				
Total PCDD/Fs	**1,360**		**1,360**				
WHO-2005 TEQs							
TEQ: ND=0	125		125				
TEQ: ND=DL/2	125	0.165	125				
TEQ: ND=DL	125	0.33	125				

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Sample DUP

Method 1613B

Sample ID: 0_19675_OPR001

Analyte	OPR1_19675_DF pg/uL	OPR2_19675_DF (DUP) pg/uL	RPD
2,3,7,8-TCDD	11.1	11.3	1.2%
1,2,3,7,8-PeCDD	51.4	52.3	1.9%
1,2,3,4,7,8-HxCDD	51.5	53.4	3.5%
1,2,3,6,7,8-HxCDD	55.9	57.1	2.1%
1,2,3,7,8,9-HxCDD	51.2	54.1	5.6%
1,2,3,4,6,7,8-HpCDD	54.3	57.3	5.3%
OCDD	108	110	2.2%
2,3,7,8-TCDF	11.7	12.2	4.1%
1,2,3,7,8-PeCDF	53.2	55.3	3.9%
2,3,4,7,8-PeCDF	55.8	58.3	4.5%
1,2,3,4,7,8-HxCDF	54.9	57.7	5.0%
1,2,3,6,7,8-HxCDF	54	56.6	4.6%
2,3,4,6,7,8-HxCDF	55.7	59.2	6.0%
1,2,3,7,8,9-HxCDF	53.2	54.2	1.9%
1,2,3,4,6,7,8-HpCDF	53	57.2	7.6%
1,2,3,4,7,8,9-HpCDF	54.9	56.8	3.5%
OCDF	107	108	1.4%
Totals			
Total TCDD	51.8	51	1.6%
Total PeCDD	77.1	77.6	0.7%
Total HxCDD	173	179	3.5%
Total HpCDD	67.4	70.3	4.3%
Total TCDF	61.1	61.4	0.4%
Total PeCDF	216	222	2.9%
Total HxCDF	352	363	3.0%
Total HpCDF	108	114	5.5%

Sample Receipt Notification

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Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*22-Nov-22 at 10:25*
AP Project name:	*B7330*
Requested TAT:	*3 business days*
Projected due date:	*29-Nov-22*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*SJRWP-12599404-2022-001*
Project PO#:	
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-112122-S-MTK-Source Aggregate-1	B7330_001	Soil	1	4oz Amber	21-Nov-22	11:00	4	1	3909 4211 7407
12599404-112122-S-MTK-Source Clay-1	B7330_002	Soil	1	4oz Amber	21-Nov-22	10:50	4	1	3909 4211 7407
12599404-112122-S-MTK-Source Sand-1	B7330_003	Soil	1	4oz Amber	21-Nov-22	10:40	4	1	3909 4211 7407

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 22 Nov 22

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SGS CHAIN OF CUSTODY

B7330

PROJECT INFO

PROJECT: ~~1126~~ 1259404

P.O. #:

QUOTE #:

SITE REF:

TURN AROUND TIME: 3 day TAT

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version: PDF

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS: 5551 Corporate Blvd, St 200, Baton Rouge, LA 7080

PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE: None	ANALYSIS & METHOD: Dioxin/Furans	MS MSD	MS/ DUP	REMARKS
1259404-112122-S-MTK-Source Aggregate-1	11/21/22	1100	1	S	X				1259404*
" - " - " - " - Source Clay - 1	"	1050	1	S	X				
" - " - " - " - Source Sand - 1	"	1040	1	S	X				
Temp Blank	—	—	1	W					

11.21.22

COLLECTED/RELINQUISHED BY (1):	DATE: 11/21/22	TIME: 1500	RECEIVED BY:
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:

Ashley Dixon 11/22/22 10:25

COOLER SEAL: ☑ INTACT ☐ BROKEN ☐ ABSENT

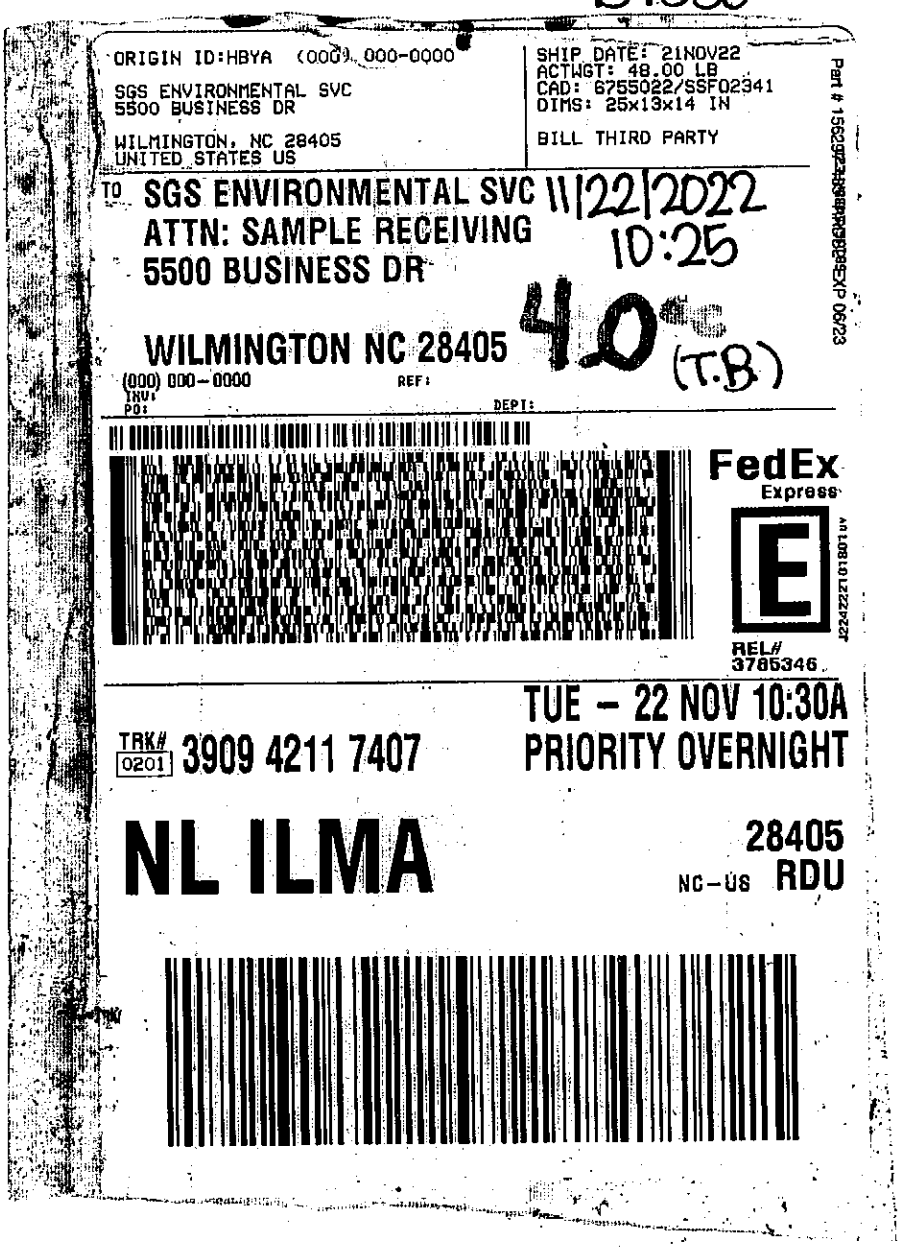
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☑ ABSENT

CARRIER: FedEx TEMP: °C 4.0°

TRACKING #: 3909 4211 7407

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

B7330



ORIGIN ID:HBYA (000) 000-0000

SGS ENVIRONMENTAL SVC
5500 BUSINESS DR

WILMINGTON, NC 28405
UNITED STATES US

SHIP DATE: 21NOV22
ACTWGT: 48.00 LB
CAD: 6755022/SSF02341
DIMS: 25x13x14 IN

BILL THIRD PARTY

Part # 1562[illegible]EXP 06/23

TO SGS ENVIRONMENTAL SVC
ATTN: SAMPLE RECEIVING
5500 BUSINESS DR

WILMINGTON NC 28405

(000) 000-0000 REF:
INV:
PO: DEPT:

11/22/2022
10:25

4.0 (T.B)

FedEx Express

E

REL# 3785346

TUE - 22 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 3909 4211 7407

NL ILMA

28405
NC-US RDU

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
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This report is approved by

Tamara Burkamper

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Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-070723-S-MTK-Source Topsoil-1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	10-Jul-2023
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.03 g	Lab Sample ID	B8138_20258_DF_001	Date Extracted:	11-Jul-2023
Date Collected:	07-Jul-2023	% Solid:	92.1 %	QC Batch No:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:19:12

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.208			ES 2378-TCDD	89.6	
12378-PeCDD	ND	0.246			ES 12378-PeCDD	93.4	
123478-HxCDD	EMPC		0.377	J	ES 123478-HxCDD	77.2	
123678-HxCDD	0.357			J	ES 123678-HxCDD	79.5	
123789-HxCDD	EMPC		0.508	J	ES 123789-HxCDD	79.6	
1234678-HpCDD	5.31				ES 1234678-HpCDD	83.3	
OCDD	118				ES OCDD	63.9	
2378-TCDF	ND	0.109			ES 2378-TCDF	89.1	
12378-PeCDF	ND	0.11			ES 12378-PeCDF	91.7	
23478-PeCDF	ND	0.0974			ES 23478-PeCDF	92.2	
123478-HxCDF	ND	0.0995			ES 123478-HxCDF	79.6	
123678-HxCDF	ND	0.103			ES 123678-HxCDF	78.9	
234678-HxCDF	ND	0.106			ES 234678-HxCDF	79.4	
123789-HxCDF	ND	0.109			ES 123789-HxCDF	83.8	
1234678-HpCDF	EMPC		0.242	J	ES 1234678-HpCDF	86.7	
1234789-HpCDF	ND	0.0902			ES 1234789-HpCDF	76	
OCDF	EMPC		0.685	J	ES OCDF	66.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	99.1	
Total TCDD	ND	0.208	ND		CS 12347-PeCDD	115	
Total PeCDD	ND	0.246	ND		CS 12346-PeCDF	107	
Total HxCDD	1.46		3.47		CS 123469-HxCDF	95.9	
Total HpCDD	13.3		13.3		CS 1234689-HpCDF	100	
Total TCDF	0.498		0.498				
Total PeCDF	ND	0.104	ND				
Total HxCDF	ND	0.104	ND				
Total HpCDF	ND		0.242				
Total PCDD/Fs	**133**		**136**				
WHO-2005 TEQs							
TEQ: ND=0	0.124		0.215				
TEQ: ND=DL/2	0.395	0.293	0.486				
TEQ: ND=DL	0.665	0.585	0.756				

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Sample ID: 12599404-070723-S-MTK-Source Topsoil-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	10-Jul-2023
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.03 g	Lab Sample ID:	B8138_20258_DF_001	Date Extracted:	11-Jul-2023
Date Collected:	07-Jul-2023	% Solid:	92.1 %	QC Batch No.:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:19:12

Tetra-Dioxins	Conc. (pg/g)	Qualifiers	Penta-Dioxins	Conc. (pg/g)	Qualifiers	Hexa-Dioxins	Conc (pg/g)	Qualifiers	Hepta-Dioxins	Conc (pg/g)	Qualifiers
1368D	(0.208)		12479/12468D	(0.246)		124679/124689D	[1.12]	J	1234679D	8.03	
1379D	(0.208)		12469D	(0.246)		123468D	(0.143)		1234678D	5.31	
1369D	(0.208)		12368D	(0.246)		123679/123689D	1.11	J			
1469D	(0.208)		12478D	(0.246)		123469D	(0.143)				
1247D...[4]	(0.208)		12379D	(0.246)		123478D	[0.377]	J			
1378D	(0.208)		12369D...[3]	(0.246)		123678D	0.357	J			
1268D	(0.208)		12346/12347D	(0.246)		123467D	(0.143)				
1478D	(0.208)		12378D	(0.246)		123789D	[0.508]	J	**Conc.**	13.3	
1279D	(0.208)		12367D	(0.246)					**EMPC**	13.3	
1234/1269D	(0.208)		12389D	(0.246)							
1236D	(0.208)								**Octa-Dioxin**	**Conc (pg/g)**	**Qualifiers**
1237/1238D	(0.208)										
1239D	(0.208)								OCDD	118	
2378D	(0.208)										
1278D	(0.208)										
1267D	(0.208)										
1289D	(0.208)										
Conc.	0		**Conc.**	0		**Conc.**	1.46				
EMPC	0		**EMPC**	0		**EMPC**	3.47				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0.124	0.215
TEQ: ND=DL/2	0.395	0.486
TEQ: ND=DL	0.665	0.756

	Conc.	EMPC
Total PCDD/Fs	133	136

Checkcode: 860-953-KDR

Report Created: 17-Jul-2023 08:56 Analyst: pw

Sample ID: 12599404-070723-S-MTK-Source Topsoil-1 Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	10-Jul-2023
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.03 g	Lab Sample ID:	B8138_20258_DF_001	Date Extracted:	11-Jul-2023
Date Collected:	07-Jul-2023	% Solid:	92.1 %	QC Batch No.:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:19:12

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.109)		13468/12468F	(0.104)		123468F	(0.104)		1234678F	[0.242]	J
1468F	(0.109)		13678F...[3]	(0.104)		124678/134678F	(0.104)		1234679F	(0.0855)	
2468F	0.498	J	12368F...[3]	(0.104)		134679F	(0.104)		1234689F	(0.0855)	
1346/1246F	(0.109)		14678F	(0.104)		124679F	(0.104)		1234789F	(0.0902)	
1347F...[3]	(0.109)		13479F	(0.104)		124689F	(0.104)				
1348F	(0.109)		13469/12479F	(0.104)		123467F	(0.104)				
1248F...[3]	(0.109)		12346F	(0.104)		123478F	(0.0995)				
1268F	(0.109)		23468/12469F	(0.104)		123678F	(0.103)				
1467F	(0.109)		12347F	(0.104)		123479F	(0.104)				
1478F	(0.109)		12348F	(0.104)		123469F	(0.104)				
1369/1237F	(0.109)		12378F	(0.11)		123679F	(0.104)				
2467F	(0.109)		12678/12367F	(0.104)		234678F	(0.106)		**Conc.**	0	
2368F	(0.109)		12379F	(0.104)		234678/123689F	0		**EMPC**	0.242	
1238F...[5]	(0.109)		12679F	(0.104)		123689F	(0.104)				
1278F	(0.109)		23467/12369F	(0.104)		123789F	(0.109)		**Octa-Furan**	**Conc (pg/g)**	**Qualifiers**
1349F	(0.109)		23478F	(0.0974)		123789/123489F	0				
1267F	(0.109)		23478/12489F	0		123489F	(0.104)		OCDF	[0.685]	J
2346/1249F	(0.109)		12489F	(0.104)							
2347/1279F	(0.109)		12349F	(0.104)							
2348F	(0.109)		12389F	(0.104)							
2378F	(0.109)										
2367/3467F	(0.109)										
1269F	(0.109)										
1239F	(0.109)										
1289F	(0.109)										
Conc.	0.498		**Conc.**	0		**Conc.**	0				
EMPC	0.498		**EMPC**	0		**EMPC**	0				

Checkcode: 860-953-KDR

Report Created: 17-Jul-2023 08:56 Analyst: pw

Sample ID: 12599404-070723-S-MTK-Source Top TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	B8138_20258_DF_001
Cliend Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.03 g	QC Batch No.:	20258
Date Collected:	07-Jul-2023	Split:	-	Date Extracted:	11-Jul-2023
Date Received:	10-Jul-2023	Dilution:	-	Date Analyzed:	14-Jul-2023 15:19
Lab Project No:	B8138	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.208)		0.208	(0.208)	(0.208)	(0.208)
12378-PeCDD	(0.246)		0.246	(0.123)	(0.246)	(0.246)
123478-HxCDD	[0.377]	J	0.145	[0.0377]	[0.0377]	[0.0377]
123678-HxCDD	0.357	J	0.145	0.0357	0.0357	0.0357
123789-HxCDD	[0.508]	J	0.139	[0.0508]	[0.0508]	[0.0508]
1234678-HpCDD	5.31		0.0892	0.0531	0.0531	0.0531
OCDD	118		0.413	0.118	0.0118	0.0354
2378-TCDF	(0.109)		0.109	(0.0109)	(0.0109)	(0.0109)
12378-PeCDF	(0.11)		0.11	(0.00548)	(0.00548)	(0.00329)
23478-PeCDF	(0.0974)		0.0974	(0.0487)	(0.0487)	(0.0292)
123478-HxCDF	(0.0995)		0.0995	(0.00995)	(0.00995)	(0.00995)
123678-HxCDF	(0.103)		0.103	(0.0103)	(0.0103)	(0.0103)
234678-HxCDF	(0.106)		0.106	(0.0106)	(0.0106)	(0.0106)
123789-HxCDF	(0.109)		0.109	(0.0109)	(0.0109)	(0.0109)
1234678-HpCDF	[0.242]	J	0.0816	[0.00242]	[0.00242]	[0.00242]
1234789-HpCDF	(0.0902)		0.0902	(0.000902)	(0.000902)	(0.000902)
OCDF	[0.685]	J	0.177	[0.000685]	[0.0000685]	[0.000206]

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TEQ Summaries			
EMPC = 0, ND = 0	0.207	0.101	0.124
EMPC = 0, ND = DL / 2	0.427	0.382	0.395
EMPC = 0, ND = DL	0.646	0.663	0.665
EMPC = 0, < J-level = 0	0.171	0.065	0.0886
EMPC = EMPC, ND = 0	0.299	0.192	0.215
EMPC = EMPC, ND = DL / 2	0.518	0.473	0.486
EMPC = EMPC, ND = DL	0.738	0.754	0.756
EMPC = EMPC, < J-level = 0	0.171	0.065	0.0886

Checkcode: 860-953-KDR

SGS North America - DF v0.99

Sample ID: Method Blank B8138_20258 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.00 g	Lab Sample ID	MB1_20258_DF_SDS	Date Extracted:	11-Jul-2023
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:43:09

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.136			ES 2378-TCDD	91.4	
12378-PeCDD	ND	0.128			ES 12378-PeCDD	94.5	
123478-HxCDD	ND	0.149			ES 123478-HxCDD	87.7	
123678-HxCDD	ND	0.134			ES 123678-HxCDD	91.8	
123789-HxCDD	ND	0.152			ES 123789-HxCDD	89.6	
1234678-HpCDD	ND	0.0932			ES 1234678-HpCDD	97.4	
OCDD	ND	0.299			ES OCDD	74.6	
2378-TCDF	ND	0.117			ES 2378-TCDF	88.7	
12378-PeCDF	ND	0.0943			ES 12378-PeCDF	92.2	
23478-PeCDF	ND	0.0907			ES 23478-PeCDF	91.4	
123478-HxCDF	ND	0.1			ES 123478-HxCDF	89.3	
123678-HxCDF	ND	0.0987			ES 123678-HxCDF	92.7	
234678-HxCDF	ND	0.0997			ES 234678-HxCDF	93.3	
123789-HxCDF	ND	0.125			ES 123789-HxCDF	92.3	
1234678-HpCDF	ND	0.0731			ES 1234678-HpCDF	99.2	
1234789-HpCDF	ND	0.0877			ES 1234789-HpCDF	92	
OCDF	ND	0.176			ES OCDF	78.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	102	
Total TCDD	ND	0.136	ND		CS 12347-PeCDD	108	
Total PeCDD	ND	0.128	ND		CS 12346-PeCDF	105	
Total HxCDD	ND	0.144	ND		CS 123469-HxCDF	105	
Total HpCDD	ND	0.0932	ND		CS 1234689-HpCDF	108	
Total TCDF	ND	0.117	ND				
Total PeCDF	ND	0.0925	ND				
Total HxCDF	ND	0.106	ND				
Total HpCDF	ND	0.0798	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.197	0.197	0.197				
TEQ: ND=DL	0.394	0.394	0.394				

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Sample ID: Method Blank B8138_20258 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.00 g	Lab Sample ID:	MB1_20258_DF_SDS	Date Extracted:	11-Jul-2023
Date Collected:	n/a	% Solid:	n/a	QC Batch No.:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:43:09

Tetra-Dioxins	Conc. (pg/g)	Qualifiers
1368D	(0.136)	
1379D	(0.136)	
1369D	(0.136)	
1469D	(0.136)	
1247D...[4]	(0.136)	
1378D	(0.136)	
1268D	(0.136)	
1478D	(0.136)	
1279D	(0.136)	
1234/1269D	(0.136)	
1236D	(0.136)	
1237/1238D	(0.136)	
1239D	(0.136)	
2378D	(0.136)	
1278D	(0.136)	
1267D	(0.136)	
1289D	(0.136)	
Conc.	0	
EMPC	0	

Penta-Dioxins	Conc. (pg/g)	Qualifiers
12479/12468D	(0.128)	
12469D	(0.128)	
12368D	(0.128)	
12478D	(0.128)	
12379D	(0.128)	
12369D...[3]	(0.128)	
12346/12347D	(0.128)	
12378D	(0.128)	
12367D	(0.128)	
12389D	(0.128)	
Conc.	0	
EMPC	0	

Hexa-Dioxins	Conc (pg/g)	Qualifiers
124679/124689D	(0.144)	
123468D	(0.144)	
123679/123689D	(0.144)	
123469D	(0.144)	
123478D	(0.149)	
123678D	(0.134)	
123467D	(0.144)	
123789D	(0.152)	
Conc.	0	
EMPC	0	

Hepta-Dioxins	Conc (pg/g)	Qualifiers
1234679D	(0.0932)	
1234678D	(0.0932)	
Conc.	0	
EMPC	0	

Octa-Dioxin	Conc (pg/g)	Qualifiers
OCDD	(0.299)	

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	0.197	0.197
TEQ: ND=DL	0.394	0.394

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 613-615-TDL

Report Created: 17-Jul-2023 08:56 Analyst: pw

Sample ID: Method Blank B8138_20258 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.00 g	Lab Sample ID:	MB1_20258_DF_SDS	Date Extracted:	11-Jul-2023
Date Collected:	n/a	% Solid:	n/a	QC Batch No.:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:43:09

Tetra-Furans	Conc. (pg/g)	Qualifiers	Penta-Furans	Conc. (pg/g)	Qualifiers	Hexa-Furans	Conc (pg/g)	Qualifiers	Hepta-Furans	Conc (pg/g)	Qualifiers
1368F	(0.117)		13468/12468F	(0.111)		123468F	(0.106)		1234678F	(0.0731)	
1468F	(0.117)		13678F...[3]	(0.0925)		124678/134678F	(0.106)		1234679F	(0.0798)	
2468F	(0.117)		12368F...[3]	(0.0925)		134679F	(0.106)		1234689F	(0.0798)	
1346/1246F	(0.117)		14678F	(0.0925)		124679F	(0.106)		1234789F	(0.0877)	
1347F...[3]	(0.117)		13479F	(0.0925)		124689F	(0.106)				
1348F	(0.117)		13469/12479F	(0.0925)		123467F	(0.106)				
1248F...[3]	(0.117)		12346F	(0.0925)		123478F	(0.1)				
1268F	(0.117)		23468/12469F	(0.0925)		123678F	(0.0987)				
1467F	(0.117)		12347F	(0.0925)		123479F	(0.106)				
1478F	(0.117)		12348F	(0.0925)		123469F	(0.106)				
1369/1237F	(0.117)		12378F	(0.0943)		123679F	(0.106)				
2467F	(0.117)		12678/12367F	(0.0925)		234678F	(0.0997)		**Conc.**	0	
2368F	(0.117)		12379F	(0.0925)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(0.117)		12679F	(0.0925)		123689F	(0.106)				
1278F	(0.117)		23467/12369F	(0.0925)		123789F	(0.125)		**Octa-Furan**	**Conc (pg/g)**	**Qualifiers**
1349F	(0.117)		23478F	(0.0907)		123789/123489F	0				
1267F	(0.117)		23478/12489F	0		123489F	(0.106)		OCDF	(0.176)	
2346/1249F	(0.117)		12489F	(0.0925)							
2347/1279F	(0.117)		12349F	(0.0925)							
2348F	(0.117)		12389F	(0.0925)							
2378F	(0.117)										
2367/3467F	(0.117)										
1269F	(0.117)										
1239F	(0.117)										
1289F	(0.117)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 613-615-TDL

Report Created: 17-Jul-2023 08:56 Analyst: pw

Sample ID: Method Blank B8138_20258 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Solid	Lab Sample ID:	MB1_20258_DF_SDS
Cliend Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	10.00 g	QC Batch No.:	20258
Date Collected:	n/a	Split:	-	Date Extracted:	11-Jul-2023
Date Received:	n/a	Dilution:	-	Date Analyzed:	14-Jul-2023 13:43
Lab Project No:	B8138	Units	pg/g		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(0.136)		0.136	(0.136)	(0.136)	(0.136)
12378-PeCDD	(0.128)		0.128	(0.064)	(0.128)	(0.128)
123478-HxCDD	(0.149)		0.149	(0.0149)	(0.0149)	(0.0149)
123678-HxCDD	(0.134)		0.134	(0.0134)	(0.0134)	(0.0134)
123789-HxCDD	(0.152)		0.152	(0.0152)	(0.0152)	(0.0152)
1234678-HpCDD	(0.0932)		0.0932	(0.000932)	(0.000932)	(0.000932)
OCDD	(0.299)		0.299	(0.000299)	(0.0000299)	(0.0000896)
2378-TCDF	(0.117)		0.117	(0.0117)	(0.0117)	(0.0117)
12378-PeCDF	(0.0943)		0.0943	(0.00471)	(0.00471)	(0.00283)
23478-PeCDF	(0.0907)		0.0907	(0.0453)	(0.0453)	(0.0272)
123478-HxCDF	(0.1)		0.1	(0.01)	(0.01)	(0.01)
123678-HxCDF	(0.0987)		0.0987	(0.00987)	(0.00987)	(0.00987)
234678-HxCDF	(0.0997)		0.0997	(0.00997)	(0.00997)	(0.00997)
123789-HxCDF	(0.125)		0.125	(0.0125)	(0.0125)	(0.0125)
1234678-HpCDF	(0.0731)		0.0731	(0.000731)	(0.000731)	(0.000731)
1234789-HpCDF	(0.0877)		0.0877	(0.000877)	(0.000877)	(0.000877)
OCDF	(0.176)		0.176	(0.000176)	(0.0000176)	(0.0000527)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	0.175	0.207	0.197
EMPC = 0, ND = DL	0.351	0.414	0.394
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	0.175	0.207	0.197
EMPC = EMPC, ND = DL	0.351	0.414	0.394
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 613-615-TDL

SGS North America - DF v0.99

Sample ID: 0_20258_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20258_DF	Date Extracted:	11-Jul-2023
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:20:24

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.2				ES 2378-TCDD	90	
12378-PeCDD	54.2				ES 12378-PeCDD	92.8	
123478-HxCDD	58.6				ES 123478-HxCDD	86.5	
123678-HxCDD	59.7				ES 123678-HxCDD	90.7	
123789-HxCDD	56.2				ES 123789-HxCDD	89.7	
1234678-HpCDD	54.5				ES 1234678-HpCDD	95.1	
OCDD	116				ES OCDD	74.4	
2378-TCDF	11.8				ES 2378-TCDF	86.6	
12378-PeCDF	50.6				ES 12378-PeCDF	90.7	
23478-PeCDF	54.1				ES 23478-PeCDF	89.9	
123478-HxCDF	51.7				ES 123478-HxCDF	89.1	
123678-HxCDF	52.4				ES 123678-HxCDF	91.3	
234678-HxCDF	51.7				ES 234678-HxCDF	94.5	
123789-HxCDF	50.3				ES 123789-HxCDF	93.8	
1234678-HpCDF	55				ES 1234678-HpCDF	101	
1234789-HpCDF	54.9				ES 1234789-HpCDF	87.2	
OCDF	107				ES OCDF	75	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.8	
Total TCDD	56.4		56.4		CS 12347-PeCDD	103	
Total PeCDD	79.6		79.6		CS 12346-PeCDF	95.2	
Total HxCDD	189		189		CS 123469-HxCDF	100	
Total HpCDD	66.6		66.6		CS 1234689-HpCDF	101	
Total TCDF	61.8		61.8				
Total PeCDF	126		126				
Total HxCDF	218		218				
Total HpCDF	110		110				
Total PCDD/Fs	**1,130**		**1,130**				
WHO-2005 TEQs							
TEQ: ND=0	125		125				
TEQ: ND=DL/2	125	0.118	125				
TEQ: ND=DL	125	0.235	125				

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Checkcode: 670-396-NJF

SGS North America - DF v0.99

Report Created: 17-Jul-2023 08:56 Analyst: pw

Sample ID: 0_20258_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Solid	Lab Project ID:	B8138	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20258_DF	Date Extracted:	11-Jul-2023
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	20258	Date Analyzed:	14-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:07:59

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	13.4				ES 2378-TCDD	87.4	
12378-PeCDD	56.9				ES 12378-PeCDD	95	
123478-HxCDD	63.9				ES 123478-HxCDD	81.9	
123678-HxCDD	65				ES 123678-HxCDD	83.9	
123789-HxCDD	61.4				ES 123789-HxCDD	84.4	
1234678-HpCDD	58.7				ES 1234678-HpCDD	91.3	
OCDD	123				ES OCDD	68.4	
2378-TCDF	11.9				ES 2378-TCDF	86.6	
12378-PeCDF	55.2				ES 12378-PeCDF	91.8	
23478-PeCDF	59.1				ES 23478-PeCDF	90.2	
123478-HxCDF	57				ES 123478-HxCDF	83.5	
123678-HxCDF	56.7				ES 123678-HxCDF	87.5	
234678-HxCDF	57.5				ES 234678-HxCDF	88.1	
123789-HxCDF	53.2				ES 123789-HxCDF	90.3	
1234678-HpCDF	58.2				ES 1234678-HpCDF	96.6	
1234789-HpCDF	57.4				ES 1234789-HpCDF	83.6	
OCDF	112				ES OCDF	70.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	98.8	
Total TCDD	62.6		62.6		CS 12347-PeCDD	111	
Total PeCDD	84.3		84.3		CS 12346-PeCDF	103	
Total HxCDD	207		207		CS 123469-HxCDF	97.6	
Total HpCDD	71.5		71.5		CS 1234689-HpCDF	98.7	
Total TCDF	66.9		66.9				
Total PeCDF	138		138				
Total HxCDF	237		237				
Total HpCDF	116		116				
Total PCDD/Fs	**1,220**		**1,220**				
WHO-2005 TEQs							
TEQ: ND=0	134		134				
TEQ: ND=DL/2	134	0.15	134				
TEQ: ND=DL	134	0.299	134				

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Checkcode: 223-194-JHS

SGS North America - DF v0.99

Report Created: 17-Jul-2023 08:56 Analyst: pw

Sample DUP

Method 1613B

Sample ID: 0_20258_OPR001

Analyte	OPR1_20258_DF pg/uL	OPR2_20258_DF (DUP) pg/uL	RPD
2,3,7,8-TCDD	12.2	13.4	9.7%
1,2,3,7,8-PeCDD	54.2	56.9	4.9%
1,2,3,4,7,8-HxCDD	58.6	63.9	8.7%
1,2,3,6,7,8-HxCDD	59.7	65	8.6%
1,2,3,7,8,9-HxCDD	56.2	61.4	8.8%
1,2,3,4,6,7,8-HpCDD	54.5	58.7	7.4%
OCDD	116	123	5.4%
2,3,7,8-TCDF	11.8	11.9	0.4%
1,2,3,7,8-PeCDF	50.6	55.2	8.7%
2,3,4,7,8-PeCDF	54.1	59.1	8.8%
1,2,3,4,7,8-HxCDF	51.7	57	9.7%
1,2,3,6,7,8-HxCDF	52.4	56.7	8.0%
2,3,4,6,7,8-HxCDF	51.7	57.5	10.6%
1,2,3,7,8,9-HxCDF	50.3	53.2	5.6%
1,2,3,4,6,7,8-HpCDF	55	58.2	5.6%
1,2,3,4,7,8,9-HpCDF	54.9	57.4	4.5%
OCDF	107	112	4.3%
Totals			
Total TCDD	56.4	62.6	10.5%
Total PeCDD	79.6	84.3	5.7%
Total HxCDD	189	207	9.2%
Total HpCDD	66.6	71.5	7.2%
Total TCDF	61.8	66.9	8.0%
Total PeCDF	126	138	8.7%
Total HxCDF	218	237	8.6%
Total HpCDF	110	116	5.1%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*10-Jul-23 at 08:35*
AP Project name:	*B8138*
Requested TAT:	*5 business days*
Projected due date:	*17-Jul-23*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto Waste Pits S. Impoundment*
Project PO#:	*340-009759*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-070723-S-MTK-Source Topsoil-1	B8138_001	Soil	2	8oz Clear Glass	07-Jul-23	10:00	16.2	1	7808 4204 7665

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact. Sample received out of temp, okay to proceed per client email.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 11 Jul 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

Wilmington

SGS CHAIN OF CUSTODY

B8138

PROJECT INFO
PROJECT: San Juanito Waste Pits-S. Impoundment
P.O. #:
QUOTE #:
SITE REF:
TURN AROUND TIME: 5 day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
SSOW-125994404-2022-001

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD Services Inc
CONTACT: Wells Richard
ADDRESS: 2237 S. Acadian Thruway, Suite 701
PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	PRESERVATIVE	ANALYSIS & METHOD: Dioxin/Furans	QC MS	QC MSD	QC DUP	QTY	REMARKS
125994404-070723-SWTK-Source1-1	7/7/23	10:00	G	S	2		X					See SSOW
Temp Blank	—	—	—	—	1							

COLLECTED/RELINQUISHED BY (1): GHD	DATE: 7/7/23	TIME: 1500	RECEIVED BY:
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: Samara Burkemper DATE: 7/8/23 TIME: 8:35am
COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☒ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: FedEx TEMP: °C 16.2°C IR4 TempB
TRACKING #: attached ice melted

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Member of the SGS Group (SGS SA)

B8138

ORIGIN ID:HBYA (772) 233-3016
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR

WILMINGTON, NC 28405
UNITED STATES US

SHIP DATE: 07JUL23
ACTWGT: 20.90 LB
CAD: 6755022/SSF02422
DIMS: 16x12x11 IN

BILL THIRD PARTY

Part # 156297-435 RRDB2 EXP 06/24

TO ATTN: SAMPLE MANAGEMENT
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR

WILMINGTON NC 28405

(772) 233-3016 REF:
INV:
PO: DEPT:

7/10/23
8:35a
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PRIORITY OVERNIGHT

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AHS
28405
NC-US RDU

XG ILMA

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March 10, 2023

Wells Richard
GHD
5551 Corporate Blvd #200
Baton Rouge, LA 70808

Work Order: **HS23030369**

Laboratory Results for: **San Jacinto WP-South**

Dear Wells Richard,

ALS Environmental received 20 sample(s) on Mar 07, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Anna Kinchen
Project Manager

Client: GHD
Project: San Jacinto WP-South
Work Order: HS23030369

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	Soil		07-Mar-2023 11:18	07-Mar-2023 15:45	☐
HS23030369-02	12599404-030723-S-MTK-Backfill-62 (8-10)	Soil		07-Mar-2023 11:29	07-Mar-2023 15:45	☐
HS23030369-03	12599404-030723-S-MTK-Backfill-63 (0-2)	Soil		07-Mar-2023 11:36	07-Mar-2023 15:45	☐
HS23030369-04	12599404-030723-S-MTK-Backfill-64 (10-12)	Soil		07-Mar-2023 11:45	07-Mar-2023 15:45	☐
HS23030369-05	12599404-030723-S-MTK-Backfill-65 (8-10)	Soil		07-Mar-2023 12:25	07-Mar-2023 15:45	☐
HS23030369-06	12599404-030723-S-MTK-Backfill-66 (0-2)	Soil		07-Mar-2023 12:16	07-Mar-2023 15:45	☐
HS23030369-07	12599404-030723-S-MTK-Backfill-67 (10-12)	Soil		07-Mar-2023 12:08	07-Mar-2023 15:45	☐
HS23030369-08	12599404-030723-S-MTK-Backfill-68 (0-2)	Soil		07-Mar-2023 11:59	07-Mar-2023 15:45	☐
HS23030369-09	12599404-030723-S-MTK-Backfill-69 (0-2)	Soil		07-Mar-2023 12:31	07-Mar-2023 15:45	☐
HS23030369-10	12599404-030723-S-MTK-Backfill-70 (0-2)	Soil		07-Mar-2023 12:36	07-Mar-2023 15:45	☐
HS23030369-11	12599404-030723-S-MTK-Backfill-71 (8-10)	Soil		07-Mar-2023 12:43	07-Mar-2023 15:45	☐
HS23030369-12	12599404-030723-S-MTK-Backfill-72 (10-12)	Soil		07-Mar-2023 12:50	07-Mar-2023 15:45	☐
HS23030369-13	12599404-030723-S-MTK-Backfill-73 (10-12)	Soil		07-Mar-2023 13:41	07-Mar-2023 15:45	☐
HS23030369-14	12599404-030723-S-MTK-Backfill-74 (0-2)	Soil		07-Mar-2023 13:33	07-Mar-2023 15:45	☐
HS23030369-15	12599404-030723-S-MTK-Backfill-75 (0-2)	Soil		07-Mar-2023 13:29	07-Mar-2023 15:45	☐
HS23030369-16	12599404-030723-S-MTK-Backfill-76 (8-10)	Soil		07-Mar-2023 13:21	07-Mar-2023 15:45	☐
HS23030369-17	12599404-030723-S-MTK-Backfill-77 (0-2)	Soil		07-Mar-2023 13:48	07-Mar-2023 15:45	☐
HS23030369-18	12599404-030723-S-MTK-Backfill-78 (10-12)	Soil		07-Mar-2023 14:00	07-Mar-2023 15:45	☐
HS23030369-19	12599404-030723-S-MTK-Backfill-79 (8-10)	Soil		07-Mar-2023 14:06	07-Mar-2023 15:45	☐
HS23030369-20	12599404-030723-S-MTK-Backfill-80 (0-2)	Soil		07-Mar-2023 14:17	07-Mar-2023 15:45	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **CASE NARRATIVE**
Project: San Jacinto WP-South
Work Order: HS23030369

Metals by Method SW6020A

Batch ID: 190538

Sample ID: HS23030369-01MS

- Antimony failed on the MS\MSD but passed on the PDS. Manganese, Vanadium, and Zinc failed on the MS but passed on the MSD and PDS.

Sample ID: HS23030369-01MSD

- Due to non-homogeneity of the soil sample matrix the MS/MSD RPD were outside the control limits for Manganese.
- The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Aluminum, Calcium, Iron.

Metals by Method SW7471B

Batch ID: 190510

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method ASTM D2216

Batch ID: R429781,R429797

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SW7196

Batch ID: 190551

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-61 (0-2)
Collection Date: 07-Mar-2023 11:18

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-01
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**14,500**		**274**	**2360**	**mg/Kg-dry**	1000	10-Mar-2023 12:25
Antimony	< 0.0767		0.0767	0.590	mg/Kg-dry	1	10-Mar-2023 00:05
Arsenic	**2.72**		**0.0826**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Barium	**20.2**		**0.0354**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Beryllium	**1.10**		**0.0248**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Cadmium	< 0.0319		0.0319	0.590	mg/Kg-dry	1	10-Mar-2023 00:05
Calcium	**5,710**		**5.85**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Chromium	**14.1**		**0.0271**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Cobalt	**2.63**		**0.0177**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Copper	**7.64**		**0.0449**	**0.236**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Iron	**12,200**		**21.6**	**590**	**mg/Kg-dry**	10	10-Mar-2023 12:31
Lead	**8.24**		**0.0153**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Magnesium	**1,930**		**2.96**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Manganese	**27.0**		**0.0508**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Nickel	**9.96**		**0.0567**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Potassium	**560**		**7.93**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Selenium	**1.16**		**0.107**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Silver	**0.0611**	J	**0.0177**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Sodium	**1,050**		**4.92**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Thallium	< 0.263		0.263	0.590	mg/Kg-dry	1	10-Mar-2023 00:05
Vanadium	**24.5**		**0.0885**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:05
Zinc	**23.5**		**2.01**	**5.90**	**mg/Kg-dry**	10	10-Mar-2023 12:31
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0161**		**0.000601**	**0.00425**	**mg/Kg-dry**	1	09-Mar-2023 12:45
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**18.0**		**0.0100**	**0.0100**	**wt%**	1	10-Mar-2023 10:34
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.365		0.365	2.44	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-62 (8-10) Lab ID:HS23030369-02
Collection Date: 07-Mar-2023 11:29 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**10,300**		**28.2**	**243**	**mg/Kg-dry**	100	10-Mar-2023 12:46
Antimony	**0.126**	J	**0.0789**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Arsenic	**12.0**		**0.0850**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Barium	**89.5**		**0.0364**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Beryllium	**0.915**		**0.0255**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Cadmium	**0.0903**	J	**0.0328**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Calcium	**86,000**		**602**	**6070**	**mg/Kg-dry**	100	10-Mar-2023 12:46
Chromium	**15.3**		**0.0279**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Cobalt	**6.69**		**0.0182**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Copper	**13.2**		**0.0461**	**0.243**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Iron	**24,000**		**222**	**6070**	**mg/Kg-dry**	100	10-Mar-2023 12:46
Lead	**9.92**		**0.0158**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Magnesium	**2,280**		**3.05**	**60.7**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Manganese	**263**		**5.22**	**60.7**	**mg/Kg-dry**	100	10-Mar-2023 12:46
Nickel	**22.4**		**0.0583**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Potassium	**1,180**		**8.16**	**60.7**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Selenium	**1.35**		**0.110**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Silver	< 0.0182		0.0182	0.607	mg/Kg-dry	1	10-Mar-2023 00:19
Sodium	**345**		**5.06**	**60.7**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Thallium	< 0.271		0.271	0.607	mg/Kg-dry	1	10-Mar-2023 00:19
Vanadium	**36.7**		**0.0910**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
Zinc	**43.4**		**0.206**	**0.607**	**mg/Kg-dry**	1	10-Mar-2023 00:19
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.00924**		**0.000609**	**0.00431**	**mg/Kg-dry**	1	09-Mar-2023 12:50
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**20.7**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.374		0.374	2.49	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-63 (0-2)
Collection Date: 07-Mar-2023 11:36

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-03
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**12,000**		**25.6**	**221**	**mg/Kg-dry**	100	10-Mar-2023 12:48
Antimony	< 0.0718		0.0718	0.553	mg/Kg-dry	1	10-Mar-2023 00:21
Arsenic	**3.00**		**0.0774**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Barium	**197**		**0.0332**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Beryllium	**0.709**		**0.0232**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Cadmium	**0.106**	J	**0.0298**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Calcium	**101,000**		**548**	**5530**	**mg/Kg-dry**	100	10-Mar-2023 12:48
Chromium	**11.1**		**0.0254**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Cobalt	**7.49**		**0.0166**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Copper	**3.65**		**0.0420**	**0.221**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Iron	**9,790**		**2.02**	**55.3**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Lead	**7.99**		**0.0144**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Magnesium	**3,150**		**2.77**	**55.3**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Manganese	**290**		**4.75**	**55.3**	**mg/Kg-dry**	100	10-Mar-2023 12:48
Nickel	**8.10**		**0.0531**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Potassium	**581**		**7.43**	**55.3**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Selenium	**0.797**		**0.101**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Silver	**0.442**	J	**0.0166**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Sodium	**142**		**4.61**	**55.3**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Thallium	< 0.246		0.246	0.553	mg/Kg-dry	1	10-Mar-2023 00:21
Vanadium	**20.2**		**0.0829**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
Zinc	**18.6**		**0.188**	**0.553**	**mg/Kg-dry**	1	10-Mar-2023 00:21
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0190**		**0.000560**	**0.00396**	**mg/Kg-dry**	1	09-Mar-2023 12:52
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**14.7**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.348		0.348	2.32	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-64 (10-12) Lab ID:HS23030369-04
Collection Date: 07-Mar-2023 11:45 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**7,510**		**26.8**	**231**	**mg/Kg-dry**	100	10-Mar-2023 12:50
Antimony	< 0.0752		0.0752	0.579	mg/Kg-dry	1	10-Mar-2023 00:23
Arsenic	**2.09**		**0.0810**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Barium	**71.6**		**0.0347**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Beryllium	**0.517**	J	**0.0243**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Cadmium	< 0.0312		0.0312	0.579	mg/Kg-dry	1	10-Mar-2023 00:23
Calcium	**11,800**		**5.74**	**57.9**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Chromium	**10.4**		**0.0266**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Cobalt	**2.74**		**0.0174**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Copper	**5.11**		**0.0440**	**0.231**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Iron	**9,200**		**2.12**	**57.9**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Lead	**6.67**		**0.0150**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Magnesium	**1,440**		**2.90**	**57.9**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Manganese	**52.4**		**0.0498**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Nickel	**6.93**		**0.0555**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Potassium	**876**		**7.78**	**57.9**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Selenium	**0.822**		**0.105**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Silver	< 0.0174		0.0174	0.579	mg/Kg-dry	1	10-Mar-2023 00:23
Sodium	**330**		**4.83**	**57.9**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Thallium	< 0.258		0.258	0.579	mg/Kg-dry	1	10-Mar-2023 00:23
Vanadium	**14.1**		**0.0868**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
Zinc	**22.8**		**0.197**	**0.579**	**mg/Kg-dry**	1	10-Mar-2023 00:23
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0320**		**0.000591**	**0.00418**	**mg/Kg-dry**	1	09-Mar-2023 12:54
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**19.0**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.370		0.370	2.46	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-65 (8-10) Lab ID:HS23030369-05
Collection Date: 07-Mar-2023 12:25 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**8,020**		**27.4**	**236**	**mg/Kg-dry**	100	10-Mar-2023 12:52
Antimony	< 0.0767		0.0767	0.590	mg/Kg-dry	1	10-Mar-2023 00:25
Arsenic	**2.99**		**0.0825**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Barium	**36.6**		**0.0354**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Beryllium	**0.625**		**0.0248**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Cadmium	< 0.0318		0.0318	0.590	mg/Kg-dry	1	10-Mar-2023 00:25
Calcium	**2,700**		**5.85**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Chromium	**9.54**		**0.0271**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Cobalt	**1.72**		**0.0177**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Copper	**4.27**		**0.0448**	**0.236**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Iron	**9,940**		**2.16**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Lead	**6.52**		**0.0153**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Magnesium	**1,260**		**2.96**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Manganese	**20.1**		**0.0507**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Nickel	**9.41**		**0.0566**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Potassium	**713**		**7.92**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Selenium	**1.27**		**0.107**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Silver	**0.202**	J	**0.0177**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Sodium	**328**		**4.92**	**59.0**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Thallium	< 0.263		0.263	0.590	mg/Kg-dry	1	10-Mar-2023 00:25
Vanadium	**15.5**		**0.0884**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
Zinc	**19.5**		**0.200**	**0.590**	**mg/Kg-dry**	1	10-Mar-2023 00:25
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0163**		**0.000593**	**0.00420**	**mg/Kg-dry**	1	09-Mar-2023 12:55
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**18.4**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.367		0.367	2.44	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-66 (0-2)
Collection Date: 07-Mar-2023 12:16

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-06
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**13,100**		**27.0**	**233**	**mg/Kg-dry**	100	10-Mar-2023 12:54
Antimony	< 0.0757		0.0757	0.582	mg/Kg-dry	1	10-Mar-2023 00:27
Arsenic	**6.39**		**0.0815**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Barium	**70.3**		**0.0349**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Beryllium	**1.37**		**0.0245**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Cadmium	< 0.0314		0.0314	0.582	mg/Kg-dry	1	10-Mar-2023 00:27
Calcium	**3,900**		**5.78**	**58.2**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Chromium	**12.4**		**0.0268**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Cobalt	**10.1**		**0.0175**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Copper	**7.61**		**0.0443**	**0.233**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Iron	**25,700**		**213**	**5820**	**mg/Kg-dry**	100	10-Mar-2023 12:54
Lead	**64.1**		**0.0151**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Magnesium	**1,460**		**2.92**	**58.2**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Manganese	**171**		**0.0501**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Nickel	**8.09**		**0.0559**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Potassium	**349**		**7.83**	**58.2**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Selenium	**1.62**		**0.106**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Silver	**0.0539**	J	**0.0175**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Sodium	**586**		**4.86**	**58.2**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Thallium	< 0.260		0.260	0.582	mg/Kg-dry	1	10-Mar-2023 00:27
Vanadium	**38.4**		**0.0873**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
Zinc	**14.1**		**0.198**	**0.582**	**mg/Kg-dry**	1	10-Mar-2023 00:27
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0185**		**0.000583**	**0.00413**	**mg/Kg-dry**	1	09-Mar-2023 12:57
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**17.8**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.360		0.360	2.40	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
ANALYTICAL REPORT
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-67 (10-12) Lab ID:HS23030369-07
Collection Date: 07-Mar-2023 12:08 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**8,910**		**27.1**	**234**	**mg/Kg-dry**	100	10-Mar-2023 12:56
Antimony	**0.0899**	J	**0.0760**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Arsenic	**15.4**		**0.0818**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Barium	**66.6**		**0.0351**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Beryllium	**0.917**		**0.0245**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Cadmium	< 0.0315		0.0315	0.584	mg/Kg-dry	1	10-Mar-2023 00:29
Calcium	**17,600**		**5.80**	**58.4**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Chromium	**12.3**		**0.0269**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Cobalt	**4.02**		**0.0175**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Copper	**16.1**		**0.0444**	**0.234**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Iron	**19,800**		**2.14**	**58.4**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Lead	**10.6**		**0.0152**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Magnesium	**1,630**		**2.93**	**58.4**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Manganese	**91.1**		**0.0502**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Nickel	**19.8**		**0.0561**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Potassium	**992**		**7.85**	**58.4**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Selenium	**1.02**		**0.106**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Silver	< 0.0175		0.0175	0.584	mg/Kg-dry	1	10-Mar-2023 00:29
Sodium	**354**		**4.87**	**58.4**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Thallium	< 0.261		0.261	0.584	mg/Kg-dry	1	10-Mar-2023 00:29
Vanadium	**37.6**		**0.0876**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
Zinc	**36.9**		**0.199**	**0.584**	**mg/Kg-dry**	1	10-Mar-2023 00:29
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.00609**		**0.000613**	**0.00434**	**mg/Kg-dry**	1	09-Mar-2023 13:06
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**19.4**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.368		0.368	2.45	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-68 (0-2)
Collection Date: 07-Mar-2023 11:59

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-08
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**10,400**		**27.2**	**235**	**mg/Kg-dry**	100	10-Mar-2023 12:58
Antimony	< 0.0763		0.0763	0.587	mg/Kg-dry	1	10-Mar-2023 00:31
Arsenic	**1.55**		**0.0822**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Barium	**137**		**0.0352**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Beryllium	**0.850**		**0.0246**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Cadmium	< 0.0317		0.0317	0.587	mg/Kg-dry	1	10-Mar-2023 00:31
Calcium	**4,920**		**5.82**	**58.7**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Chromium	**9.31**		**0.0270**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Cobalt	**2.85**		**0.0176**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Copper	**5.51**		**0.0446**	**0.235**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Iron	**9,230**		**2.15**	**58.7**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Lead	**9.03**		**0.0153**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Magnesium	**911**		**2.95**	**58.7**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Manganese	**32.5**		**0.0505**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Nickel	**6.71**		**0.0563**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Potassium	**377**		**7.89**	**58.7**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Selenium	**1.22**		**0.107**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Silver	**0.0533**	J	**0.0176**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Sodium	**290**		**4.89**	**58.7**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Thallium	< 0.262		0.262	0.587	mg/Kg-dry	1	10-Mar-2023 00:31
Vanadium	**16.0**		**0.0880**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
Zinc	**14.5**		**0.200**	**0.587**	**mg/Kg-dry**	1	10-Mar-2023 00:31
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0117**		**0.000605**	**0.00428**	**mg/Kg-dry**	1	09-Mar-2023 13:07
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**21.1**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.372		0.372	2.48	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-69 (0-2)
Collection Date: 07-Mar-2023 12:31

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-09
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**12,000**		**26.4**	**228**	**mg/Kg-dry**	100	10-Mar-2023 13:00
Antimony	< 0.0740		0.0740	0.570	mg/Kg-dry	1	10-Mar-2023 00:33
Arsenic	**2.62**		**0.0797**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Barium	**424**		**3.42**	**57.0**	**mg/Kg-dry**	100	10-Mar-2023 13:00
Beryllium	**0.919**		**0.0239**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Cadmium	< 0.0308		0.0308	0.570	mg/Kg-dry	1	10-Mar-2023 00:33
Calcium	**3,540**		**5.65**	**57.0**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Chromium	**10.3**		**0.0262**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Cobalt	**2.58**		**0.0171**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Copper	**5.22**		**0.0433**	**0.228**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Iron	**10,500**		**2.08**	**57.0**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Lead	**10.3**		**0.0148**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Magnesium	**1,530**		**2.86**	**57.0**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Manganese	**10.6**		**0.0490**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Nickel	**6.04**		**0.0547**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Potassium	**344**		**7.65**	**57.0**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Selenium	**0.950**		**0.104**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Silver	**0.0211**	J	**0.0171**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Sodium	**614**		**4.75**	**57.0**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Thallium	< 0.254		0.254	0.570	mg/Kg-dry	1	10-Mar-2023 00:33
Vanadium	**22.1**		**0.0854**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
Zinc	**14.7**		**0.194**	**0.570**	**mg/Kg-dry**	1	10-Mar-2023 00:33
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0237**		**0.000585**	**0.00414**	**mg/Kg-dry**	1	09-Mar-2023 13:09
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**17.1**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.357		0.357	2.38	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-70 (0-2)
Collection Date: 07-Mar-2023 12:36

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-10
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**13,300**		**26.2**	**226**	**mg/Kg-dry**	100	10-Mar-2023 13:02
Antimony	< 0.0733		0.0733	0.564	mg/Kg-dry	1	10-Mar-2023 00:35
Arsenic	**3.40**		**0.0790**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Barium	**174**		**0.0339**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Beryllium	**0.955**		**0.0237**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Cadmium	< 0.0305		0.0305	0.564	mg/Kg-dry	1	10-Mar-2023 00:35
Calcium	**8,730**		**5.60**	**56.4**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Chromium	**12.3**		**0.0260**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Cobalt	**1.71**		**0.0169**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Copper	**6.08**		**0.0429**	**0.226**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Iron	**11,700**		**2.07**	**56.4**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Lead	**7.82**		**0.0147**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Magnesium	**1,800**		**2.83**	**56.4**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Manganese	**16.9**		**0.0485**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Nickel	**9.31**		**0.0542**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Potassium	**474**		**7.58**	**56.4**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Selenium	**1.17**		**0.103**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Silver	**0.0343**	J	**0.0169**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Sodium	**526**		**4.71**	**56.4**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Thallium	< 0.252		0.252	0.564	mg/Kg-dry	1	10-Mar-2023 00:35
Vanadium	**25.2**		**0.0846**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
Zinc	**17.1**		**0.192**	**0.564**	**mg/Kg-dry**	1	10-Mar-2023 00:35
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0214**		**0.000588**	**0.00416**	**mg/Kg-dry**	1	09-Mar-2023 13:11
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**17.9**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.362		0.362	2.41	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-71 (8-10)
Collection Date: 07-Mar-2023 12:43

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-11
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**12,100**		**27.4**	**237**	**mg/Kg-dry**	100	10-Mar-2023 13:14
Antimony	**0.0817**	J	**0.0769**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Arsenic	**8.80**		**0.0828**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Barium	**578**		**3.55**	**59.1**	**mg/Kg-dry**	100	10-Mar-2023 13:14
Beryllium	**1.44**		**0.0248**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Cadmium	**0.580**	J	**0.0319**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Calcium	**5,260**		**5.87**	**59.1**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Chromium	**15.3**		**0.0272**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Cobalt	**52.4**		**0.0177**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Copper	**16.4**		**0.0449**	**0.237**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Iron	**25,400**		**216**	**5910**	**mg/Kg-dry**	100	10-Mar-2023 13:14
Lead	**23.0**		**0.0154**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Magnesium	**2,280**		**2.97**	**59.1**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Manganese	**2,620**		**5.09**	**59.1**	**mg/Kg-dry**	100	10-Mar-2023 13:14
Nickel	**56.9**		**0.0568**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Potassium	**1,210**		**7.95**	**59.1**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Selenium	**3.15**		**0.108**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Silver	< 0.0177		0.0177	0.591	mg/Kg-dry	1	10-Mar-2023 00:37
Sodium	**510**		**4.93**	**59.1**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Thallium	**0.281**	J	**0.264**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Vanadium	**33.7**		**0.0887**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
Zinc	**48.3**		**0.201**	**0.591**	**mg/Kg-dry**	1	10-Mar-2023 00:37
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0318**		**0.000616**	**0.00436**	**mg/Kg-dry**	1	09-Mar-2023 13:12
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**21.1**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.374		0.374	2.50	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
ANALYTICAL REPORT
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-72 (10-12) Lab ID:HS23030369-12
Collection Date: 07-Mar-2023 12:50 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**13,900**		**27.7**	**239**	**mg/Kg-dry**	100	10-Mar-2023 13:16
Antimony	**0.124**	J	**0.0776**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Arsenic	**14.1**		**0.0836**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Barium	**306**		**3.58**	**59.7**	**mg/Kg-dry**	100	10-Mar-2023 13:16
Beryllium	**1.09**		**0.0251**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Cadmium	**0.213**	J	**0.0322**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Calcium	**88,800**		**592**	**5970**	**mg/Kg-dry**	100	10-Mar-2023 13:16
Chromium	**17.8**		**0.0275**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Cobalt	**25.1**		**0.0179**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Copper	**15.3**		**0.0454**	**0.239**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Iron	**26,800**		**218**	**5970**	**mg/Kg-dry**	100	10-Mar-2023 13:16
Lead	**17.7**		**0.0155**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Magnesium	**2,760**		**3.00**	**59.7**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Manganese	**1,570**		**5.13**	**59.7**	**mg/Kg-dry**	100	10-Mar-2023 13:16
Nickel	**31.1**		**0.0573**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Potassium	**1,500**		**8.02**	**59.7**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Selenium	**1.62**		**0.109**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Silver	< 0.0179		0.0179	0.597	mg/Kg-dry	1	10-Mar-2023 00:42
Sodium	**333**		**4.98**	**59.7**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Thallium	**0.271**	J	**0.266**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Vanadium	**41.7**		**0.0895**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
Zinc	**47.4**		**0.203**	**0.597**	**mg/Kg-dry**	1	10-Mar-2023 00:42
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.00527**		**0.000599**	**0.00424**	**mg/Kg-dry**	1	09-Mar-2023 13:14
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**20.0**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.374		0.374	2.49	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-73 (10-12) Lab ID:HS23030369-13
Collection Date: 07-Mar-2023 13:41 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**10,600**		**27.6**	**238**	**mg/Kg-dry**	100	10-Mar-2023 13:18
Antimony	< 0.0772		0.0772	0.594	mg/Kg-dry	1	10-Mar-2023 00:44
Arsenic	**3.84**		**0.0831**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Barium	**69.6**		**0.0356**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Beryllium	**0.829**		**0.0249**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Cadmium	**0.0551**	J	**0.0321**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Calcium	**3,460**		**5.89**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Chromium	**12.8**		**0.0273**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Cobalt	**5.89**		**0.0178**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Copper	**6.47**		**0.0451**	**0.238**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Iron	**12,400**		**2.17**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Lead	**9.44**		**0.0154**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Magnesium	**1,660**		**2.98**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Manganese	**325**		**5.11**	**59.4**	**mg/Kg-dry**	100	10-Mar-2023 13:18
Nickel	**16.2**		**0.0570**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Potassium	**953**		**7.98**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Selenium	**1.26**		**0.108**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Silver	< 0.0178		0.0178	0.594	mg/Kg-dry	1	10-Mar-2023 00:44
Sodium	**519**		**4.95**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Thallium	< 0.265		0.265	0.594	mg/Kg-dry	1	10-Mar-2023 00:44
Vanadium	**18.1**		**0.0891**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
Zinc	**28.4**		**0.202**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:44
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0156**		**0.000596**	**0.00422**	**mg/Kg-dry**	1	09-Mar-2023 13:16
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**18.4**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.361		0.361	2.41	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-74 (0-2)
Collection Date: 07-Mar-2023 13:33

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-14
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**10,800**		**25.6**	**221**	**mg/Kg-dry**	100	10-Mar-2023 13:20
Antimony	< 0.0717		0.0717	0.551	mg/Kg-dry	1	10-Mar-2023 00:46
Arsenic	**1.94**		**0.0772**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Barium	**43.3**		**0.0331**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Beryllium	**0.682**		**0.0232**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Cadmium	< 0.0298		0.0298	0.551	mg/Kg-dry	1	10-Mar-2023 00:46
Calcium	**4,160**		**5.47**	**55.1**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Chromium	**9.16**		**0.0254**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Cobalt	**1.09**		**0.0165**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Copper	**6.45**		**0.0419**	**0.221**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Iron	**8,500**		**2.02**	**55.1**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Lead	**8.26**		**0.0143**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Magnesium	**1,350**		**2.77**	**55.1**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Manganese	**11.5**		**0.0474**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Nickel	**5.25**		**0.0529**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Potassium	**319**		**7.41**	**55.1**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Selenium	**0.749**		**0.100**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Silver	**0.0550**	J	**0.0165**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Sodium	**452**		**4.60**	**55.1**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Thallium	< 0.246		0.246	0.551	mg/Kg-dry	1	10-Mar-2023 00:46
Vanadium	**20.8**		**0.0827**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
Zinc	**15.2**		**0.187**	**0.551**	**mg/Kg-dry**	1	10-Mar-2023 00:46
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0190**		**0.000582**	**0.00412**	**mg/Kg-dry**	1	09-Mar-2023 13:17
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**16.9**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.356		0.356	2.38	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-75 (0-2)
Collection Date: 07-Mar-2023 13:29

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-15
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**13,200**		**26.9**	**232**	**mg/Kg-dry**	100	10-Mar-2023 13:22
Antimony	< 0.0754		0.0754	0.580	mg/Kg-dry	1	10-Mar-2023 00:48
Arsenic	**2.31**		**0.0812**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Barium	**62.3**		**0.0348**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Beryllium	**0.832**		**0.0244**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Cadmium	< 0.0313		0.0313	0.580	mg/Kg-dry	1	10-Mar-2023 00:48
Calcium	**14,900**		**5.75**	**58.0**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Chromium	**11.1**		**0.0267**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Cobalt	**3.45**		**0.0174**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Copper	**4.71**		**0.0441**	**0.232**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Iron	**9,390**		**2.12**	**58.0**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Lead	**7.43**		**0.0151**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Magnesium	**2,030**		**2.91**	**58.0**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Manganese	**45.1**		**0.0499**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Nickel	**8.03**		**0.0557**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Potassium	**445**		**7.79**	**58.0**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Selenium	**0.842**		**0.106**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Silver	**0.0372**	J	**0.0174**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Sodium	**2,790**		**4.84**	**58.0**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Thallium	< 0.259		0.259	0.580	mg/Kg-dry	1	10-Mar-2023 00:48
Vanadium	**18.9**		**0.0870**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
Zinc	**18.0**		**0.197**	**0.580**	**mg/Kg-dry**	1	10-Mar-2023 00:48
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0198**		**0.000579**	**0.00410**	**mg/Kg-dry**	1	09-Mar-2023 13:19
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**16.7**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.360		0.360	2.40	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-76 (8-10) Lab ID:HS23030369-16
Collection Date: 07-Mar-2023 13:21 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**9,830**		**26.0**	**224**	**mg/Kg-dry**	100	10-Mar-2023 13:24
Antimony	**0.0876**	J	**0.0727**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Arsenic	**6.61**		**0.0783**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Barium	**129**		**0.0336**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Beryllium	**0.712**		**0.0235**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Cadmium	**0.0409**	J	**0.0302**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Calcium	**35,100**		**555**	**5590**	**mg/Kg-dry**	100	10-Mar-2023 13:24
Chromium	**12.7**		**0.0257**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Cobalt	**7.58**		**0.0168**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Copper	**8.96**		**0.0425**	**0.224**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Iron	**16,000**		**2.05**	**55.9**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Lead	**8.08**		**0.0145**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Magnesium	**2,070**		**2.81**	**55.9**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Manganese	**420**		**4.81**	**55.9**	**mg/Kg-dry**	100	10-Mar-2023 13:24
Nickel	**15.0**		**0.0537**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Potassium	**980**		**7.52**	**55.9**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Selenium	**1.15**		**0.102**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Silver	< 0.0168		0.0168	0.559	mg/Kg-dry	1	10-Mar-2023 00:50
Sodium	**311**		**4.67**	**55.9**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Thallium	< 0.249		0.249	0.559	mg/Kg-dry	1	10-Mar-2023 00:50
Vanadium	**24.5**		**0.0839**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
Zinc	**33.7**		**0.190**	**0.559**	**mg/Kg-dry**	1	10-Mar-2023 00:50
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0120**		**0.000587**	**0.00416**	**mg/Kg-dry**	1	09-Mar-2023 13:21
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**18.1**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.363		0.363	2.42	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-77 (0-2)
Collection Date: 07-Mar-2023 13:48

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-17
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**14,000**		**25.8**	**222**	**mg/Kg-dry**	100	10-Mar-2023 13:26
Antimony	< 0.0722		0.0722	0.555	mg/Kg-dry	1	10-Mar-2023 00:52
Arsenic	**1.45**		**0.0778**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Barium	**152**		**0.0333**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Beryllium	**0.822**		**0.0233**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Cadmium	< 0.0300		0.0300	0.555	mg/Kg-dry	1	10-Mar-2023 00:52
Calcium	**2,590**		**5.51**	**55.5**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Chromium	**12.9**		**0.0255**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Cobalt	**1.76**		**0.0167**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Copper	**3.58**		**0.0422**	**0.222**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Iron	**9,150**		**2.03**	**55.5**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Lead	**7.86**		**0.0144**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Magnesium	**1,560**		**2.79**	**55.5**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Manganese	**13.1**		**0.0478**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Nickel	**5.96**		**0.0533**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Potassium	**421**		**7.46**	**55.5**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Selenium	**0.911**		**0.101**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Silver	**0.0470**	J	**0.0167**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Sodium	**1,830**		**4.63**	**55.5**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Thallium	< 0.248		0.248	0.555	mg/Kg-dry	1	10-Mar-2023 00:52
Vanadium	**20.1**		**0.0833**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
Zinc	**18.1**		**0.189**	**0.555**	**mg/Kg-dry**	1	10-Mar-2023 00:52
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0254**		**0.000575**	**0.00407**	**mg/Kg-dry**	1	09-Mar-2023 13:33
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**16.6**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.352		0.352	2.35	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-78 (10-12) Lab ID:HS23030369-18
Collection Date: 07-Mar-2023 14:00 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**10,800**		**27.6**	**238**	**mg/Kg-dry**	100	10-Mar-2023 13:28
Antimony	< 0.0773		0.0773	0.595	mg/Kg-dry	1	10-Mar-2023 00:54
Arsenic	**2.66**		**0.0833**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Barium	**62.3**		**0.0357**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Beryllium	**0.671**		**0.0250**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Cadmium	< 0.0321		0.0321	0.595	mg/Kg-dry	1	10-Mar-2023 00:54
Calcium	**21,000**		**5.90**	**59.5**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Chromium	**13.1**		**0.0274**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Cobalt	**2.66**		**0.0178**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Copper	**7.10**		**0.0452**	**0.238**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Iron	**12,000**		**2.18**	**59.5**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Lead	**8.38**		**0.0155**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Magnesium	**2,170**		**2.99**	**59.5**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Manganese	**57.4**		**0.0512**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Nickel	**9.69**		**0.0571**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Potassium	**1,120**		**8.00**	**59.5**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Selenium	**1.14**		**0.108**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Silver	< 0.0178		0.0178	0.595	mg/Kg-dry	1	10-Mar-2023 00:54
Sodium	**257**		**4.96**	**59.5**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Thallium	< 0.265		0.265	0.595	mg/Kg-dry	1	10-Mar-2023 00:54
Vanadium	**17.9**		**0.0892**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
Zinc	**28.1**		**0.202**	**0.595**	**mg/Kg-dry**	1	10-Mar-2023 00:54
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0265**		**0.000604**	**0.00427**	**mg/Kg-dry**	1	09-Mar-2023 13:35
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**19.2**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.371		0.371	2.47	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto WP-South WorkOrder:HS23030369
Sample ID: 12599404-030723-S-MTK-Backfill-79 (8-10) Lab ID:HS23030369-19
Collection Date: 07-Mar-2023 14:06 Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**14,000**		**27.6**	**238**	**mg/Kg-dry**	100	10-Mar-2023 13:30
Antimony	**0.167**	J	**0.0772**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Arsenic	**17.3**		**0.0831**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Barium	**137**		**0.0356**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Beryllium	**1.37**		**0.0249**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Cadmium	**0.107**	J	**0.0321**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Calcium	**60,600**		**589**	**5940**	**mg/Kg-dry**	100	10-Mar-2023 13:30
Chromium	**19.9**		**0.0273**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Cobalt	**10.6**		**0.0178**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Copper	**20.6**		**0.0451**	**0.238**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Iron	**34,800**		**217**	**5940**	**mg/Kg-dry**	100	10-Mar-2023 13:30
Lead	**15.6**		**0.0154**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Magnesium	**2,580**		**2.98**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Manganese	**471**		**5.11**	**59.4**	**mg/Kg-dry**	100	10-Mar-2023 13:30
Nickel	**29.9**		**0.0570**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Potassium	**1,530**		**7.98**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Selenium	**1.94**		**0.108**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Silver	< 0.0178		0.0178	0.594	mg/Kg-dry	1	10-Mar-2023 00:56
Sodium	**812**		**4.95**	**59.4**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Thallium	< 0.265		0.265	0.594	mg/Kg-dry	1	10-Mar-2023 00:56
Vanadium	**51.0**		**0.0891**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
Zinc	**60.9**		**0.202**	**0.594**	**mg/Kg-dry**	1	10-Mar-2023 00:56
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.00352**	J	**0.000621**	**0.00439**	**mg/Kg-dry**	1	09-Mar-2023 13:37
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**22.8**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.387		0.387	2.58	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
Sample ID: 12599404-030723-S-MTK-Backfill-80 (0-2)
Collection Date: 07-Mar-2023 14:17

ANALYTICAL REPORT
WorkOrder:HS23030369
Lab ID:HS23030369-20
Matrix:Soil

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
METALS BY SW6020A		**Method:SW6020A**			Prep:SW3050B / 09-Mar-2023		Analyst: MSC
Aluminum	**11,600**		**26.1**	**225**	**mg/Kg-dry**	100	10-Mar-2023 13:32
Antimony	< 0.0731		0.0731	0.563	mg/Kg-dry	1	10-Mar-2023 00:58
Arsenic	**1.78**		**0.0788**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Barium	**110**		**0.0338**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Beryllium	**0.629**		**0.0236**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Cadmium	< 0.0304		0.0304	0.563	mg/Kg-dry	1	10-Mar-2023 00:58
Calcium	**7,300**		**5.58**	**56.3**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Chromium	**12.2**		**0.0259**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Cobalt	**1.23**		**0.0169**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Copper	**4.40**		**0.0428**	**0.225**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Iron	**10,100**		**2.06**	**56.3**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Lead	**7.33**		**0.0146**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Magnesium	**1,360**		**2.82**	**56.3**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Manganese	**15.6**		**0.0484**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Nickel	**4.60**		**0.0540**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Potassium	**400**		**7.56**	**56.3**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Selenium	**0.614**		**0.102**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Silver	**0.0425**	J	**0.0169**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Sodium	**607**		**4.69**	**56.3**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Thallium	< 0.251		0.251	0.563	mg/Kg-dry	1	10-Mar-2023 00:58
Vanadium	**19.4**		**0.0844**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
Zinc	**19.4**		**0.191**	**0.563**	**mg/Kg-dry**	1	10-Mar-2023 00:58
MERCURY BY SW7471B		**Method:SW7471B**			Prep:SW7471B / 09-Mar-2023		Analyst: JS
Mercury	**0.0160**		**0.000594**	**0.00420**	**mg/Kg-dry**	1	09-Mar-2023 13:38
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: FO
Percent Moisture	**16.4**		**0.0100**	**0.0100**	**wt%**	1	09-Mar-2023 13:17
HEXAVALENT CHROMIUM BY SW7196A		**Method:SW7196**			Prep:SW3060A / 08-Mar-2023		Analyst: MZD
Chromium, Hexavalent	< 0.354		0.354	2.36	mg/kg-dry	1	10-Mar-2023 10:10

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

Batch ID: 190510 **Start Date:** 09 Mar 2023 08:30 **End Date:** 09 Mar 2023 10:30
Method: MERCURY PREP - SOLID - 7471B **Prep Code:** HG_S_LOWPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23030369-01		0.5723 (grams)	40 (mL)	69.89	4-oz glass, Neat
HS23030369-02		0.5843 (grams)	40 (mL)	68.46	4-oz glass, Neat
HS23030369-03		0.5908 (grams)	40 (mL)	67.7	4-oz glass, Neat
HS23030369-04		0.5886 (grams)	40 (mL)	67.96	4-oz glass, Neat
HS23030369-05		0.5826 (grams)	40 (mL)	68.66	4-oz glass, Neat
HS23030369-06		0.588 (grams)	40 (mL)	68.03	4-oz glass, Neat
HS23030369-07		0.5704 (grams)	40 (mL)	70.13	4-oz glass, Neat
HS23030369-08		0.5909 (grams)	40 (mL)	67.69	4-oz glass, Neat
HS23030369-09		0.5811 (grams)	40 (mL)	68.83	4-oz glass, Neat
HS23030369-10		0.5841 (grams)	40 (mL)	68.48	4-oz glass, Neat
HS23030369-11		0.5804 (grams)	40 (mL)	68.92	4-oz glass, Neat
HS23030369-12		0.5885 (grams)	40 (mL)	67.97	4-oz glass, Neat
HS23030369-13		0.5799 (grams)	40 (mL)	68.98	4-oz glass, Neat
HS23030369-14		0.5833 (grams)	40 (mL)	68.58	4-oz glass, Neat
HS23030369-15		0.5845 (grams)	40 (mL)	68.43	4-oz glass, Neat
HS23030369-16		0.5861 (grams)	40 (mL)	68.25	4-oz glass, Neat
HS23030369-17		0.5877 (grams)	40 (mL)	68.06	4-oz glass, Neat
HS23030369-18		0.5782 (grams)	40 (mL)	69.18	4-oz glass, Neat
HS23030369-19		0.5886 (grams)	40 (mL)	67.96	4-oz glass, Neat
HS23030369-20		0.568 (grams)	40 (mL)	70.42	4-oz glass, Neat

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

Batch ID: 190538 **Start Date:** 09 Mar 2023 08:30 **End Date:** 09 Mar 2023 14:30
Method: METALS PREP - SOLIDS - SW3050B **Prep Code:** 3050_I_LOW

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23030369-01		0.5166 (g)	50 (mL)	96.79	4-oz glass, Neat
HS23030369-02		0.5194 (g)	50 (mL)	96.26	4-oz glass, Neat
HS23030369-03		0.5303 (g)	50 (mL)	94.29	4-oz glass, Neat
HS23030369-04		0.5334 (g)	50 (mL)	93.74	4-oz glass, Neat
HS23030369-05		0.5196 (g)	50 (mL)	96.23	4-oz glass, Neat
HS23030369-06		0.5223 (g)	50 (mL)	95.73	4-oz glass, Neat
HS23030369-07		0.5309 (g)	50 (mL)	94.18	4-oz glass, Neat
HS23030369-08		0.5399 (g)	50 (mL)	92.61	4-oz glass, Neat
HS23030369-09		0.5295 (g)	50 (mL)	94.43	4-oz glass, Neat
HS23030369-10		0.5397 (g)	50 (mL)	92.64	4-oz glass, Neat
HS23030369-11		0.5358 (g)	50 (mL)	93.32	4-oz glass, Neat
HS23030369-12		0.5236 (g)	50 (mL)	95.49	4-oz glass, Neat
HS23030369-13		0.5159 (g)	50 (mL)	96.92	4-oz glass, Neat
HS23030369-14		0.5456 (g)	50 (mL)	91.64	4-oz glass, Neat
HS23030369-15		0.5176 (g)	50 (mL)	96.6	4-oz glass, Neat
HS23030369-16		0.5457 (g)	50 (mL)	91.63	4-oz glass, Neat
HS23030369-17		0.5397 (g)	50 (mL)	92.64	4-oz glass, Neat
HS23030369-18		0.5201 (g)	50 (mL)	96.14	4-oz glass, Neat
HS23030369-19		0.5453 (g)	50 (mL)	91.69	4-oz glass, Neat
HS23030369-20		0.5315 (g)	50 (mL)	94.07	4-oz glass, Neat

Batch ID: 190551 **Start Date:** 09 Mar 2023 15:22 **End Date:** 09 Mar 2023 16:30
Method: CR6 PREP - SOIL **Prep Code:** CR6_S_PR3060A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23030369-01		2.5028 (g)	100 (mL)	39.96	4-oz glass, Neat
HS23030369-02		2.5303 (g)	100 (mL)	39.52	4-oz glass, Neat
HS23030369-03		2.5273 (g)	100 (mL)	39.57	4-oz glass, Neat
HS23030369-04		2.5051 (g)	100 (mL)	39.92	4-oz glass, Neat
HS23030369-05		2.5077 (g)	100 (mL)	39.88	4-oz glass, Neat
HS23030369-06		2.535 (g)	100 (mL)	39.45	4-oz glass, Neat
HS23030369-07		2.5311 (g)	100 (mL)	39.51	4-oz glass, Neat
HS23030369-08		2.5539 (g)	100 (mL)	39.16	4-oz glass, Neat
HS23030369-09		2.5371 (g)	100 (mL)	39.42	4-oz glass, Neat
HS23030369-10		2.5229 (g)	100 (mL)	39.64	4-oz glass, Neat
HS23030369-11		2.5384 (g)	100 (mL)	39.39	4-oz glass, Neat
HS23030369-12		2.5066 (g)	100 (mL)	39.89	4-oz glass, Neat
HS23030369-13		2.5432 (g)	100 (mL)	39.32	4-oz glass, Neat
HS23030369-14		2.5321 (g)	100 (mL)	39.49	4-oz glass, Neat
HS23030369-15		2.5035 (g)	100 (mL)	39.94	4-oz glass, Neat
HS23030369-16		2.5256 (g)	100 (mL)	39.59	4-oz glass, Neat
HS23030369-17		2.5557 (g)	100 (mL)	39.13	4-oz glass, Neat
HS23030369-18		2.5041 (g)	100 (mL)	39.93	4-oz glass, Neat
HS23030369-19		2.5127 (g)	100 (mL)	39.8	4-oz glass, Neat
HS23030369-20		2.5331 (g)	100 (mL)	39.48	4-oz glass, Neat

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 190510 (0)	**Test Name :** MERCURY BY SW7471B				**Matrix:** Soil	
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	07 Mar 2023 11:18		09 Mar 2023 08:30	09 Mar 2023 12:45	1
HS23030369-02	12599404-030723-S-MTK-Backfill-62 (8-10)	07 Mar 2023 11:29		09 Mar 2023 08:30	09 Mar 2023 12:50	1
HS23030369-03	12599404-030723-S-MTK-Backfill-63 (0-2)	07 Mar 2023 11:36		09 Mar 2023 08:30	09 Mar 2023 12:52	1
HS23030369-04	12599404-030723-S-MTK-Backfill-64 (10-12)	07 Mar 2023 11:45		09 Mar 2023 08:30	09 Mar 2023 12:54	1
HS23030369-05	12599404-030723-S-MTK-Backfill-65 (8-10)	07 Mar 2023 12:25		09 Mar 2023 08:30	09 Mar 2023 12:55	1
HS23030369-06	12599404-030723-S-MTK-Backfill-66 (0-2)	07 Mar 2023 12:16		09 Mar 2023 08:30	09 Mar 2023 12:57	1
HS23030369-07	12599404-030723-S-MTK-Backfill-67 (10-12)	07 Mar 2023 12:08		09 Mar 2023 08:30	09 Mar 2023 13:06	1
HS23030369-08	12599404-030723-S-MTK-Backfill-68 (0-2)	07 Mar 2023 11:59		09 Mar 2023 08:30	09 Mar 2023 13:07	1
HS23030369-09	12599404-030723-S-MTK-Backfill-69 (0-2)	07 Mar 2023 12:31		09 Mar 2023 08:30	09 Mar 2023 13:09	1
HS23030369-10	12599404-030723-S-MTK-Backfill-70 (0-2)	07 Mar 2023 12:36		09 Mar 2023 08:30	09 Mar 2023 13:11	1
HS23030369-11	12599404-030723-S-MTK-Backfill-71 (8-10)	07 Mar 2023 12:43		09 Mar 2023 08:30	09 Mar 2023 13:12	1
HS23030369-12	12599404-030723-S-MTK-Backfill-72 (10-12)	07 Mar 2023 12:50		09 Mar 2023 08:30	09 Mar 2023 13:14	1
HS23030369-13	12599404-030723-S-MTK-Backfill-73 (10-12)	07 Mar 2023 13:41		09 Mar 2023 08:30	09 Mar 2023 13:16	1
HS23030369-14	12599404-030723-S-MTK-Backfill-74 (0-2)	07 Mar 2023 13:33		09 Mar 2023 08:30	09 Mar 2023 13:17	1
HS23030369-15	12599404-030723-S-MTK-Backfill-75 (0-2)	07 Mar 2023 13:29		09 Mar 2023 08:30	09 Mar 2023 13:19	1
HS23030369-16	12599404-030723-S-MTK-Backfill-76 (8-10)	07 Mar 2023 13:21		09 Mar 2023 08:30	09 Mar 2023 13:21	1
HS23030369-17	12599404-030723-S-MTK-Backfill-77 (0-2)	07 Mar 2023 13:48		09 Mar 2023 08:30	09 Mar 2023 13:33	1
HS23030369-18	12599404-030723-S-MTK-Backfill-78 (10-12)	07 Mar 2023 14:00		09 Mar 2023 08:30	09 Mar 2023 13:35	1
HS23030369-19	12599404-030723-S-MTK-Backfill-79 (8-10)	07 Mar 2023 14:06		09 Mar 2023 08:30	09 Mar 2023 13:37	1
HS23030369-20	12599404-030723-S-MTK-Backfill-80 (0-2)	07 Mar 2023 14:17		09 Mar 2023 08:30	09 Mar 2023 13:38	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 190538 (0)	**Test Name :** METALS BY SW6020A				**Matrix:** Soil	
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	07 Mar 2023 11:18		09 Mar 2023 08:30	10 Mar 2023 12:31	10
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	07 Mar 2023 11:18		09 Mar 2023 08:30	10 Mar 2023 12:25	1000
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	07 Mar 2023 11:18		09 Mar 2023 08:30	10 Mar 2023 00:05	1
HS23030369-02	12599404-030723-S-MTK-Backfill-62 (8-10)	07 Mar 2023 11:29		09 Mar 2023 08:30	10 Mar 2023 12:46	100
HS23030369-02	12599404-030723-S-MTK-Backfill-62 (8-10)	07 Mar 2023 11:29		09 Mar 2023 08:30	10 Mar 2023 00:19	1
HS23030369-03	12599404-030723-S-MTK-Backfill-63 (0-2)	07 Mar 2023 11:36		09 Mar 2023 08:30	10 Mar 2023 12:48	100
HS23030369-03	12599404-030723-S-MTK-Backfill-63 (0-2)	07 Mar 2023 11:36		09 Mar 2023 08:30	10 Mar 2023 00:21	1
HS23030369-04	12599404-030723-S-MTK-Backfill-64 (10-12)	07 Mar 2023 11:45		09 Mar 2023 08:30	10 Mar 2023 12:50	100
HS23030369-04	12599404-030723-S-MTK-Backfill-64 (10-12)	07 Mar 2023 11:45		09 Mar 2023 08:30	10 Mar 2023 00:23	1
HS23030369-05	12599404-030723-S-MTK-Backfill-65 (8-10)	07 Mar 2023 12:25		09 Mar 2023 08:30	10 Mar 2023 12:52	100
HS23030369-05	12599404-030723-S-MTK-Backfill-65 (8-10)	07 Mar 2023 12:25		09 Mar 2023 08:30	10 Mar 2023 00:25	1
HS23030369-06	12599404-030723-S-MTK-Backfill-66 (0-2)	07 Mar 2023 12:16		09 Mar 2023 08:30	10 Mar 2023 12:54	100
HS23030369-06	12599404-030723-S-MTK-Backfill-66 (0-2)	07 Mar 2023 12:16		09 Mar 2023 08:30	10 Mar 2023 00:27	1
HS23030369-07	12599404-030723-S-MTK-Backfill-67 (10-12)	07 Mar 2023 12:08		09 Mar 2023 08:30	10 Mar 2023 12:56	100
HS23030369-07	12599404-030723-S-MTK-Backfill-67 (10-12)	07 Mar 2023 12:08		09 Mar 2023 08:30	10 Mar 2023 00:29	1
HS23030369-08	12599404-030723-S-MTK-Backfill-68 (0-2)	07 Mar 2023 11:59		09 Mar 2023 08:30	10 Mar 2023 12:58	100
HS23030369-08	12599404-030723-S-MTK-Backfill-68 (0-2)	07 Mar 2023 11:59		09 Mar 2023 08:30	10 Mar 2023 00:31	1
HS23030369-09	12599404-030723-S-MTK-Backfill-69 (0-2)	07 Mar 2023 12:31		09 Mar 2023 08:30	10 Mar 2023 13:00	100
HS23030369-09	12599404-030723-S-MTK-Backfill-69 (0-2)	07 Mar 2023 12:31		09 Mar 2023 08:30	10 Mar 2023 00:33	1
HS23030369-10	12599404-030723-S-MTK-Backfill-70 (0-2)	07 Mar 2023 12:36		09 Mar 2023 08:30	10 Mar 2023 13:02	100
HS23030369-10	12599404-030723-S-MTK-Backfill-70 (0-2)	07 Mar 2023 12:36		09 Mar 2023 08:30	10 Mar 2023 00:35	1
HS23030369-11	12599404-030723-S-MTK-Backfill-71 (8-10)	07 Mar 2023 12:43		09 Mar 2023 08:30	10 Mar 2023 13:14	100
HS23030369-11	12599404-030723-S-MTK-Backfill-71 (8-10)	07 Mar 2023 12:43		09 Mar 2023 08:30	10 Mar 2023 00:37	1
HS23030369-12	12599404-030723-S-MTK-Backfill-72 (10-12)	07 Mar 2023 12:50		09 Mar 2023 08:30	10 Mar 2023 13:16	100
HS23030369-12	12599404-030723-S-MTK-Backfill-72 (10-12)	07 Mar 2023 12:50		09 Mar 2023 08:30	10 Mar 2023 00:42	1
HS23030369-13	12599404-030723-S-MTK-Backfill-73 (10-12)	07 Mar 2023 13:41		09 Mar 2023 08:30	10 Mar 2023 13:18	100
HS23030369-13	12599404-030723-S-MTK-Backfill-73 (10-12)	07 Mar 2023 13:41		09 Mar 2023 08:30	10 Mar 2023 00:44	1
HS23030369-14	12599404-030723-S-MTK-Backfill-74 (0-2)	07 Mar 2023 13:33		09 Mar 2023 08:30	10 Mar 2023 13:20	100
HS23030369-14	12599404-030723-S-MTK-Backfill-74 (0-2)	07 Mar 2023 13:33		09 Mar 2023 08:30	10 Mar 2023 00:46	1
HS23030369-15	12599404-030723-S-MTK-Backfill-75 (0-2)	07 Mar 2023 13:29		09 Mar 2023 08:30	10 Mar 2023 13:22	100

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
HS23030369-15	12599404-030723-S-MTK-Backfill-75 (0-2)	07 Mar 2023 13:29		09 Mar 2023 08:30	10 Mar 2023 00:48	1
HS23030369-16	12599404-030723-S-MTK-Backfill-76 (8-10)	07 Mar 2023 13:21		09 Mar 2023 08:30	10 Mar 2023 13:24	100
HS23030369-16	12599404-030723-S-MTK-Backfill-76 (8-10)	07 Mar 2023 13:21		09 Mar 2023 08:30	10 Mar 2023 00:50	1
HS23030369-17	12599404-030723-S-MTK-Backfill-77 (0-2)	07 Mar 2023 13:48		09 Mar 2023 08:30	10 Mar 2023 13:26	100
HS23030369-17	12599404-030723-S-MTK-Backfill-77 (0-2)	07 Mar 2023 13:48		09 Mar 2023 08:30	10 Mar 2023 00:52	1
HS23030369-18	12599404-030723-S-MTK-Backfill-78 (10-12)	07 Mar 2023 14:00		09 Mar 2023 08:30	10 Mar 2023 13:28	100
HS23030369-18	12599404-030723-S-MTK-Backfill-78 (10-12)	07 Mar 2023 14:00		09 Mar 2023 08:30	10 Mar 2023 00:54	1
HS23030369-19	12599404-030723-S-MTK-Backfill-79 (8-10)	07 Mar 2023 14:06		09 Mar 2023 08:30	10 Mar 2023 13:30	100
HS23030369-19	12599404-030723-S-MTK-Backfill-79 (8-10)	07 Mar 2023 14:06		09 Mar 2023 08:30	10 Mar 2023 00:56	1
HS23030369-20	12599404-030723-S-MTK-Backfill-80 (0-2)	07 Mar 2023 14:17		09 Mar 2023 08:30	10 Mar 2023 13:32	100
HS23030369-20	12599404-030723-S-MTK-Backfill-80 (0-2)	07 Mar 2023 14:17		09 Mar 2023 08:30	10 Mar 2023 00:58	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 190551 (0)	**Test Name :** HEXAVALENT CHROMIUM BY SW7196A				**Matrix:** Soil	
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	07 Mar 2023 11:18		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-02	12599404-030723-S-MTK-Backfill-62 (8-10)	07 Mar 2023 11:29		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-03	12599404-030723-S-MTK-Backfill-63 (0-2)	07 Mar 2023 11:36		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-04	12599404-030723-S-MTK-Backfill-64 (10-12)	07 Mar 2023 11:45		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-05	12599404-030723-S-MTK-Backfill-65 (8-10)	07 Mar 2023 12:25		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-06	12599404-030723-S-MTK-Backfill-66 (0-2)	07 Mar 2023 12:16		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-07	12599404-030723-S-MTK-Backfill-67 (10-12)	07 Mar 2023 12:08		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-08	12599404-030723-S-MTK-Backfill-68 (0-2)	07 Mar 2023 11:59		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-09	12599404-030723-S-MTK-Backfill-69 (0-2)	07 Mar 2023 12:31		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-10	12599404-030723-S-MTK-Backfill-70 (0-2)	07 Mar 2023 12:36		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-11	12599404-030723-S-MTK-Backfill-71 (8-10)	07 Mar 2023 12:43		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-12	12599404-030723-S-MTK-Backfill-72 (10-12)	07 Mar 2023 12:50		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-13	12599404-030723-S-MTK-Backfill-73 (10-12)	07 Mar 2023 13:41		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-14	12599404-030723-S-MTK-Backfill-74 (0-2)	07 Mar 2023 13:33		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-15	12599404-030723-S-MTK-Backfill-75 (0-2)	07 Mar 2023 13:29		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-16	12599404-030723-S-MTK-Backfill-76 (8-10)	07 Mar 2023 13:21		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-17	12599404-030723-S-MTK-Backfill-77 (0-2)	07 Mar 2023 13:48		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-18	12599404-030723-S-MTK-Backfill-78 (10-12)	07 Mar 2023 14:00		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-19	12599404-030723-S-MTK-Backfill-79 (8-10)	07 Mar 2023 14:06		08 Mar 2023 15:22	10 Mar 2023 10:10	1
HS23030369-20	12599404-030723-S-MTK-Backfill-80 (0-2)	07 Mar 2023 14:17		08 Mar 2023 15:22	10 Mar 2023 10:10	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R429781 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS23030369-02	12599404-030723-S-MTK-Backfill-62 (8-10)	07 Mar 2023 11:29			09 Mar 2023 13:17	1
HS23030369-03	12599404-030723-S-MTK-Backfill-63 (0-2)	07 Mar 2023 11:36			09 Mar 2023 13:17	1
HS23030369-04	12599404-030723-S-MTK-Backfill-64 (10-12)	07 Mar 2023 11:45			09 Mar 2023 13:17	1
HS23030369-05	12599404-030723-S-MTK-Backfill-65 (8-10)	07 Mar 2023 12:25			09 Mar 2023 13:17	1
HS23030369-06	12599404-030723-S-MTK-Backfill-66 (0-2)	07 Mar 2023 12:16			09 Mar 2023 13:17	1
HS23030369-07	12599404-030723-S-MTK-Backfill-67 (10-12)	07 Mar 2023 12:08			09 Mar 2023 13:17	1
HS23030369-08	12599404-030723-S-MTK-Backfill-68 (0-2)	07 Mar 2023 11:59			09 Mar 2023 13:17	1
HS23030369-09	12599404-030723-S-MTK-Backfill-69 (0-2)	07 Mar 2023 12:31			09 Mar 2023 13:17	1
HS23030369-10	12599404-030723-S-MTK-Backfill-70 (0-2)	07 Mar 2023 12:36			09 Mar 2023 13:17	1
HS23030369-11	12599404-030723-S-MTK-Backfill-71 (8-10)	07 Mar 2023 12:43			09 Mar 2023 13:17	1
HS23030369-12	12599404-030723-S-MTK-Backfill-72 (10-12)	07 Mar 2023 12:50			09 Mar 2023 13:17	1
HS23030369-13	12599404-030723-S-MTK-Backfill-73 (10-12)	07 Mar 2023 13:41			09 Mar 2023 13:17	1
HS23030369-14	12599404-030723-S-MTK-Backfill-74 (0-2)	07 Mar 2023 13:33			09 Mar 2023 13:17	1
HS23030369-15	12599404-030723-S-MTK-Backfill-75 (0-2)	07 Mar 2023 13:29			09 Mar 2023 13:17	1
HS23030369-16	12599404-030723-S-MTK-Backfill-76 (8-10)	07 Mar 2023 13:21			09 Mar 2023 13:17	1
HS23030369-17	12599404-030723-S-MTK-Backfill-77 (0-2)	07 Mar 2023 13:48			09 Mar 2023 13:17	1
HS23030369-18	12599404-030723-S-MTK-Backfill-78 (10-12)	07 Mar 2023 14:00			09 Mar 2023 13:17	1
HS23030369-19	12599404-030723-S-MTK-Backfill-79 (8-10)	07 Mar 2023 14:06			09 Mar 2023 13:17	1
HS23030369-20	12599404-030723-S-MTK-Backfill-80 (0-2)	07 Mar 2023 14:17			09 Mar 2023 13:17	1
Batch ID: R429797 (0)	**Test Name :** MOISTURE - ASTM D2216				**Matrix:** Soil	
HS23030369-01	12599404-030723-S-MTK-Backfill-61 (0-2)	07 Mar 2023 11:18			10 Mar 2023 10:34	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190510 (0) **Instrument: HG04** **Method: MERCURY BY SW7471B**

MBLK Sample ID: **MBLK-190510** Units: **ug/Kg** Analysis Date: **09-Mar-2023 12:42**
Client ID: Run ID: **HG04_429708** SeqNo: **7164519** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.7333	3.32								J

LCS Sample ID: **LCS-190510** Units: **ug/Kg** Analysis Date: **09-Mar-2023 12:44**
Client ID: Run ID: **HG04_429708** SeqNo: **7164520** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	334	3.32	333.3	0	100	80 - 120				

MS Sample ID: **HS23030369-01MS** Units: **ug/Kg** Analysis Date: **09-Mar-2023 12:47**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **HG04_429708** SeqNo: **7164522** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	318.9	3.33	333.6	13.21	91.6	80 - 120				

MSD Sample ID: **HS23030369-01MSD** Units: **ug/Kg** Analysis Date: **09-Mar-2023 12:49**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **HG04_429708** SeqNo: **7164523** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	349.1	3.41	342.3	13.21	98.1	80 - 120	318.9	9.04	20	

The following samples were analyzed in this batch:

HS23030369-01	HS23030369-02	HS23030369-03	HS23030369-04
HS23030369-05	HS23030369-06	HS23030369-07	HS23030369-08
HS23030369-09	HS23030369-10	HS23030369-11	HS23030369-12
HS23030369-13	HS23030369-14	HS23030369-15	HS23030369-16
HS23030369-17	HS23030369-18	HS23030369-19	HS23030369-20

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190538 (0) **Instrument: ICPMS06** **Method: METALS BY SW6020A**

MBLK Sample ID: **MBLK-190538** Units: **mg/Kg** Analysis Date: **09-Mar-2023 23:52**
Client ID: Run ID: **ICPMS06_429657** SeqNo: **7165344** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.9057	1.99								J
Antimony	< 0.0648	0.499								
Arsenic	< 0.0698	0.499								
Barium	0.05723	0.499								J
Beryllium	< 0.0209	0.499								
Cadmium	< 0.0269	0.499								
Calcium	< 4.95	49.9								
Chromium	0.2002	0.499								J
Cobalt	< 0.0150	0.499								
Copper	< 0.0379	0.199								
Iron	< 1.82	49.9								
Lead	< 0.0130	0.499								
Magnesium	< 2.50	49.9								
Manganese	< 0.0429	0.499								
Nickel	< 0.0479	0.499								
Potassium	< 6.70	49.9								
Selenium	< 0.0907	0.499								
Silver	< 0.0150	0.499								
Sodium	< 4.16	49.9								
Thallium	< 0.222	0.499								
Vanadium	< 0.0748	0.499								
Zinc	< 0.169	0.499								

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Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190538 (0) **Instrument: ICPMS06** **Method: METALS BY SW6020A**

LCS Sample ID: **LCS-190538** Units: **mg/Kg** Analysis Date: **09-Mar-2023 23:54**
Client ID: Run ID: **ICPMS06_429657** SeqNo: **7165345** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	69.63	1.99	59.73	0	117	80 - 120				
Antimony	10.09	0.498	9.954	0	101	80 - 120				
Arsenic	10.18	0.498	9.954	0	102	80 - 120				
Barium	10.37	0.498	9.954	0	104	80 - 120				
Beryllium	10.15	0.498	9.954	0	102	80 - 120				
Cadmium	10.22	0.498	9.954	0	103	80 - 120				
Calcium	1062	49.8	995.4	0	107	80 - 120				
Chromium	10.5	0.498	9.954	0	106	80 - 120				
Cobalt	10.71	0.498	9.954	0	108	80 - 120				
Copper	10.37	0.199	9.954	0	104	80 - 120				
Iron	1041	49.8	995.4	0	105	80 - 120				
Lead	10.15	0.498	9.954	0	102	80 - 120				
Magnesium	1049	49.8	995.4	0	105	80 - 120				
Manganese	10.59	0.498	9.954	0	106	80 - 120				
Nickel	10.42	0.498	9.954	0	105	80 - 120				
Potassium	1023	49.8	995.4	0	103	80 - 120				
Selenium	10.18	0.498	9.954	0	102	80 - 120				
Silver	10.34	0.498	9.954	0	104	80 - 120				
Sodium	1031	49.8	995.4	0	104	80 - 120				
Thallium	10.25	0.498	9.954	0	103	80 - 120				
Vanadium	10.22	0.498	9.954	0	103	80 - 120				
Zinc	10.33	0.498	9.954	0	104	80 - 120				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190538 (0) **Instrument:** ICPMS06 **Method:** METALS BY SW6020A

MS Sample ID: **HS23030369-01MS** Units: **mg/Kg** Analysis Date: **10-Mar-2023 00:09**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS06_429657** SeqNo: **7165303** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	10490	1.94	9.701	11940	-15000	75 - 125				SEO
Antimony	4.961	0.485	9.701	0.04917	50.6	75 - 125				S
Arsenic	10.86	0.485	9.701	2.233	88.9	75 - 125				
Barium	26.65	0.485	9.701	16.56	104	75 - 125				
Beryllium	10.33	0.485	9.701	0.9031	97.2	75 - 125				
Cadmium	9.453	0.485	9.701	0.01713	97.3	75 - 125				
Calcium	5798	48.5	970.1	4678	115	75 - 125				O
Chromium	19.19	0.485	9.701	11.55	78.7	75 - 125				
Cobalt	11.69	0.485	9.701	2.154	98.3	75 - 125				
Copper	14.78	0.194	9.701	6.266	87.8	75 - 125				
Iron	9588	48.5	970.1	9953	-37.6	75 - 125				SO
Lead	15.77	0.485	9.701	6.755	93.0	75 - 125				
Magnesium	2392	48.5	970.1	1581	83.6	75 - 125				
Manganese	38.53	0.485	9.701	22.18	169	75 - 125				S
Nickel	16.78	0.485	9.701	8.167	88.8	75 - 125				
Potassium	1307	48.5	970.1	458.8	87.4	75 - 125				
Selenium	9.428	0.485	9.701	0.9552	87.3	75 - 125				
Silver	9.671	0.485	9.701	0.05014	99.2	75 - 125				
Sodium	1773	48.5	970.1	857.6	94.4	75 - 125				
Thallium	9.625	0.485	9.701	0.145	97.7	75 - 125				
Vanadium	25.82	0.485	9.701	20.08	59.3	75 - 125				S
Zinc	24.13	0.485	9.701	18.57	57.3	75 - 125				S

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190538 (0) **Instrument:** ICPMS06 **Method:** METALS BY SW6020A

MSD Sample ID: **HS23030369-01MSD** Units: **mg/Kg** Analysis Date: **10-Mar-2023 00:11**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS06_429657** SeqNo: **7165304** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	11680	1.91	9.549	11940	-2740	75 - 125	10490	10.8	20	SEO
Antimony	4.502	0.477	9.549	0.04917	46.6	75 - 125	4.961	9.7	20	S
Arsenic	11.61	0.477	9.549	2.233	98.2	75 - 125	10.86	6.65	20	
Barium	25.26	0.477	9.549	16.56	91.2	75 - 125	26.65	5.32	20	
Beryllium	10.43	0.477	9.549	0.9031	99.7	75 - 125	10.33	0.909	20	
Cadmium	9.358	0.477	9.549	0.01713	97.8	75 - 125	9.453	1.01	20	
Calcium	5018	47.7	954.9	4678	35.6	75 - 125	5798	14.4	20	SO
Chromium	20.54	0.477	9.549	11.55	94.1	75 - 125	19.19	6.8	20	
Cobalt	11.73	0.477	9.549	2.154	100	75 - 125	11.69	0.33	20	
Copper	16.05	0.191	9.549	6.266	102	75 - 125	14.78	8.25	20	
Iron	11280	47.7	954.9	9953	139	75 - 125	9588	16.2	20	SO
Lead	16.23	0.477	9.549	6.755	99.2	75 - 125	15.77	2.87	20	
Magnesium	2509	47.7	954.9	1581	97.2	75 - 125	2392	4.77	20	
Manganese	30.15	0.477	9.549	22.18	83.5	75 - 125	38.53	24.4	20	R
Nickel	18.09	0.477	9.549	8.167	104	75 - 125	16.78	7.46	20	
Potassium	1380	47.7	954.9	458.8	96.4	75 - 125	1307	5.41	20	
Selenium	9.607	0.477	9.549	0.9552	90.6	75 - 125	9.428	1.89	20	
Silver	9.404	0.477	9.549	0.05014	97.9	75 - 125	9.671	2.8	20	
Sodium	1800	47.7	954.9	857.6	98.7	75 - 125	1773	1.48	20	
Thallium	9.771	0.477	9.549	0.145	101	75 - 125	9.625	1.5	20	
Vanadium	29.83	0.477	9.549	20.08	102	75 - 125	25.82	14.4	20	
Zinc	25.98	0.477	9.549	18.57	77.6	75 - 125	24.13	7.38	20	

PDS Sample ID: **HS23030369-01PDS** Units: **mg/Kg** Analysis Date: **10-Mar-2023 12:29**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS05_429748** SeqNo: **7165964** PrepDate: **09-Mar-2023** DF: **1000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	21140	1940	9679	11910	95.4	75 - 125				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190538 (0) **Instrument:** ICPMS06 **Method:** METALS BY SW6020A

PDS Sample ID: **HS23030369-01PDS** Units: **mg/Kg** Analysis Date: **10-Mar-2023 00:13**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS06_429657** SeqNo: **7165305** PrepDate: **09-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	9.34	0.484	9.679	0	96.5	75 - 125				
Arsenic	11.55	0.484	9.679	2.233	96.2	75 - 125				
Barium	26.22	0.484	9.679	16.56	99.8	75 - 125				
Beryllium	10.39	0.484	9.679	0.9031	98.1	75 - 125				
Cadmium	9.68	0.484	9.679	0	100	75 - 125				
Calcium	5456	48.4	967.9	4678	80.3	75 - 125				O
Chromium	20.41	0.484	9.679	11.55	91.6	75 - 125				
Cobalt	11.44	0.484	9.679	2.154	95.9	75 - 125				
Copper	15.35	0.194	9.679	6.266	93.9	75 - 125				
Lead	16.13	0.484	9.679	6.755	96.9	75 - 125				
Magnesium	2484	48.4	967.9	1581	93.3	75 - 125				
Manganese	31.16	0.484	9.679	22.18	92.8	75 - 125				
Nickel	17.22	0.484	9.679	8.167	93.5	75 - 125				
Potassium	1398	48.4	967.9	458.8	97.0	75 - 125				
Selenium	10.38	0.484	9.679	0.9552	97.4	75 - 125				
Silver	9.646	0.484	9.679	0.05014	99.1	75 - 125				
Sodium	1780	48.4	967.9	857.6	95.3	75 - 125				
Thallium	9.788	0.484	9.679	0	101	75 - 125				
Vanadium	28.99	0.484	9.679	20.08	92.1	75 - 125				

PDS Sample ID: **HS23030369-01PDS** Units: **mg/Kg** Analysis Date: **10-Mar-2023 12:36**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS05_429748** SeqNo: **7165967** PrepDate: **09-Mar-2023** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	19530	484	9679	9993	98.5	75 - 125				
Zinc	116.4	4.84	96.79	19.28	100	75 - 125				

SD Sample ID: **HS23030369-01SD** Units: **mg/Kg** Analysis Date: **10-Mar-2023 13:39**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS05_429748** SeqNo: **7166226** PrepDate: **09-Mar-2023** DF: **5000**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	11420	9680					11910	4.04	10	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190538 (0) **Instrument:** ICPMS06 **Method:** METALS BY SW6020A

SD Sample ID: **HS23030369-01SD** Units: **mg/Kg** Analysis Date: **10-Mar-2023 00:07**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS06_429657** SeqNo: **7165302** PrepDate: **09-Mar-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	< 0.315	2.42					0	0	10	
Arsenic	2.286	2.42					2.233	0	10	J
Barium	17.55	2.42					16.56	6	10	
Beryllium	0.9644	2.42					0.9031	0	10	J
Cadmium	< 0.131	2.42					0	0	10	
Calcium	4968	242					4678	6.18	10	
Cobalt	2.335	2.42					2.154	0	10	J
Lead	7.155	2.42					6.755	5.92	10	
Magnesium	1682	242					1581	6.42	10	
Manganese	23.45	2.42					22.18	5.73	10	
Selenium	0.8733	2.42					0.9552	0	10	J
Silver	< 0.0726	2.42					0.05014	0	10	
Sodium	903.6	242					857.6	5.36	10	
Thallium	< 1.08	2.42					0	0	10	
Vanadium	20.84	2.42					20.08	3.82	10	

SD Sample ID: **HS23030369-01SD** Units: **mg/Kg** Analysis Date: **10-Mar-2023 12:33**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **ICPMS05_429748** SeqNo: **7165966** PrepDate: **09-Mar-2023** DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	10400	2420					9993	4.12	10	
Zinc	20.55	24.2					19.28	0	10	J

The following samples were analyzed in this batch:

HS23030369-01	HS23030369-02	HS23030369-03	HS23030369-04
HS23030369-05	HS23030369-06	HS23030369-07	HS23030369-08
HS23030369-09	HS23030369-10	HS23030369-11	HS23030369-12
HS23030369-13	HS23030369-14	HS23030369-15	HS23030369-16
HS23030369-17	HS23030369-18	HS23030369-19	HS23030369-20

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: 190551 (0) **Instrument: UV-2450** **Method: HEXAVALENT CHROMIUM BY SW7196A**

MBLK Sample ID: **MBLK-190551** Units: **mg/kg** Analysis Date: **10-Mar-2023 10:10**
Client ID: Run ID: **UV-2450_429785** SeqNo: **7166415** PrepDate: **08-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	< 0.300	2.00								

LCS Sample ID: **LCS-190551** Units: **mg/kg** Analysis Date: **10-Mar-2023 10:10**
Client ID: Run ID: **UV-2450_429785** SeqNo: **7166414** PrepDate: **08-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	10.56	2.00	10	0	106	81 - 115				

MS Sample ID: **HS23030369-01MS** Units: **mg/kg** Analysis Date: **10-Mar-2023 10:10**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **UV-2450_429785** SeqNo: **7166412** PrepDate: **08-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.524	1.98	9.88	-0.03996	96.8	81 - 115				

MSD Sample ID: **HS23030369-01MSD** Units: **mg/kg** Analysis Date: **10-Mar-2023 10:10**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **UV-2450_429785** SeqNo: **7166413** PrepDate: **08-Mar-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	9.59	1.97	9.867	-0.03996	97.6	81 - 115	9.524	0.692	20	

The following samples were analyzed in this batch:

HS23030369-01	HS23030369-02	HS23030369-03	HS23030369-04
HS23030369-05	HS23030369-06	HS23030369-07	HS23030369-08
HS23030369-09	HS23030369-10	HS23030369-11	HS23030369-12
HS23030369-13	HS23030369-14	HS23030369-15	HS23030369-16
HS23030369-17	HS23030369-18	HS23030369-19	HS23030369-20

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: R429781 (0) **Instrument: Balance1** **Method: MOISTURE - ASTM D2216**

DUP Sample ID: **HS23030378-01DUP** Units: **wt%** Analysis Date: **09-Mar-2023 13:17**
Client ID: Run ID: **Balance1_429781** SeqNo: **7166341** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	21.6	0.0100					21.8	0.922	20	

The following samples were analyzed in this batch:

HS23030369-02	HS23030369-03	HS23030369-04	HS23030369-05
HS23030369-06	HS23030369-07	HS23030369-08	HS23030369-09
HS23030369-10	HS23030369-11	HS23030369-12	HS23030369-13
HS23030369-14	HS23030369-15	HS23030369-16	HS23030369-17
HS23030369-18	HS23030369-19	HS23030369-20	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: HS23030369

QC BATCH REPORT

Batch ID: **R429797 (0)** **Instrument:** **Balance1** **Method:** **MOISTURE - ASTM D2216**

DUP Sample ID: **HS23030369-01DUP** Units: **wt%** Analysis Date: **10-Mar-2023 10:34**
Client ID: **12599404-030723-S-MTK-Backfill-61 (0-2)** Run ID: **Balance1_429797** SeqNo: **7166662** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	16.5	0.0100					18	8.7	20	

The following samples were analyzed in this batch: HS23030369-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP-South
WorkOrder: **HS23030369**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	22-041-0	27-Mar-2023
California	2919 2022-2023	30-Apr-2023
Dept of Defense	L21-682	31-Dec-2023
Florida	E87611-36	30-Jun-2023
Illinois	2000322022-9	09-May-2023
Kansas	E-10352; 2022-2023	31-Jul-2023
Kentucky	123043, 2022-2023	30-Apr-2023
Louisiana	03087, 2022-2023	30-Jun-2023
Maryland	343, 2022-2023	30-Jun-2023
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2022-2023	30-Apr-2023
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-22-29	30-Apr-2023
Utah	TX026932022-13	31-Jul-2023

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23030369 **Date/Time Received:** **07-Mar-2023 15:45**

Client Name: GHD Baton Rouge **Received by:** **Paresh M. Giga**

Completed By:	/S/ Paresh M. Giga	07-Mar-2023 16:15	**Reviewed by:**	/S/ Anna Kinchen	08-Mar-2023 08:35
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Soil** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	3 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:292224/292225/292223
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	1.1C/0.6C U/C	IR31
Cooler(s)/Kit(s):	49939	
Date/Time sample(s) sent to storage:	3/7/23 17:15	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by:

Login Notes: **LOGIN** - Use 2 day TAT for login of samples received 3/7/23

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTIONS | RIGHT PARTNER

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 3

COC ID: 292224

HS23030369

GHD
San Jacinto WP-South

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	San Jacinto WP-South	A	Cr6_S (3060/7196 Hexavalent Cr) [4oz jar-shared]
Work Order		Project Number	12599404	B	ICP_S_Low (~~6020~~ 6010 TAL Metals) [4oz jar-shared]
Company Name	GHD	Bill To Company	GHD Services Inc	C	HG_S_Low (7471 Hg TAL Metals) [4oz jar-shared]
Send Report To	Allie Beal	Invoice Attn		D	MOIST_ASTM (Moisture %) [4oz jar-shared]
Address	5551 Corporate Blvd #200	Address	2055 Niagara Falls Blvd Suite #3	E	
				F	
City/State/Zip	Baton Rouge, LA 70808	City/State/Zip	Niagara Falls NY 14304	G	
Phone		Phone	(716) 297-6150	H	
Fax	(225) 292-9007	Fax		I	
e-Mail Address	wells.richard@ghd.com	e-Mail Address	invoicing-US@ghd.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12599404-030723-S-MTK-Backfill-61(0-2)	3/7/23	1118	Soil	6	1	X	X	X	X							
2	- - - - -62(8-10)		1129				X	X	X	X							
3	- - - - -63(0-2)		1136				X	X	X	X							
4	- - - - -64(10-12)		1145				X	X	X	X							
5	- - - - -65(8-10)		1225				X	X	X	X							
6	- - - - -66(0-2)		1216				X	X	X	X							
7	- - - - -67(10-12)		1208				X	X	X	X							
8	- - - - -68(0-2)		1159				X	X	X	X							
9	- - - - -69(0-2)		1231				X	X	X	X							
10	- - - - -70(0-2)		1236				X	X	X	X							

Sampler(s) Please Print & Sign

Shipment Method: Drop Off

Required Turnaround Time: (Check Box) ☒ ~~3 days~~ ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☒ 1 Day

Results Due Date: Quickest TAT

Relinquished by: [signature] Nick Neill Date: 3/7/23 Time: 1545 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 3/7/23 15:45

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: GHD San Jacinto

Cooler ID	Cooler Temp.
49939	2.1°
	1.1°
	~~4~~ 5
	4 Fos

QC Package: (Check One Box Below)

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Chain of Custody Form

Page 2 of 3

COC ID: 292225

HS23030369

GHD
San Jacinto WP-South

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	San Jacinto WP-South	A	Cr6_S (3060/7196 Hexavalent Cr) [4oz jar-shared]
Work Order		Project Number	12599404	B	ICP_S_Low ~~6020~~ 6010 TAL Metals) [4oz jar-shared]
Company Name	GHD	Bill To Company	GHD Services Inc	C	HG_S_Low (7471 Hg TAL Metals) [4oz jar-shared]
Send Report To	Wille Beal	Invoice Attn		D	MOIST_ASTM (Moisture %) [4oz jar-shared]
Address	5551 Corporate Blvd #200	Address	2035 Niagara Falls Blvd Suite #3	E	
				F	
City/State/Zip	Baton Rouge, LA 70808	City/State/Zip	Niagara Falls NY 14304	G	
Phone		Phone	(716) 297-6150	H	
Fax	(225) 292-9007	Fax		I	
e-Mail Address	wells.richard@ghd.com	e-Mail Address	invoicing-US@ghd.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12599404-030723-S-MTK-Backfill-71(8-10)	3/7/23	1243	Soil	8	1	X	X	X	X							
2	- - - - -72(10-12)		1250				X	X	X	X							
3	- - - - -73(10-12)		1341				X	X	X	X							
4	- - - - -74(0-2)		1333				X	X	X	X							
5	- - - - -75(0-2)		1329				X	X	X	X							
6	- - - - -76(8-10)		1321				X	X	X	X							
7	- - - - -77(0-2)		1348				X	X	X	X							
8	- - - - -78(10-12)		1400				X	X	X	X							
9	- - - - -79(8-10)		1406				X	X	X	X							
10	- - - - -80(0-2)		1417				X	X	X	X							

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time: (Check Box)	Results Due Date:
[signature] Nick Neill	Drop Off	[X] 3 days [ ] 5 Wk Days [ ] 2 Wk Days [X] 4 Hour	Quickest TAT

Relinquished by:	Date:	Time:	Received by:	Notes:
[signature] Nick Neill	3/7/23	1545	[signature]	GHD San Jacinto
Relinquished by:	Date:	Time:	Received by (Laboratory): 3/7/23 15:45	Cooler ID / Cooler Temp. / QC Package: (Check One Box Below) [X]
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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Chain of Custody Form

Page 3 of 3

COC ID: 292223

HS23030369

WV

GHD

San Jacinto WP-South

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	San Jacinto WP-South	A	Cr6_S [8060/7196 Hexavalent Cr] [4oz jar-shared]
Work Order		Project Number	12599404	B	ICP_S_Low [6020 TAL Metals] [4oz jar-shared]
Company Name	GHD	Bill To Company	GHD Services Inc.	C	HG_S_Low [7471 Hg TAL Metals] [4oz jar-shared]
Send Report To	Wille Beal	Invoice Attn		D	MOIST_ASTM (Moisture %) [4oz jar-shared]
Address	5551 Corporate Blvd #200	Address	2055 Niagara Falls Blvd Suite #3	E	
				F	
City/State/Zip	Baton Rouge, LA 70808	City/State/Zip	Niagara Falls NY 14304	G	
Phone		Phone	(716) 297-6150	H	
Fax	(225) 292-3007	Fax		I	
e-Mail Address		e-Mail Address	invoicing-US@ghd.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Temp Blank	—	—	Water	6	1	X	X	X	X							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Nick Neill

Shipment Method: Drop Off

Required Turnaround Time: (Check Box) ☒ 3 days ☐ [illegible] ☒ [illegible]

Results Due Date: Quicker TAT

Relinquished by: Nick Neill Date: 3/7/23 Time: 1545

Received by: —

Relinquished by: — Date: — Time: —

Received by (Laboratory): 3/7/23 15:45

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: GHD San Jacinto

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404 SSOW: 12599404-2022-001

SGS Job Number: JD56110

Sampling Date: 11/21/22

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: **139**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

December 13, 2022

Ms. Kathleen Shaw
GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079

RE: SGS – Dayton, Job # JD56110 - Reissues

Dear Ms. Shaw,

The final report for SGS job numbers JD56110 has been edited to reflect corrections to the results. These edits have been incorporated into the revised report which is attached.

Specifically, the sample's ID of JD56110-3 has been revised per client's request. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc.

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD56110

SJRWP - PCFSE, Harris County, TX
Project No: 12599404 SSOW: 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the MDL							
JD56110-1	11/21/22	11:30	MTK	11/22/22	SO	Soil	12599404-112122-S-MTK-SOURCE SAND-1
JD56110-2	11/21/22	12:00	MTK	11/22/22	SO	Soil	12599404-112122-S-MTK-SOURCE CLAY-1
JD56110-3	11/21/22	12:30	MTK	11/22/22	SO	Soil	12599404-112122-S-MTK-SOURCE AGG-1
JD56110-4	11/21/22	12:30	MTK	11/22/22	AQ	Trip Blank Soil	12599404-112122-W-MTK-TRIP-BLANK-1

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD56110
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	12/9/2022 12:13:39 P

On 11/22/2022, 3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD56110 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260D

Matrix: AQ **Batch ID:** VL10597

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD56004-3MS, JD56004-3MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike / Matrix Spike Duplicate Recovery(s) for Benzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JD56110-4 for Acetone: Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
- JD56110-4 for 2-Butanone (MEK): Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
- JD56110-4 for 1,2-Dibromo-3-chloropropane: Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
- JD56110-4 for Bromomethane: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD56110-4 for Chloromethane: Associated CCV outside of control limits high, sample was ND.
- VL10597-BS for Bromomethane: High percent recovery and no associated positive reported in the QC batch.
- JD56110-4 for Methyl Acetate: Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

Matrix: SO **Batch ID:** V3C7895

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD56061-1MS, JD56061-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for 1,1,1-Trichloroethane, 1,1-Dichloroethene, Carbon tetrachloride, Cyclohexane, Dichlorodifluoromethane, Freon 113, Methylcyclohexane, Trichlorofluoromethane are outside control limits. Probable cause due to matrix interference.
- RPD(s) for Duplicate for Acetone are outside control limits for sample JD56061-2DUP. High RPD due to low concentration of hit.
- JD56110-1 for Bromomethane: Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
- JD56110-3 for Bromomethane: Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
- JD56110-2 for Bromomethane: Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

MS Semi-volatiles By Method SW846 8270E

Matrix: SO **Batch ID:** OP43376

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56066-2MS, JD56066-2MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 2,4-Dinitrophenol are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol are outside control limits. Probable cause due to matrix interference.
- JD56110-3 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JD56110-2 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JD56110-2 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JD56110-3 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.
- JD56110-1 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JD56110-1 for Di-n-octyl phthalate: Associated CCV outside of control limits high, sample was ND.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: SO **Batch ID:** OP43383

- All samples were extracted within the recommended method holding time.
- Sample(s) JD56066-2MS, JD56066-2MSD, OP43383-MSMSD were used as the QC samples indicated.
- Sample(s) JD56110-1, JD56110-2, JD56110-3 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO **Batch ID:** OP43384

- All samples were extracted within the recommended method holding time.
- Sample(s) JD56093-1MS, JD56093-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Aroclor 1016 are outside control limits.
- OP43384-BS1 for Aroclor 1016: Outside control limits biased high. Associated samples ND.
- OP43384-BS1 for Tetrachloro-m-xylene: Outside control limits biased high. Associated samples ND.

GC/LC Semi-volatiles By Method SW846 8151A

Matrix: SO **Batch ID:** OP43362

- All samples were extracted within the recommended method holding time.
- Sample(s) JD56110-1MS, JD56110-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for MSD for 2,4,5-T, 2,4,5-TP (Silvex) are outside control limits for sample OP43362-MSD. Probable cause due to sample homogeneity.

GC/LC Semi-volatiles By Method TNRCC 1005

Matrix: SO **Batch ID:** L:OP21838

- The data for TNRCC 1005 meets quality control requirements.
- JD56110-1: Analysis performed at SGS Scott, LA.
- JD56110-3: Analysis performed at SGS Scott, LA.
- JD56110-2: Analysis performed at SGS Scott, LA.

Metals Analysis By Method SW846 6010D

Matrix:	SO	Batch ID:	MP36551

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD55906-4MS, JD55906-4MSD, JD55906-4PS, JD55906-4SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Antimony, Iron are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- Matrix Spike Duplicate Recovery(s) for Antimony are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Recovery(s) for Aluminum are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for Serial Dilution for Arsenic, Beryllium, Cadmium, Selenium, Silver, Sodium, Thallium are outside control limits for sample MP36551-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7471B

Matrix:	SO	Batch ID:	MP36603

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56076-1MS, JD56076-1MSD were used as the QC samples for metals.
- RPD(s) for MSD for Mercury are outside control limits for sample MP36603-S2. High rpd due to possible sample nonhomogeneity.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix:	SO	Batch ID:	GN36108

- Sample(s) JD55783-3DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 3060A/7196A

Matrix:	SO	Batch ID:	GP43760

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56093-2DUP, JD56093-2MS were used as the QC samples for Chromium, Hexavalent.
- GP43760-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (105 %) on the post-spike.

General Chemistry By Method SW846 9012B/LACHAT

Matrix:	SO	Batch ID:	GP43728

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD56110-1DUP, JD56110-1MS, JD56110-2MS were used as the QC samples for Cyanide.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	SGS Dayton, NJ	**Job No:**	JD56110
Site:	CRATXH: SJRWP - PCFSE, Harris County, TX	**Report Date**	12/2/2022 4:29:29 PM

3 samples were collected on 11/21/2022 and were received intact at SGS North America Inc.-Scott (SGS) on 11/22/2022, properly preserved and cool at 2.2 Deg C. These samples received an SGS job number of JD56110. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

GC/LC Semi-volatiles By Method TNRCC 1005

Matrix: SO **Batch ID:** OP21838

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- OP21838-MB for aaa-Trifluorotoluene: Recovery corrected for double spike.
- OP21838-MB for o-Terphenyl: Recovery corrected for double spike.

SGS North America Inc.-Scott (SGS) certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS and as stated on the COC. SGS certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the SGS Quality Manual except as noted above. This report is to be used in its entirety. SGS is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: JD56110
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 11/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD56110-1	**12599404-112122-S-MTK-SOURCE SAND-1**					
4,4'-DDT		0.0024 B	0.00069	0.00062	mg/kg	SW846 8081B
Aluminum		1520	54		mg/kg	SW846 6010D
Calcium		11200	540		mg/kg	SW846 6010D
Chromium		2.6	1.1		mg/kg	SW846 6010D
Iron		2050	54		mg/kg	SW846 6010D
Manganese		36.1	1.6		mg/kg	SW846 6010D
Zinc		8.1	5.4		mg/kg	SW846 6010D
JD56110-2	**12599404-112122-S-MTK-SOURCE CLAY-1**					
Ethylbenzene		0.00071 J	0.0012	0.00054	mg/kg	SW846 8260D
Toluene		0.00066 J	0.0012	0.00062	mg/kg	SW846 8260D
m,p-Xylene		0.0015	0.0012	0.0011	mg/kg	SW846 8260D
o-Xylene		0.00056 J	0.0012	0.00054	mg/kg	SW846 8260D
Xylene (total)		0.0021	0.0012	0.00054	mg/kg	SW846 8260D
Anthracene		0.0271 J	0.038	0.023	mg/kg	SW846 8270E
Fluoranthene		0.0306 J	0.038	0.017	mg/kg	SW846 8270E
Phenanthrene		0.0758	0.038	0.013	mg/kg	SW846 8270E
Pyrene		0.0202 J	0.038	0.012	mg/kg	SW846 8270E
4,4'-DDT		0.0029 B	0.00073	0.00064	mg/kg	SW846 8081B
Aluminum		11800	62		mg/kg	SW846 6010D
Arsenic		5.3	2.5		mg/kg	SW846 6010D
Barium		103	25		mg/kg	SW846 6010D
Beryllium		0.67	0.25		mg/kg	SW846 6010D
Calcium		66400	3100		mg/kg	SW846 6010D
Chromium		15.1	1.2		mg/kg	SW846 6010D
Cobalt		6.7	6.2		mg/kg	SW846 6010D
Copper		7.5	3.1		mg/kg	SW846 6010D
Iron		13700	62		mg/kg	SW846 6010D
Lead		10.5	2.5		mg/kg	SW846 6010D
Magnesium		2040	620		mg/kg	SW846 6010D
Manganese		429	1.9		mg/kg	SW846 6010D
Nickel		14.6	5.0		mg/kg	SW846 6010D
Potassium		1540	1200		mg/kg	SW846 6010D
Vanadium		27.1	6.2		mg/kg	SW846 6010D
Zinc		45.2	6.2		mg/kg	SW846 6010D
JD56110-3	**12599404-112122-S-MTK-SOURCE AGG-1**					
4,4'-DDT		0.0026 B	0.00065	0.00058	mg/kg	SW846 8081B
Aluminum		2060	51		mg/kg	SW846 6010D
Barium		35.1	20		mg/kg	SW846 6010D
Calcium		270000	10000		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD56110
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 11/21/22

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chromium		5.0	1.0		mg/kg	SW846 6010D
Iron		1510	51		mg/kg	SW846 6010D
Magnesium		68000	10000		mg/kg	SW846 6010D
Manganese		67.8	1.5		mg/kg	SW846 6010D
Vanadium		5.6	5.1		mg/kg	SW846 6010D
Cyanide		0.30	0.24		mg/kg	SW846 9012B/LACHAT

JD56110-4 **12599404-112122-W-MTK-TRIP-BLANK-1**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C180119.D	1	11/23/22 22:11	CL	n/a	n/a	V3C7895
Run #2							

	Initial Weight
Run #1	4.3 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.012	0.0051	mg/kg	
71-43-2	Benzene	ND	0.00062	0.00057	mg/kg	
74-97-5	Bromochloromethane	ND	0.0062	0.00070	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0025	0.00053	mg/kg	
75-25-2	Bromoform	ND	0.0062	0.0017	mg/kg	
74-83-9	Bromomethane [a]	ND	0.0062	0.00095	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.012	0.0030	mg/kg	
75-15-0	Carbon disulfide	ND	0.0025	0.00067	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0025	0.00077	mg/kg	
108-90-7	Chlorobenzene	ND	0.0025	0.00057	mg/kg	
75-00-3	Chloroethane	ND	0.0062	0.00073	mg/kg	
67-66-3	Chloroform	ND	0.0025	0.00065	mg/kg	
74-87-3	Chloromethane	ND	0.0062	0.0024	mg/kg	
110-82-7	Cyclohexane	ND	0.0025	0.00082	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0025	0.00086	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0025	0.00070	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0012	0.00052	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0012	0.00068	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0012	0.00062	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0012	0.00061	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0062	0.00090	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0012	0.00062	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0012	0.00058	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0012	0.00081	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0012	0.0010	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0012	0.00076	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0025	0.00059	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0025	0.00059	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0025	0.00057	mg/kg	
100-41-4	Ethylbenzene	ND	0.0012	0.00056	mg/kg	
76-13-1	Freon 113	ND	0.0062	0.0033	mg/kg	
591-78-6	2-Hexanone	ND	0.0062	0.0026	mg/kg	

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Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0025	0.0018	mg/kg	
79-20-9	Methyl Acetate	ND	0.0062	0.0017	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0025	0.0011	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0012	0.00058	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0062	0.0028	mg/kg	
75-09-2	Methylene chloride	ND	0.0062	0.0032	mg/kg	
100-42-5	Styrene	ND	0.0025	0.00050	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0025	0.00074	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0025	0.00072	mg/kg	
108-88-3	Toluene	ND	0.0012	0.00065	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0062	0.0031	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0062	0.0031	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0025	0.00060	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0025	0.00069	mg/kg	
79-01-6	Trichloroethene	ND	0.0012	0.00095	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0062	0.00085	mg/kg	
75-01-4	Vinyl chloride	ND	0.0025	0.00060	mg/kg	
	m,p-Xylene	ND	0.0012	0.0011	mg/kg	
95-47-6	o-Xylene	ND	0.0012	0.00057	mg/kg	
1330-20-7	Xylene (total)	ND	0.0012	0.00057	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-124%
17060-07-0	1,2-Dichloroethane-D4	112%		75-133%
2037-26-5	Toluene-D8	93%		79-125%
460-00-4	4-Bromofluorobenzene	105%		58-148%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8270E SW846 3546	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CT514.D	1	12/02/22 00:29	RS	11/30/22 11:30	OP43376	ECT28
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.071	0.018	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.030	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.063	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.071	0.023	mg/kg	
	3&4-Methylphenol	ND	0.071	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.024	mg/kg	
100-02-7	4-Nitrophenol	ND	0.36	0.095	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.033	mg/kg	
108-95-2	Phenol	ND	0.071	0.019	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.024	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.027	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.036	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.036	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0077	mg/kg	
120-12-7	Anthracene	ND	0.036	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.071	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.036	0.010	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.036	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.036	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.036	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.036	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.071	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.071	0.0087	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.071	0.0049	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0088	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.071	0.0085	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	ND	0.071	0.0052	mg/kg	

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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8270E SW846 3546	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam [a]	ND	0.071	0.014	mg/kg	
218-01-9	Chrysene	ND	0.036	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.071	0.0076	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.071	0.015	mg/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	0.071	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.071	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.036	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.036	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.071	0.030	mg/kg	
123-91-1	1,4-Dioxane	ND	0.036	0.024	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.036	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.071	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.071	0.0058	mg/kg	
117-84-0	Di-n-octyl phthalate [a]	ND	0.071	0.0089	mg/kg	
84-66-2	Diethyl phthalate	ND	0.071	0.0076	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.071	0.0063	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.071	0.0083	mg/kg	
206-44-0	Fluoranthene	ND	0.036	0.016	mg/kg	
86-73-7	Fluorene	ND	0.036	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.071	0.0090	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.036	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.36	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.036	0.017	mg/kg	
78-59-1	Isophorone	ND	0.071	0.0076	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.036	0.0081	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.0084	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0089	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0092	mg/kg	
91-20-3	Naphthalene	ND	0.036	0.010	mg/kg	
98-95-3	Nitrobenzene	ND	0.071	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.071	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	ND	0.036	0.012	mg/kg	
129-00-0	Pyrene	ND	0.036	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0091	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	60%		10-99%

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Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8270E SW846 3546	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	66%		10-96%
118-79-6	2,4,6-Tribromophenol	69%		10-123%
4165-60-0	Nitrobenzene-d5	59%		10-109%
321-60-8	2-Fluorobiphenyl	63%		11-109%
1718-51-0	Terphenyl-d14	76%		10-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8151A SW846 3546	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA163085.D	1	12/01/22 08:32	RK	11/30/22 16:00	OP43362	GOA5757
Run #2							

	Initial Weight	Final Volume
Run #1	16.1 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.017	0.0090	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0033	0.0019	mg/kg	
93-76-5	2,4,5-T	ND	0.0033	0.0017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	46%		10-125%
19719-28-9	2,4-DCAA	57%		10-125%

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Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8081B SW846 3546	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G9729493.D	1	12/01/22 18:38	TL	11/30/22 15:17	OP43383	G4G3961
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00069	0.00057	mg/kg	
319-84-6	alpha-BHC	ND	0.00069	0.00056	mg/kg	
319-85-7	beta-BHC	ND	0.00069	0.00063	mg/kg	
319-86-8	delta-BHC	ND	0.00069	0.00067	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00069	0.00051	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00069	0.00056	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00069	0.00031	mg/kg	
60-57-1	Dieldrin	ND	0.00069	0.00048	mg/kg	
72-54-8	4,4'-DDD	ND	0.00069	0.00064	mg/kg	
72-55-9	4,4'-DDE	ND	0.00069	0.00061	mg/kg	
50-29-3	4,4'-DDT	0.0024	0.00069	0.00062	mg/kg	B
72-20-8	Endrin	ND	0.00069	0.00054	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00069	0.00054	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00069	0.00039	mg/kg	
959-98-8	Endosulfan-I	ND	0.00069	0.00040	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00069	0.00043	mg/kg	
76-44-8	Heptachlor	ND	0.00069	0.00060	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00069	0.00049	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00055	mg/kg	
53494-70-5	Endrin ketone	ND	0.00069	0.00050	mg/kg	
8001-35-2	Toxaphene	ND	0.017	0.016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		14-145%
877-09-8	Tetrachloro-m-xylene	70%		14-145%
2051-24-3	Decachlorobiphenyl	75%		10-197%
2051-24-3	Decachlorobiphenyl	68%		10-197%

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Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE SAND-1		
Lab Sample ID:	JD56110-1	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8082A SW846 3546	**Percent Solids:**	93.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	RL3200.D	1	12/01/22 20:45	MLC	11/30/22 15:17	OP43384	GRL55
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.035	0.016	mg/kg	
11104-28-2	Aroclor 1221	ND	0.035	0.022	mg/kg	
11141-16-5	Aroclor 1232	ND	0.035	0.022	mg/kg	
53469-21-9	Aroclor 1242	ND	0.035	0.014	mg/kg	
12672-29-6	Aroclor 1248	ND	0.035	0.031	mg/kg	
11097-69-1	Aroclor 1254	ND	0.035	0.019	mg/kg	
11096-82-5	Aroclor 1260	ND	0.035	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.035	0.015	mg/kg	
37324-23-5	Aroclor 1262	ND	0.035	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	119%		10-163%
877-09-8	Tetrachloro-m-xylene	121%		10-163%
2051-24-3	Decachlorobiphenyl	102%		10-215%
2051-24-3	Decachlorobiphenyl	102%		10-215%

ND = Not detected MDL = Method Detection Limit
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE SAND-1
Lab Sample ID: JD56110-1
Matrix: SO - Soil
Method: TNRCC 1005 TX1005
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	JF124368.D	1	12/02/22 00:40	ALA	12/01/22 11:00	L:OP21838	L:GJJ2448
Run #2							

	Initial Weight	Final Volume
Run #1	4.80 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	56	28	mg/kg	
	TPH (> C12-C28)	ND	56	28	mg/kg	
	TPH (> C28-C35)	ND	56	28	mg/kg	
	TPH (C6-C35)	ND	56	28	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	105%		70-130%
98-08-8	aaa-Trifluorotoluene	106%		70-130%

(a) Analysis performed at SGS Scott, LA.

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J = Indicates an estimated value
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N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE SAND-1
Lab Sample ID: JD56110-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	1520	54	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.2	2.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	< 22	22	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	< 0.22	0.22	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.54	0.54	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	11200	540	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	2.6	1.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.4	5.4	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	< 2.7	2.7	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	2050	54	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	< 2.2	2.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	< 540	540	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	36.1	1.6	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.029	0.029	mg/kg	1	11/23/22	11/24/22	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 4.3	4.3	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.54	0.54	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	< 5.4	5.4	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	8.1	5.4	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53367
(2) Instrument QC Batch: MA53370
(3) Prep QC Batch: MP36551
(4) Prep QC Batch: MP36603

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE SAND-1
Lab Sample ID: JD56110-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.5

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.42	0.42	mg/kg	1	11/30/22 12:22	RI	SW846 3060A/7196A
Cyanide	< 0.29	0.29	mg/kg	1	11/25/22 08:56	MM	SW846 9012B/LACHAT
Solids, Percent	93.5		%	1	11/29/22 11:36	MP	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE CLAY-1		
Lab Sample ID:	JD56110-2	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C180120.D	1	11/23/22 22:36	CL	n/a	n/a	V3C7895
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.012	0.0049	mg/kg	
71-43-2	Benzene	ND	0.00059	0.00054	mg/kg	
74-97-5	Bromochloromethane	ND	0.0059	0.00067	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0024	0.00051	mg/kg	
75-25-2	Bromoform	ND	0.0059	0.0016	mg/kg	
74-83-9	Bromomethane [a]	ND	0.0059	0.00091	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.012	0.0029	mg/kg	
75-15-0	Carbon disulfide	ND	0.0024	0.00064	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0024	0.00073	mg/kg	
108-90-7	Chlorobenzene	ND	0.0024	0.00055	mg/kg	
75-00-3	Chloroethane	ND	0.0059	0.00070	mg/kg	
67-66-3	Chloroform	ND	0.0024	0.00062	mg/kg	
74-87-3	Chloromethane	ND	0.0059	0.0023	mg/kg	
110-82-7	Cyclohexane	ND	0.0024	0.00078	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0024	0.00082	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0024	0.00067	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0012	0.00050	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0012	0.00065	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0012	0.00059	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0012	0.00059	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0059	0.00086	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0012	0.00059	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0012	0.00056	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0012	0.00078	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0012	0.0010	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0012	0.00073	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0024	0.00056	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0024	0.00056	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0024	0.00054	mg/kg	
100-41-4	Ethylbenzene	0.00071	0.0012	0.00054	mg/kg	J
76-13-1	Freon 113	ND	0.0059	0.0032	mg/kg	
591-78-6	2-Hexanone	ND	0.0059	0.0025	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE CLAY-1		
Lab Sample ID:	JD56110-2	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0024	0.0017	mg/kg	
79-20-9	Methyl Acetate	ND	0.0059	0.0017	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0024	0.0010	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0012	0.00056	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0059	0.0027	mg/kg	
75-09-2	Methylene chloride	ND	0.0059	0.0031	mg/kg	
100-42-5	Styrene	ND	0.0024	0.00048	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0024	0.00071	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0024	0.00069	mg/kg	
108-88-3	Toluene	0.00066	0.0012	0.00062	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0059	0.0030	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0059	0.0030	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0024	0.00057	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0024	0.00066	mg/kg	
79-01-6	Trichloroethene	ND	0.0012	0.00091	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0059	0.00081	mg/kg	
75-01-4	Vinyl chloride	ND	0.0024	0.00057	mg/kg	
	m,p-Xylene	0.0015	0.0012	0.0011	mg/kg	
95-47-6	o-Xylene	0.00056	0.0012	0.00054	mg/kg	J
1330-20-7	Xylene (total)	0.0021	0.0012	0.00054	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-124%
17060-07-0	1,2-Dichloroethane-D4	130%		75-133%
2037-26-5	Toluene-D8	90%		79-125%
460-00-4	4-Bromofluorobenzene	105%		58-148%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE CLAY-1
Lab Sample ID: JD56110-2
Matrix: SO - Soil
Method: SW846 8270E SW846 3546
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 82.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CT515.D	1	12/02/22 00:46	RS	11/30/22 11:30	OP43376	ECT28
Run #2							

	Initial Weight	Final Volume
Run #1	32.0 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.076	0.019	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.19	0.023	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.19	0.032	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.19	0.067	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.19	0.14	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.19	0.041	mg/kg	
95-48-7	2-Methylphenol	ND	0.076	0.024	mg/kg	
	3&4-Methylphenol	ND	0.076	0.031	mg/kg	
88-75-5	2-Nitrophenol	ND	0.19	0.025	mg/kg	
100-02-7	4-Nitrophenol	ND	0.38	0.10	mg/kg	
87-86-5	Pentachlorophenol	ND	0.15	0.036	mg/kg	
108-95-2	Phenol	ND	0.076	0.020	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.19	0.025	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.19	0.028	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.19	0.023	mg/kg	
83-32-9	Acenaphthene	ND	0.038	0.013	mg/kg	
208-96-8	Acenaphthylene	ND	0.038	0.019	mg/kg	
98-86-2	Acetophenone	ND	0.19	0.0081	mg/kg	
120-12-7	Anthracene	0.0271	0.038	0.023	mg/kg	J
1912-24-9	Atrazine	ND	0.076	0.016	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.038	0.011	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.038	0.017	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.038	0.017	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.038	0.019	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.038	0.018	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.076	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.076	0.0092	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.076	0.0052	mg/kg	
100-52-7	Benzaldehyde	ND	0.19	0.0094	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.076	0.0090	mg/kg	
106-47-8	4-Chloroaniline	ND	0.19	0.014	mg/kg	
86-74-8	Carbazole	ND	0.076	0.0055	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE CLAY-1
Lab Sample ID: JD56110-2
Matrix: SO - Soil
Method: SW846 8270E SW846 3546
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 82.5

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam [a]	ND	0.076	0.015	mg/kg	
218-01-9	Chrysene	ND	0.038	0.012	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.076	0.0081	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.076	0.016	mg/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	0.076	0.014	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.076	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.038	0.012	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.038	0.019	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.076	0.032	mg/kg	
123-91-1	1,4-Dioxane	ND	0.038	0.025	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.038	0.017	mg/kg	
132-64-9	Dibenzofuran	ND	0.076	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.076	0.0062	mg/kg	
117-84-0	Di-n-octyl phthalate [a]	ND	0.076	0.0094	mg/kg	
84-66-2	Diethyl phthalate	ND	0.076	0.0081	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.076	0.0067	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.076	0.0089	mg/kg	
206-44-0	Fluoranthene	0.0306	0.038	0.017	mg/kg	J
86-73-7	Fluorene	ND	0.038	0.017	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.076	0.0096	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.038	0.015	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.38	0.015	mg/kg	
67-72-1	Hexachloroethane	ND	0.19	0.019	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.038	0.018	mg/kg	
78-59-1	Isophorone	ND	0.076	0.0081	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.038	0.0086	mg/kg	
88-74-4	2-Nitroaniline	ND	0.19	0.0089	mg/kg	
99-09-2	3-Nitroaniline	ND	0.19	0.0095	mg/kg	
100-01-6	4-Nitroaniline	ND	0.19	0.0098	mg/kg	
91-20-3	Naphthalene	ND	0.038	0.011	mg/kg	
98-95-3	Nitrobenzene	ND	0.076	0.015	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.076	0.011	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.19	0.014	mg/kg	
85-01-8	Phenanthrene	0.0758	0.038	0.013	mg/kg	
129-00-0	Pyrene	0.0202	0.038	0.012	mg/kg	J
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.19	0.0096	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	66%		10-99%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE CLAY-1		
Lab Sample ID:	JD56110-2	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8270E SW846 3546	**Percent Solids:**	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	70%		10-96%
118-79-6	2,4,6-Tribromophenol	77%		10-123%
4165-60-0	Nitrobenzene-d5	67%		10-109%
321-60-8	2-Fluorobiphenyl	68%		11-109%
1718-51-0	Terphenyl-d14	76%		10-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE CLAY-1		
Lab Sample ID:	JD56110-2	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8151A SW846 3546	**Percent Solids:**	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA163086.D	1	12/01/22 08:56	RK	11/30/22 16:00	OP43362	GOA5757
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.020	0.011	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0039	0.0022	mg/kg	
93-76-5	2,4,5-T	ND	0.0039	0.0020	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	49%		10-125%
19719-28-9	2,4-DCAA	47%		10-125%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE CLAY-1
Lab Sample ID: JD56110-2
Matrix: SO - Soil
Method: SW846 8081B SW846 3546
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 82.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G9729494.D	1	12/01/22 18:53	TL	11/30/22 15:17	OP43383	G4G3961
Run #2							

	Initial Weight	Final Volume
Run #1	16.7 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00073	0.00060	mg/kg	
319-84-6	alpha-BHC	ND	0.00073	0.00059	mg/kg	
319-85-7	beta-BHC	ND	0.00073	0.00066	mg/kg	
319-86-8	delta-BHC	ND	0.00073	0.00070	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00073	0.00053	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00073	0.00059	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00073	0.00033	mg/kg	
60-57-1	Dieldrin	ND	0.00073	0.00050	mg/kg	
72-54-8	4,4'-DDD	ND	0.00073	0.00067	mg/kg	
72-55-9	4,4'-DDE	ND	0.00073	0.00064	mg/kg	
50-29-3	4,4'-DDT	0.0029	0.00073	0.00064	mg/kg	B
72-20-8	Endrin	ND	0.00073	0.00056	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00073	0.00057	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00073	0.00041	mg/kg	
959-98-8	Endosulfan-I	ND	0.00073	0.00042	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00073	0.00045	mg/kg	
76-44-8	Heptachlor	ND	0.00073	0.00063	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00073	0.00051	mg/kg	
72-43-5	Methoxychlor	ND	0.0015	0.00058	mg/kg	
53494-70-5	Endrin ketone	ND	0.00073	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.018	0.017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	69%		14-145%
877-09-8	Tetrachloro-m-xylene	60%		14-145%
2051-24-3	Decachlorobiphenyl	73%		10-197%
2051-24-3	Decachlorobiphenyl	59%		10-197%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE CLAY-1		
Lab Sample ID:	JD56110-2	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8082A SW846 3546	**Percent Solids:**	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	RL3201.D	1	12/01/22 21:02	MLC	11/30/22 15:17	OP43384	GRL55
Run #2							

	Initial Weight	Final Volume
Run #1	16.7 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.036	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.036	0.023	mg/kg	
11141-16-5	Aroclor 1232	ND	0.036	0.023	mg/kg	
53469-21-9	Aroclor 1242	ND	0.036	0.015	mg/kg	
12672-29-6	Aroclor 1248	ND	0.036	0.032	mg/kg	
11097-69-1	Aroclor 1254	ND	0.036	0.020	mg/kg	
11096-82-5	Aroclor 1260	ND	0.036	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.036	0.015	mg/kg	
37324-23-5	Aroclor 1262	ND	0.036	0.024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		10-163%
877-09-8	Tetrachloro-m-xylene	99%		10-163%
2051-24-3	Decachlorobiphenyl	85%		10-215%
2051-24-3	Decachlorobiphenyl	86%		10-215%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE CLAY-1
Lab Sample ID: JD56110-2
Matrix: SO - Soil
Method: TNRCC 1005 TX1005
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 82.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	JF124369.D	1	12/02/22 01:06	ALA	12/01/22 11:00	L:OP21838	L:GJJ2448
Run #2							

	Initial Weight	Final Volume
Run #1	5.10 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	59	30	mg/kg	
	TPH (> C12-C28)	ND	59	30	mg/kg	
	TPH (> C28-C35)	ND	59	30	mg/kg	
	TPH (C6-C35)	ND	59	30	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	110%		70-130%
98-08-8	aaa-Trifluorotoluene	113%		70-130%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE CLAY-1
Lab Sample ID: JD56110-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 82.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11800	62	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.5	2.5	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	5.3	2.5	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	103	25	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.67	0.25	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.62	0.62	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	66400	3100	mg/kg	5	11/23/22	11/28/22	ND	SW846 6010D [3]	SW846 3050B [4]
Chromium	15.1	1.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	6.7	6.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	7.5	3.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	13700	62	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	10.5	2.5	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2040	620	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	429	1.9	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.036	0.036	mg/kg	1	11/23/22	11/24/22	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	14.6	5.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1540	1200	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.5	2.5	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.62	0.62	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	27.1	6.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	45.2	6.2	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53367
(2) Instrument QC Batch: MA53370
(3) Instrument QC Batch: MA53385
(4) Prep QC Batch: MP36551
(5) Prep QC Batch: MP36603

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE CLAY-1
Lab Sample ID: JD56110-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 82.5

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	11/30/22 12:22	RI	SW846 3060A/7196A
Cyanide	< 0.28	0.28	mg/kg	1	11/25/22 08:57	MM	SW846 9012B/LACHAT
Solids, Percent	82.5		%	1	11/29/22 11:36	MP	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE AGG-1		
Lab Sample ID:	JD56110-3	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	93.3
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3C180121.D	1	11/23/22 23:01	CL	n/a	n/a	V3C7895
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.0088	0.0036	mg/kg	
71-43-2	Benzene	ND	0.00044	0.00040	mg/kg	
74-97-5	Bromochloromethane	ND	0.0044	0.00049	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0018	0.00038	mg/kg	
75-25-2	Bromoform	ND	0.0044	0.0012	mg/kg	
74-83-9	Bromomethane [a]	ND	0.0044	0.00067	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0088	0.0021	mg/kg	
75-15-0	Carbon disulfide	ND	0.0018	0.00047	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0018	0.00054	mg/kg	
108-90-7	Chlorobenzene	ND	0.0018	0.00040	mg/kg	
75-00-3	Chloroethane	ND	0.0044	0.00052	mg/kg	
67-66-3	Chloroform	ND	0.0018	0.00046	mg/kg	
74-87-3	Chloromethane	ND	0.0044	0.0017	mg/kg	
110-82-7	Cyclohexane	ND	0.0018	0.00058	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0018	0.00061	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0018	0.00049	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.00088	0.00037	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.00088	0.00048	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.00088	0.00044	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.00088	0.00043	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0044	0.00064	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.00088	0.00043	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.00088	0.00041	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.00088	0.00058	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.00088	0.00074	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.00088	0.00054	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0018	0.00042	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0018	0.00042	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0018	0.00040	mg/kg	
100-41-4	Ethylbenzene	ND	0.00088	0.00040	mg/kg	
76-13-1	Freon 113	ND	0.0044	0.0023	mg/kg	
591-78-6	2-Hexanone	ND	0.0044	0.0019	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE AGG-1		
Lab Sample ID:	JD56110-3	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	93.3
Project:	SJRWP - PCFSE, Harris County, TX		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0018	0.0012	mg/kg	
79-20-9	Methyl Acetate	ND	0.0044	0.0012	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0018	0.00077	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.00088	0.00041	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0044	0.0020	mg/kg	
75-09-2	Methylene chloride	ND	0.0044	0.0023	mg/kg	
100-42-5	Styrene	ND	0.0018	0.00035	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0018	0.00053	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0018	0.00051	mg/kg	
108-88-3	Toluene	ND	0.00088	0.00046	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0044	0.0022	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0044	0.0022	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0018	0.00042	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0018	0.00049	mg/kg	
79-01-6	Trichloroethene	ND	0.00088	0.00067	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0044	0.00060	mg/kg	
75-01-4	Vinyl chloride	ND	0.0018	0.00042	mg/kg	
	m,p-Xylene	ND	0.00088	0.00079	mg/kg	
95-47-6	o-Xylene	ND	0.00088	0.00040	mg/kg	
1330-20-7	Xylene (total)	ND	0.00088	0.00040	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-124%
17060-07-0	1,2-Dichloroethane-D4	113%		75-133%
2037-26-5	Toluene-D8	93%		79-125%
460-00-4	4-Bromofluorobenzene	106%		58-148%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE AGG-1
Lab Sample ID: JD56110-3
Matrix: SO - Soil
Method: SW846 8270E SW846 3546
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CT516.D	1	12/02/22 01:03	RS	11/30/22 11:30	OP43376	ECT28
Run #2							

	Initial Weight	Final Volume
Run #1	31.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.069	0.017	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.17	0.021	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.17	0.029	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.17	0.061	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.17	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.17	0.037	mg/kg	
95-48-7	2-Methylphenol	ND	0.069	0.022	mg/kg	
	3&4-Methylphenol	ND	0.069	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.17	0.023	mg/kg	
100-02-7	4-Nitrophenol	ND	0.34	0.092	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.032	mg/kg	
108-95-2	Phenol	ND	0.069	0.018	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.17	0.023	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.17	0.026	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.17	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.034	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.034	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.17	0.0074	mg/kg	
120-12-7	Anthracene	ND	0.034	0.021	mg/kg	
1912-24-9	Atrazine	ND	0.069	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.034	0.0098	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.034	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.034	0.015	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.034	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.034	0.016	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.069	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.069	0.0084	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.069	0.0047	mg/kg	
100-52-7	Benzaldehyde	ND	0.17	0.0085	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.069	0.0082	mg/kg	
106-47-8	4-Chloroaniline	ND	0.17	0.012	mg/kg	
86-74-8	Carbazole	ND	0.069	0.0050	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE AGG-1
Lab Sample ID: JD56110-3
Matrix: SO - Soil
Method: SW846 8270E SW846 3546
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.3

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam [a]	ND	0.069	0.014	mg/kg	
218-01-9	Chrysene	ND	0.034	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.069	0.0074	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.069	0.015	mg/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	0.069	0.012	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.069	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.034	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.034	0.017	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.069	0.029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.034	0.023	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.034	0.015	mg/kg	
132-64-9	Dibenzofuran	ND	0.069	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.069	0.0056	mg/kg	
117-84-0	Di-n-octyl phthalate [a]	ND	0.069	0.0086	mg/kg	
84-66-2	Diethyl phthalate	ND	0.069	0.0073	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.069	0.0061	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.069	0.0081	mg/kg	
206-44-0	Fluoranthene	ND	0.034	0.015	mg/kg	
86-73-7	Fluorene	ND	0.034	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.069	0.0087	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.034	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.34	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.17	0.017	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.034	0.016	mg/kg	
78-59-1	Isophorone	ND	0.069	0.0074	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.034	0.0078	mg/kg	
88-74-4	2-Nitroaniline	ND	0.17	0.0081	mg/kg	
99-09-2	3-Nitroaniline	ND	0.17	0.0086	mg/kg	
100-01-6	4-Nitroaniline	ND	0.17	0.0089	mg/kg	
91-20-3	Naphthalene	ND	0.034	0.0097	mg/kg	
98-95-3	Nitrobenzene	ND	0.069	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.069	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.17	0.013	mg/kg	
85-01-8	Phenanthrene	ND	0.034	0.012	mg/kg	
129-00-0	Pyrene	ND	0.034	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.17	0.0088	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		10-99%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE AGG-1		
Lab Sample ID:	JD56110-3	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8270E SW846 3546	**Percent Solids:**	93.3
Project:	SJRWP - PCFSE, Harris County, TX		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	62%		10-96%
118-79-6	2,4,6-Tribromophenol	63%		10-123%
4165-60-0	Nitrobenzene-d5	60%		10-109%
321-60-8	2-Fluorobiphenyl	60%		11-109%
1718-51-0	Terphenyl-d14	70%		10-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE AGG-1		
Lab Sample ID:	JD56110-3	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8151A SW846 3546	**Percent Solids:**	93.3
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA163087.D	1	12/01/22 09:20	RK	11/30/22 16:00	OP43362	GOA5757
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.018	0.0096	mg/kg	
93-72-1	2,4,5-TP (Silvex)	ND	0.0035	0.0020	mg/kg	
93-76-5	2,4,5-T	ND	0.0035	0.0018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	92%		10-125%
19719-28-9	2,4-DCAA	86%		10-125%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE AGG-1		
Lab Sample ID:	JD56110-3	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8081B SW846 3546	**Percent Solids:**	93.3
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4G9729495.D	1	12/01/22 19:08	TL	11/30/22 15:17	OP43383	G4G3961
Run #2							

	Initial Weight	Final Volume
Run #1	16.4 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00065	0.00054	mg/kg	
319-84-6	alpha-BHC	ND	0.00065	0.00053	mg/kg	
319-85-7	beta-BHC	ND	0.00065	0.00059	mg/kg	
319-86-8	delta-BHC	ND	0.00065	0.00063	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00065	0.00048	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00065	0.00053	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00065	0.00030	mg/kg	
60-57-1	Dieldrin	ND	0.00065	0.00045	mg/kg	
72-54-8	4,4'-DDD	ND	0.00065	0.00060	mg/kg	
72-55-9	4,4'-DDE	ND	0.00065	0.00057	mg/kg	
50-29-3	4,4'-DDT	0.0026	0.00065	0.00058	mg/kg	B
72-20-8	Endrin	ND	0.00065	0.00051	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00065	0.00051	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00065	0.00037	mg/kg	
959-98-8	Endosulfan-I	ND	0.00065	0.00038	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00065	0.00041	mg/kg	
76-44-8	Heptachlor	ND	0.00065	0.00056	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00065	0.00046	mg/kg	
72-43-5	Methoxychlor	ND	0.0013	0.00052	mg/kg	
53494-70-5	Endrin ketone	ND	0.00065	0.00047	mg/kg	
8001-35-2	Toxaphene	ND	0.016	0.015	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		14-145%
877-09-8	Tetrachloro-m-xylene	81%		14-145%
2051-24-3	Decachlorobiphenyl	99%		10-197%
2051-24-3	Decachlorobiphenyl	80%		10-197%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-S-MTK-SOURCE AGG-1		
Lab Sample ID:	JD56110-3	**Date Sampled:**	11/21/22
Matrix:	SO - Soil	**Date Received:**	11/22/22
Method:	SW846 8082A SW846 3546	**Percent Solids:**	93.3
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	RL3202.D	1	12/01/22 21:18	MLC	11/30/22 15:17	OP43384	GRL55
Run #2							

	Initial Weight	Final Volume
Run #1	16.4 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.033	0.015	mg/kg	
11104-28-2	Aroclor 1221	ND	0.033	0.020	mg/kg	
11141-16-5	Aroclor 1232	ND	0.033	0.021	mg/kg	
53469-21-9	Aroclor 1242	ND	0.033	0.013	mg/kg	
12672-29-6	Aroclor 1248	ND	0.033	0.029	mg/kg	
11097-69-1	Aroclor 1254	ND	0.033	0.018	mg/kg	
11096-82-5	Aroclor 1260	ND	0.033	0.014	mg/kg	
11100-14-4	Aroclor 1268	ND	0.033	0.014	mg/kg	
37324-23-5	Aroclor 1262	ND	0.033	0.021	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	115%		10-163%
877-09-8	Tetrachloro-m-xylene	116%		10-163%
2051-24-3	Decachlorobiphenyl	96%		10-215%
2051-24-3	Decachlorobiphenyl	97%		10-215%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE AGG-1
Lab Sample ID: JD56110-3
Matrix: SO - Soil
Method: TNRCC 1005 TX1005
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	JF124371.D	1	12/02/22 01:58	ALA	12/01/22 11:00	L:OP21838	L:GJJ2448
Run #2							

	Initial Weight	Final Volume
Run #1	5.10 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	53	26	mg/kg	
	TPH (> C12-C28)	ND	53	26	mg/kg	
	TPH (> C28-C35)	ND	53	26	mg/kg	
	TPH (C6-C35)	ND	53	26	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		70-130%
98-08-8	aaa-Trifluorotoluene	112%		70-130%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE AGG-1
Lab Sample ID: JD56110-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	2060	51	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.0	2.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	< 2.0	2.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	35.1	20	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	< 0.20	0.20	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.51	0.51	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	270000	10000	mg/kg	20	11/23/22	11/28/22	ND	SW846 6010D [3]	SW846 3050B [4]
Chromium	5.0	1.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	< 5.1	5.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	< 2.6	2.6	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	1510	51	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	< 2.0	2.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	68000	10000	mg/kg	20	11/23/22	11/28/22	ND	SW846 6010D [3]	SW846 3050B [4]
Manganese	67.8	1.5	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.032	0.032	mg/kg	1	11/23/22	11/24/22	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	< 4.1	4.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1000	1000	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.0	2.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.51	0.51	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1000	1000	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.0	1.0	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	5.6	5.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	< 5.1	5.1	mg/kg	1	11/23/22	11/24/22	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53367
(2) Instrument QC Batch: MA53370
(3) Instrument QC Batch: MA53385
(4) Prep QC Batch: MP36551
(5) Prep QC Batch: MP36603

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-112122-S-MTK-SOURCE AGG-1
Lab Sample ID: JD56110-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 11/21/22
Date Received: 11/22/22
Percent Solids: 93.3

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.44	0.44	mg/kg	1	11/30/22 12:22	RI	SW846 3060A/7196A
Cyanide	0.30	0.24	mg/kg	1	11/25/22 09:05	MM	SW846 9012B/LACHAT
Solids, Percent	93.3		%	1	11/29/22 11:36	MP	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-112122-W-MTK-TRIP-BLANK-1		
Lab Sample ID:	JD56110-4	**Date Sampled:**	11/21/22
Matrix:	AQ - Trip Blank Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L350074.D	1	11/24/22 05:00	NH	n/a	n/a	VL10597
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	ND	0.010	0.0031	mg/l	
71-43-2	Benzene	ND	0.00050	0.00043	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00048	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00045	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00063	mg/l	
74-83-9	Bromomethane [b]	ND	0.0020	0.0016	mg/l	
78-93-3	2-Butanone (MEK) [a]	ND	0.010	0.0027	mg/l	
75-15-0	Carbon disulfide	ND	0.0020	0.00046	mg/l	
56-23-5	Carbon tetrachloride	ND	0.0010	0.00055	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00056	mg/l	
75-00-3	Chloroethane	ND	0.0010	0.00073	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00050	mg/l	
74-87-3	Chloromethane [c]	ND	0.0010	0.00076	mg/l	
110-82-7	Cyclohexane	ND	0.0050	0.00078	mg/l	
96-12-8	1,2-Dibromo-3-chloropropan [a]	ND	0.0020	0.00053	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00056	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0010	0.00048	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00053	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00054	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00051	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00056	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00057	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00060	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00059	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00051	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00054	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00051	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00047	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00043	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00060	mg/l	
76-13-1	Freon 113	ND	0.0050	0.00058	mg/l	
591-78-6	2-Hexanone	ND	0.0050	0.0020	mg/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-112122-W-MTK-TRIP-BLANK-1		
Lab Sample ID:	JD56110-4	**Date Sampled:**	11/21/22
Matrix:	AQ - Trip Blank Soil	**Date Received:**	11/22/22
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0010	0.00065	mg/l	
79-20-9	Methyl Acetate [a]	ND	0.0050	0.00080	mg/l	
108-87-2	Methylcyclohexane	ND	0.0050	0.00060	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00051	mg/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0050	0.0019	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
100-42-5	Styrene	ND	0.0010	0.00049	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00065	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00056	mg/l	
108-88-3	Toluene	ND	0.0010	0.00049	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0010	0.00050	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0010	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00054	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00053	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00053	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00040	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00052	mg/l	
	m,p-Xylene	ND	0.0010	0.00078	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00059	mg/l	
1330-20-7	Xylene (total)	ND	0.0010	0.00059	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	114%		80-120%
2037-26-5	Toluene-D8	105%		80-120%
460-00-4	4-Bromofluorobenzene	100%		82-114%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.
(b) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SO
SLL
TB

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking # 3907 - 4411 - 4149
Bottle Order Control # KR-111877-148
SGS Quote #
SGS Job # JD56110

Client / Reporting Information	Project Information
Company Name: GHD	Project Name: San Jacinto River Waste Pits - S. Impoundment
Street Address: 5551 Corporate Blvd, Ste 200	Street: 18311 Market St
City: Baton Rouge State: LA Zip: 70808	City: Channelview State: TX
Project Contact: Wells, Richard E-mail: Wells.Richard@GHD.com	Project #: 12599404
Phone #: 225-296-6508	Client Purchase Order #
Sampler(s) Name(s): Mark Kemper Phone #: 772-233-3096	Project Manager: Wells, Richard
	Billing Information (if different from Report to)
	Company Name
	Street Address
	City State Zip
	Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TX 1005	TX 1006	Herbicides (SW846 8151A)	PCBs (8082A)	TCL Pest (8081B)	TCL Vollsem-Vol (8260B)	Cyanide (9010/9012)	Hex Chromium (7196A)	Metals (6020A/7471A)	Particle Size/Soil Classification	VOC	LAB USE ONLY
1	12599404-112122-S-MTK-Source Sand-1		11/21/22	1130	MTK	G	N	S	9					6	2	1		X	X	X	X	X	X	X	X	X	X	X	DL
2	-Source Clay-1			1200	MTK	G	N	S	9					6	2	1		X	X	X	X	X	X	X	X	X	X	X	Lab 11
3	-Source Aggregate-1			1230	MTK	G	N	S	9					6	2	1		X	X	X	X	X	X	X	X	X	X	X	
4	12599404-112122-W-MTK-Trip Blank-1			—	—	—	N	W	2	2																	X	1403 4937 V554

11/21/22

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [x] 3 Business Days* — Initial Assessment N/A(2A)
- [ ] 2 Business Days* — Label Verification
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [x] EDD Format PDF

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions: See SSOW

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1		11/21/22/1500	1 FedEx	2 FedEx	11/22/22	2 8:00
3		Date / Time:	3	4	Date / Time:	4
5		Date / Time:	5	Custody Seal #	Intact / Not Intact / Absent	Therm ID: On Ice / See Sample Receipt Summary; Cooler Temp. °C: 2.1

EHSA-QAC-0023-05 Rev.Date:8/5/22

JD56110: Chain of Custody
Page 1 of 3

SGS Sample Receipt Summary

Job Number: JD56110 **Client:** GHD SERVICES INC. **Project:** SJRWP - PCFSE, HARRIS COUNTY, TX

Date / Time Received: 11/22/2022 8:00:00 AM **Delivery Method:** FED EX **Airbill #'s:** 3909 4191 4149

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (2.1);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Job Change Order: JD56110

Requested Date:	12/13/2022	**Received Date:**	11/22/2022
Account Name:	GHD Services Inc.	**Due Date:**	12/13/2022
Project Description:	SJRWP - PCFSE, Harris County, TX	**Deliverable:**	COMMBN
C/O Initiated By:	KELLY.RAM **PM:** KR	**TAT (Days):**	1

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Sample #: JD56110-3

Dept:

TAT: 1

12599404-112122-S-MTK-SOURCE AGG

Change:
Please revise ID to 12599404-112122-S-MTK-SOURCE AGG-1

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Above Changes Per: Wells Richard **Date/Time:** 12/13/2022

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C7895-MB	3C180108.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	4.1	ug/kg	
71-43-2	Benzene	ND	0.50	0.46	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.56	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.43	ug/kg	
75-25-2	Bromoform	ND	5.0	1.4	ug/kg	
74-83-9	Bromomethane	ND	5.0	0.76	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	2.4	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.54	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.62	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.46	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.59	ug/kg	
67-66-3	Chloroform	7.6	2.0	0.52	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.56	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.55	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.49	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.73	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.61	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.47	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.46	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/kg	
76-13-1	Freon 113	ND	5.0	2.7	ug/kg	
591-78-6	2-Hexanone	ND	5.0	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	1.4	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.88	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.47	ug/kg	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C7895-MB	3C180108.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	2.3	ug/kg	
75-09-2	Methylene chloride	ND	5.0	2.6	ug/kg	
100-42-5	Styrene	ND	2.0	0.40	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.60	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.58	ug/kg	
108-88-3	Toluene	ND	1.0	0.53	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.55	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.48	ug/kg	
	m,p-Xylene	ND	1.0	0.90	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.46	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.46	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	80-124%
17060-07-0	1,2-Dichloroethane-D4	113%	75-133%
2037-26-5	Toluene-D8	93%	79-125%
460-00-4	4-Bromofluorobenzene	105%	58-148%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10597-MB	L350066.D	1	11/24/22	NH	n/a	n/a	VL10597

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.1	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.45	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	2.7	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.46	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.53	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.56	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	0.58	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10597-MB	L350066.D	1	11/24/22	NH	n/a	n/a	VL10597

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-4

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.49	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.56	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.40	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.52	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	119%	80-120%
2037-26-5	Toluene-D8	106%	80-120%
460-00-4	4-Bromofluorobenzene	101%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C7895-BS	3C180106.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	218	109	52-156
71-43-2	Benzene	50	49.8	100	82-119
74-97-5	Bromochloromethane	50	46.3	93	82-123
75-27-4	Bromodichloromethane	50	46.8	94	83-121
75-25-2	Bromoform	50	45.8	92	74-138
74-83-9	Bromomethane	50	34.0	68	56-150
78-93-3	2-Butanone (MEK)	200	182	91	72-138
75-15-0	Carbon disulfide	50	47.3	95	67-131
56-23-5	Carbon tetrachloride	50	47.3	95	72-130
108-90-7	Chlorobenzene	50	44.5	89	83-114
75-00-3	Chloroethane	50	44.1	88	67-141
67-66-3	Chloroform	50	46.0	92	76-115
74-87-3	Chloromethane	50	57.7	115	57-141
110-82-7	Cyclohexane	50	49.4	99	69-130
96-12-8	1,2-Dibromo-3-chloropropane	50	44.0	88	72-131
124-48-1	Dibromochloromethane	50	44.7	89	80-128
106-93-4	1,2-Dibromoethane	50	42.5	85	58-145
95-50-1	1,2-Dichlorobenzene	50	46.7	93	83-117
541-73-1	1,3-Dichlorobenzene	50	47.2	94	82-114
106-46-7	1,4-Dichlorobenzene	50	44.3	89	79-114
75-71-8	Dichlorodifluoromethane	50	41.6	83	49-146
75-34-3	1,1-Dichloroethane	50	54.0	108	76-126
107-06-2	1,2-Dichloroethane	50	50.1	100	76-118
75-35-4	1,1-Dichloroethene	50	46.1	92	72-125
156-59-2	cis-1,2-Dichloroethene	50	45.9	92	80-118
156-60-5	trans-1,2-Dichloroethene	50	45.5	91	76-122
78-87-5	1,2-Dichloropropane	50	55.1	110	82-123
10061-01-5	cis-1,3-Dichloropropene	50	49.6	99	83-123
10061-02-6	trans-1,3-Dichloropropene	50	46.6	93	83-123
100-41-4	Ethylbenzene	50	47.1	94	83-115
76-13-1	Freon 113	50	44.4	89	65-132
591-78-6	2-Hexanone	200	203	102	73-138
98-82-8	Isopropylbenzene	50	47.2	94	81-122
79-20-9	Methyl Acetate	50	53.9	108	63-142
108-87-2	Methylcyclohexane	50	47.0	94	73-126
1634-04-4	Methyl Tert Butyl Ether	50	43.3	87	75-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3C7895-BS	3C180106.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	187	94	71-138
75-09-2	Methylene chloride	50	44.9	90	73-122
100-42-5	Styrene	50	46.3	93	84-122
79-34-5	1,1,2,2-Tetrachloroethane	50	45.5	91	75-127
127-18-4	Tetrachloroethene	50	45.3	91	73-125
108-88-3	Toluene	50	47.2	94	82-118
87-61-6	1,2,3-Trichlorobenzene	50	46.9	94	68-132
120-82-1	1,2,4-Trichlorobenzene	50	50.5	101	72-133
71-55-6	1,1,1-Trichloroethane	50	46.1	92	77-124
79-00-5	1,1,2-Trichloroethane	50	42.0	84	83-122
79-01-6	Trichloroethene	50	46.5	93	80-122
75-69-4	Trichlorofluoromethane	50	40.1	80	69-132
75-01-4	Vinyl chloride	50	51.3	103	60-144
	m,p-Xylene	100	92.3	92	82-119
95-47-6	o-Xylene	50	46.9	94	84-120
1330-20-7	Xylene (total)	150	139	93	83-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	80-124%
17060-07-0	1,2-Dichloroethane-D4	112%	75-133%
2037-26-5	Toluene-D8	97%	79-125%
460-00-4	4-Bromofluorobenzene	106%	58-148%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10597-BS	L350064.D	1	11/24/22	NH	n/a	n/a	VL10597

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	200	192	96	27-175
71-43-2	Benzene	50	43.5	87	80-115
74-97-5	Bromochloromethane	50	46.9	94	83-122
75-27-4	Bromodichloromethane	50	49.4	99	82-119
75-25-2	Bromoform	50	44.4	89	77-135
74-83-9	Bromomethane	50	85.5	171* [a]	40-162
78-93-3	2-Butanone (MEK)	200	157	79	61-150
75-15-0	Carbon disulfide	50	40.4	81	64-130
56-23-5	Carbon tetrachloride	50	47.5	95	75-127
108-90-7	Chlorobenzene	50	45.6	91	80-115
75-00-3	Chloroethane	50	60.6	121	56-144
67-66-3	Chloroform	50	47.2	94	75-116
74-87-3	Chloromethane	50	66.1	132	41-153
110-82-7	Cyclohexane	50	48.3	97	66-129
96-12-8	1,2-Dibromo-3-chloropropane	50	42.1	84	69-134
124-48-1	Dibromochloromethane	50	47.1	94	81-123
106-93-4	1,2-Dibromoethane	50	45.2	90	67-138
95-50-1	1,2-Dichlorobenzene	50	46.6	93	81-117
541-73-1	1,3-Dichlorobenzene	50	47.0	94	81-115
106-46-7	1,4-Dichlorobenzene	50	45.0	90	80-114
75-71-8	Dichlorodifluoromethane	50	46.5	93	43-152
75-34-3	1,1-Dichloroethane	50	52.8	106	75-125
107-06-2	1,2-Dichloroethane	50	54.2	108	73-117
75-35-4	1,1-Dichloroethene	50	43.1	86	70-124
156-59-2	cis-1,2-Dichloroethene	50	45.4	91	80-120
156-60-5	trans-1,2-Dichloroethene	50	44.6	89	77-121
78-87-5	1,2-Dichloropropane	50	53.3	107	79-121
10061-01-5	cis-1,3-Dichloropropene	50	50.5	101	83-123
10061-02-6	trans-1,3-Dichloropropene	50	49.2	98	83-122
100-41-4	Ethylbenzene	50	41.8	84	78-116
76-13-1	Freon 113	50	42.2	84	68-134
591-78-6	2-Hexanone	200	185	93	66-136
98-82-8	Isopropylbenzene	50	42.8	86	78-121
79-20-9	Methyl Acetate	50	41.5	83	60-143
108-87-2	Methylcyclohexane	50	42.6	85	71-123
1634-04-4	Methyl Tert Butyl Ether	50	52.1	104	76-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL10597-BS	L350064.D	1	11/24/22	NH	n/a	n/a	VL10597

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	207	104	73-134
75-09-2	Methylene chloride	50	46.9	94	73-123
100-42-5	Styrene	50	43.4	87	81-125
79-34-5	1,1,2,2-Tetrachloroethane	50	46.2	92	73-126
127-18-4	Tetrachloroethene	50	43.1	86	73-119
108-88-3	Toluene	50	42.4	85	79-116
87-61-6	1,2,3-Trichlorobenzene	50	51.2	102	63-137
120-82-1	1,2,4-Trichlorobenzene	50	53.4	107	68-135
71-55-6	1,1,1-Trichloroethane	50	48.2	96	76-124
79-00-5	1,1,2-Trichloroethane	50	46.1	92	83-117
79-01-6	Trichloroethene	50	47.1	94	80-118
75-69-4	Trichlorofluoromethane	50	56.7	113	67-134
75-01-4	Vinyl chloride	50	58.6	117	52-146
	m,p-Xylene	100	84.4	84	79-119
95-47-6	o-Xylene	50	43.2	86	81-119
1330-20-7	Xylene (total)	150	128	85	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-120%
17060-07-0	1,2-Dichloroethane-D4	111%	80-120%
2037-26-5	Toluene-D8	95%	80-120%
460-00-4	4-Bromofluorobenzene	105%	82-114%

(a) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56061-1MS	3C180112.D	1	11/23/22	CL	n/a	n/a	V3C7895
JD56061-1	3C180109.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56061-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	ND		204	199	98	10-170
71-43-2	Benzene	ND		51	40.8	80	61-132
74-97-5	Bromochloromethane	ND		51	45.0	88	68-126
75-27-4	Bromodichloromethane	ND		51	44.4	87	65-129
75-25-2	Bromoform	ND		51	43.7	86	52-136
74-83-9	Bromomethane	ND		51	30.3	59	23-158
78-93-3	2-Butanone (MEK)	ND		204	157	77	45-142
75-15-0	Carbon disulfide	ND		51	27.3	54	50-140
56-23-5	Carbon tetrachloride	ND		51	27.1	53* [a]	54-139
108-90-7	Chlorobenzene	ND		51	40.1	79	57-127
75-00-3	Chloroethane	ND		51	32.7	64	30-157
67-66-3	Chloroform	ND		51	41.5	81	59-127
74-87-3	Chloromethane	ND		51	46.6	91	49-145
110-82-7	Cyclohexane	ND		51	15.4	30* [a]	39-147
96-12-8	1,2-Dibromo-3-chloropropane	ND		51	38.7	76	35-140
124-48-1	Dibromochloromethane	ND		51	42.4	83	63-129
106-93-4	1,2-Dibromoethane	ND		51	40.4	79	45-141
95-50-1	1,2-Dichlorobenzene	ND		51	43.5	85	38-136
541-73-1	1,3-Dichlorobenzene	ND		51	41.7	82	37-135
106-46-7	1,4-Dichlorobenzene	ND		51	40.8	80	36-134
75-71-8	Dichlorodifluoromethane	ND		51	11.6	23* [a]	33-152
75-34-3	1,1-Dichloroethane	ND		51	45.2	89	68-131
107-06-2	1,2-Dichloroethane	ND		51	48.4	95	64-119
75-35-4	1,1-Dichloroethene	ND		51	24.7	48* [a]	60-133
156-59-2	cis-1,2-Dichloroethene	ND		51	39.4	77	58-133
156-60-5	trans-1,2-Dichloroethene	ND		51	32.9	65	62-130
78-87-5	1,2-Dichloropropane	ND		51	49.9	98	70-127
10061-01-5	cis-1,3-Dichloropropene	ND		51	43.0	84	64-126
10061-02-6	trans-1,3-Dichloropropene	ND		51	39.1	77	61-127
100-41-4	Ethylbenzene	ND		51	38.1	75	51-133
76-13-1	Freon 113	ND		51	10.9	21* [a]	46-138
591-78-6	2-Hexanone	ND		204	173	85	45-144
98-82-8	Isopropylbenzene	ND		51	36.0	71	44-142
79-20-9	Methyl Acetate	ND		51	47.5	93	14-192
108-87-2	Methylcyclohexane	ND		51	11.6	23* [a]	27-149
1634-04-4	Methyl Tert Butyl Ether	ND		51	40.7	80	62-125

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56061-1MS	3C180112.D	1	11/23/22	CL	n/a	n/a	V3C7895
JD56061-1	3C180109.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56061-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		204	163	80	50-138
75-09-2	Methylene chloride	ND		51	41.9	82	63-127
100-42-5	Styrene	ND		51	42.6	84	48-143
79-34-5	1,1,2,2-Tetrachloroethane	ND		51	39.5	78	44-135
127-18-4	Tetrachloroethene	ND		51	29.8	58	38-146
108-88-3	Toluene	ND		51	38.5	76	56-135
87-61-6	1,2,3-Trichlorobenzene	ND		51	43.0	84	10-153
120-82-1	1,2,4-Trichlorobenzene	ND		51	44.1	87	10-158
71-55-6	1,1,1-Trichloroethane	ND		51	30.0	59* [a]	61-134
79-00-5	1,1,2-Trichloroethane	ND		51	40.1	79	62-133
79-01-6	Trichloroethene	ND		51	36.3	71	52-144
75-69-4	Trichlorofluoromethane	ND		51	15.2	30* [a]	50-141
75-01-4	Vinyl chloride	ND		51	30.1	59	48-151
	m,p-Xylene	1.3		102	75.6	73	51-135
95-47-6	o-Xylene	ND		51	40.8	80	52-137
1330-20-7	Xylene (total)	1.3		153	116	75	50-138

CAS No.	Surrogate Recoveries	MS	JD56061-1	Limits
1868-53-7	Dibromofluoromethane	98%	100%	80-124%
17060-07-0	1,2-Dichloroethane-D4	104%	113%	75-133%
2037-26-5	Toluene-D8	97%	94%	79-125%
460-00-4	4-Bromofluorobenzene	106%	105%	58-148%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56004-3MS	L350069.D	20	11/24/22	NH	n/a	n/a	VL10597
JD56004-3MSD	L350070.D	20	11/24/22	NH	n/a	n/a	VL10597
JD56004-3 [a]	L350067.D	20	11/24/22	NH	n/a	n/a	VL10597

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-4

CAS No.	Compound	JD56004-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		4000	2520	63	4000	2590	65	3	22-134/19
71-43-2	Benzene	3670		1000	3930	26* [b]	1000	3860	19* [b]	2	49-137/12
74-97-5	Bromochloromethane	ND		1000	954	95	1000	980	98	3	78-122/12
75-27-4	Bromodichloromethane	ND		1000	996	100	1000	997	100	0	76-121/12
75-25-2	Bromoform	ND		1000	878	88	1000	936	94	6	70-133/13
74-83-9	Bromomethane	ND		1000	1380	138	1000	1390	139	1	27-164/38
78-93-3	2-Butanone (MEK)	ND		4000	2690	67	4000	2840	71	5	52-137/17
75-15-0	Carbon disulfide	ND		1000	781	78	1000	787	79	1	54-136/16
56-23-5	Carbon tetrachloride	ND		1000	955	96	1000	976	98	2	70-132/13
108-90-7	Chlorobenzene	ND		1000	899	90	1000	926	93	3	68-123/12
75-00-3	Chloroethane	ND		1000	1090	109	1000	1090	109	0	48-152/17
67-66-3	Chloroform	ND		1000	951	95	1000	968	97	2	68-120/13
74-87-3	Chloromethane	ND		1000	1240	124	1000	1210	121	2	35-156/18
110-82-7	Cyclohexane	180		1000	1020	84	1000	1020	84	0	53-146/14
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	893	89	1000	956	96	7	63-134/16
124-48-1	Dibromochloromethane	ND		1000	909	91	1000	973	97	7	75-122/12
106-93-4	1,2-Dibromoethane	ND		1000	897	90	1000	948	95	6	63-134/12
95-50-1	1,2-Dichlorobenzene	ND		1000	952	95	1000	964	96	1	74-119/12
541-73-1	1,3-Dichlorobenzene	ND		1000	963	96	1000	1000	100	4	75-117/12
106-46-7	1,4-Dichlorobenzene	ND		1000	887	89	1000	929	93	5	72-117/12
75-71-8	Dichlorodifluoromethane	ND		1000	926	93	1000	894	89	4	34-163/16
75-34-3	1,1-Dichloroethane	ND		1000	1030	103	1000	1050	105	2	68-129/13
107-06-2	1,2-Dichloroethane	ND		1000	1070	107	1000	1090	109	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		1000	855	86	1000	841	84	2	59-133/15
156-59-2	cis-1,2-Dichloroethene	ND		1000	892	89	1000	894	89	0	52-140/12
156-60-5	trans-1,2-Dichloroethene	ND		1000	890	89	1000	889	89	0	70-125/13
78-87-5	1,2-Dichloropropane	ND		1000	1070	107	1000	1090	109	2	73-124/12
10061-01-5	cis-1,3-Dichloropropene	ND		1000	1030	103	1000	1050	105	2	75-125/13
10061-02-6	trans-1,3-Dichloropropene	ND		1000	967	97	1000	1000	100	3	75-122/12
100-41-4	Ethylbenzene	236		1000	1010	77	1000	1030	79	2	37-144/12
76-13-1	Freon 113	ND		1000	836	84	1000	794	79	5	61-142/14
591-78-6	2-Hexanone	ND		4000	3560	89	4000	3850	96	8	56-132/16
98-82-8	Isopropylbenzene	ND		1000	866	87	1000	909	91	5	71-126/13
79-20-9	Methyl Acetate	ND		1000	750	75	1000	792	79	5	51-139/18
108-87-2	Methylcyclohexane	151		1000	978	83	1000	967	82	1	59-137/16
1634-04-4	Methyl Tert Butyl Ether	10.0	J	1000	987	98	1000	1010	100	2	66-124/12

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56004-3MS	L350069.D	20	11/24/22	NH	n/a	n/a	VL10597
JD56004-3MSD	L350070.D	20	11/24/22	NH	n/a	n/a	VL10597
JD56004-3 [a]	L350067.D	20	11/24/22	NH	n/a	n/a	VL10597

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-4

CAS No.	Compound	JD56004-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		4000	4130	103	4000	4350	109	5	65-135/14
75-09-2	Methylene chloride	ND		1000	930	93	1000	912	91	2	66-125/14
100-42-5	Styrene	ND		1000	862	86	1000	885	89	3	71-133/12
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	954	95	1000	1000	100	5	68-127/14
127-18-4	Tetrachloroethene	ND		1000	878	88	1000	887	89	1	58-132/13
108-88-3	Toluene	94.1		1000	937	84	1000	943	85	1	46-139/12
87-61-6	1,2,3-Trichlorobenzene	ND		1000	1050	105	1000	1130	113	7	57-136/17
120-82-1	1,2,4-Trichlorobenzene	ND		1000	1080	108	1000	1130	113	5	61-137/16
71-55-6	1,1,1-Trichloroethane	ND		1000	955	96	1000	973	97	2	67-132/13
79-00-5	1,1,2-Trichloroethane	ND		1000	910	91	1000	950	95	4	75-120/12
79-01-6	Trichloroethene	ND		1000	943	94	1000	935	94	1	56-136/12
75-69-4	Trichlorofluoromethane	ND		1000	1070	107	1000	1040	104	3	61-145/16
75-01-4	Vinyl chloride	ND		1000	1090	109	1000	1040	104	5	41-156/16
	m,p-Xylene	1280		2000	2670	70	2000	2740	73	3	32-151/12
95-47-6	o-Xylene	55.8		1000	921	87	1000	955	90	4	50-139/12
1330-20-7	Xylene (total)	1330		3000	3600	76	3000	3690	79	2	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD56004-3	Limits
1868-53-7	Dibromofluoromethane	104%	106%		80-120%
17060-07-0	1,2-Dichloroethane-D4	114%	110%		80-120%
2037-26-5	Toluene-D8	94%	95%		80-120%
460-00-4	4-Bromofluorobenzene	108%	105%		82-114%

(a) Sample used for QC purposes only.
(b) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56061-2DUP	3C180114.D	1	11/23/22	CL	n/a	n/a	V3C7895
JD56061-2	3C180110.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56061-2 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	4.5	J	ND		200* [a]	109
71-43-2	Benzene	ND		ND		nc	44
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	22
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	10
78-93-3	2-Butanone (MEK)	ND		ND		nc	15
75-15-0	Carbon disulfide	ND		ND		nc	43
56-23-5	Carbon tetrachloride	ND		ND		nc	38
108-90-7	Chlorobenzene	ND		ND		nc	11
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	ND		ND		nc	14
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	44
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	10
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	10
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	10
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethene	ND		ND		nc	10
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	36
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	14
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	35
76-13-1	Freon 113	ND		ND		nc	10
591-78-6	2-Hexanone	ND		ND		nc	10
98-82-8	Isopropylbenzene	ND		ND		nc	28
79-20-9	Methyl Acetate	ND		ND		nc	37
108-87-2	Methylcyclohexane	ND		ND		nc	43
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	21

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD56061-2DUP	3C180114.D	1	11/23/22	CL	n/a	n/a	V3C7895
JD56061-2	3C180110.D	1	11/23/22	CL	n/a	n/a	V3C7895

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56061-2 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	10
75-09-2	Methylene chloride	ND		ND		nc	10
100-42-5	Styrene	ND		ND		nc	10
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethene	ND		ND		nc	43
108-88-3	Toluene	ND		ND		nc	37
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	10
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	21
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
79-01-6	Trichloroethene	ND		ND		nc	44
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	22
	m,p-Xylene	ND		ND		nc	44
95-47-6	o-Xylene	ND		ND		nc	45
1330-20-7	Xylene (total)	ND		ND		nc	60

CAS No.	Surrogate Recoveries	DUP	JD56061-2	Limits
1868-53-7	Dibromofluoromethane	98%	98%	80-124%
17060-07-0	1,2-Dichloroethane-D4	114%	112%	75-133%
2037-26-5	Toluene-D8	93%	93%	79-125%
460-00-4	4-Bromofluorobenzene	106%	106%	58-148%

(a) High RPD due to low concentration of hit.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: V3C7803-BFB
Lab File ID: 3C177933.D
Instrument ID: GCMS3C
Injection Date: 08/23/22
Injection Time: 21:03

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	47570	18.9		Pass
75	30.0 - 60.0% of mass 95	123381	49.1		Pass
95	Base peak, 100% relative abundance	251434	100.0		Pass
96	5.0 - 9.0% of mass 95	17159	6.82		Pass
173	Less than 2.0% of mass 174	456	0.18	(0.20) [a]	Pass
174	50.0 - 120.0% of mass 95	225365	89.6		Pass
175	5.0 - 9.0% of mass 174	15871	6.31	(7.04) [a]	Pass
176	95.0 - 101.0% of mass 174	217493	86.5	(96.5) [a]	Pass
177	5.0 - 9.0% of mass 176	13711	5.45	(6.30) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3C7803-IC7803	3C177934.D	08/23/22	21:38	00:35	Initial cal 0.2
V3C7803-IC7803	3C177935.D	08/23/22	22:03	01:00	Initial cal 0.5
V3C7803-IC7803	3C177936.D	08/23/22	22:29	01:26	Initial cal 1
V3C7803-IC7803	3C177937.D	08/23/22	22:55	01:52	Initial cal 2
V3C7803-IC7803	3C177938.D	08/23/22	23:20	02:17	Initial cal 4
V3C7803-IC7803	3C177939.D	08/23/22	23:46	02:43	Initial cal 8
V3C7803-IC7803	3C177940.D	08/24/22	00:12	03:09	Initial cal 20
V3C7803-ICC7803	3C177941.D	08/24/22	00:37	03:34	Initial cal 50
V3C7803-IC7803	3C177942.D	08/24/22	01:03	04:00	Initial cal 100
V3C7803-IC7803	3C177943.D	08/24/22	01:29	04:26	Initial cal 200
V3C7803-ICV7803	3C177946.D	08/24/22	02:46	05:43	Initial cal verification 50
V3C7803-ICV7803	3C177947.D	08/24/22	03:11	06:08	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	V3C7895-BFB	**Injection Date:**	11/23/22
Lab File ID:	3C180104.D	**Injection Time:**	14:43
Instrument ID:	GCMS3C		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	45412	20.3		Pass
75	30.0 - 60.0% of mass 95	103477	46.4		Pass
95	Base peak, 100% relative abundance	223211	100.0		Pass
96	5.0 - 9.0% of mass 95	14326	6.42		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	185629	83.2		Pass
175	5.0 - 9.0% of mass 174	13789	6.18	(7.43) [a]	Pass
176	95.0 - 101.0% of mass 174	179475	80.4	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	12057	5.40	(6.72) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3C7895-CC7803	3C180104.D	11/23/22	14:43	00:00	Continuing cal 50
V3C7895-BS	3C180106.D	11/23/22	15:56	01:13	Blank Spike
V3C7895-MB	3C180108.D	11/23/22	16:47	02:04	Method Blank
JD56061-1	3C180109.D	11/23/22	17:57	03:14	(used for QC only; not part of job JD56110)
JD56061-2	3C180110.D	11/23/22	18:23	03:40	(used for QC only; not part of job JD56110)
ZZZZZZ	3C180111.D	11/23/22	18:48	04:05	(unrelated sample)
JD56061-1MS	3C180112.D	11/23/22	19:13	04:30	Matrix Spike
JD56061-2DUP	3C180114.D	11/23/22	20:04	05:21	Duplicate
ZZZZZZ	3C180116.D	11/23/22	20:55	06:12	(unrelated sample)
ZZZZZZ	3C180117.D	11/23/22	21:20	06:37	(unrelated sample)
JD56110-1	3C180119.D	11/23/22	22:11	07:28	12599404-112122-S-MTK-SOURCE SAND-1
JD56110-2	3C180120.D	11/23/22	22:36	07:53	12599404-112122-S-MTK-SOURCE CLAY-1
JD56110-3	3C180121.D	11/23/22	23:01	08:18	12599404-112122-S-MTK-SOURCE AGG-1

Instrument Performance Check (BFB)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: VL10548-BFB
Lab File ID: L348707.D
Instrument ID: GCMSL
Injection Date: 10/27/22
Injection Time: 01:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	15976	17.9		Pass
75	30.0 - 60.0% of mass 95	43467	48.6		Pass
95	Base peak, 100% relative abundance	89389	100.0		Pass
96	5.0 - 9.0% of mass 95	6041	6.76		Pass
173	Less than 2.0% of mass 174	262	0.29	(0.36) [a]	Pass
174	50.0 - 120.0% of mass 95	72101	80.7		Pass
175	5.0 - 9.0% of mass 174	5774	6.46	(8.01) [a]	Pass
176	95.0 - 101.0% of mass 174	69016	77.2	(95.7) [a]	Pass
177	5.0 - 9.0% of mass 176	4622	5.17	(6.70) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10548-IC10548	L348708.D	10/27/22	01:55	00:32	Initial cal 0.2
VL10548-IC10548	L348709.D	10/27/22	02:18	00:55	Initial cal 0.5
VL10548-IC10548	L348710.D	10/27/22	02:41	01:18	Initial cal 1
VL10548-IC10548	L348711.D	10/27/22	03:04	01:41	Initial cal 2
VL10548-IC10548	L348712.D	10/27/22	03:27	02:04	Initial cal 4
VL10548-IC10548	L348713.D	10/27/22	03:50	02:27	Initial cal 8
VL10548-IC10548	L348714.D	10/27/22	04:14	02:51	Initial cal 20
VL10548-ICC10548	L348715.D	10/27/22	04:37	03:14	Initial cal 50
VL10548-IC10548	L348716.D	10/27/22	05:00	03:37	Initial cal 100
VL10548-IC10548	L348717.D	10/27/22	05:23	04:00	Initial cal 200
VL10548-ICV10548	L348720.D	10/27/22	06:33	05:10	Initial cal verification 50
VL10548-ICV10548	L348721.D	10/27/22	06:56	05:33	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: VL10597-BFB
Lab File ID: L350062.D
Instrument ID: GCMSL
Injection Date: 11/24/22
Injection Time: 00:24

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	14775	20.7		Pass
75	30.0 - 60.0% of mass 95	34997	49.1		Pass
95	Base peak, 100% relative abundance	71296	100.0		Pass
96	5.0 - 9.0% of mass 95	4515	6.33		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	53997	75.7		Pass
175	5.0 - 9.0% of mass 174	4677	6.56	(8.66) [a]	Pass
176	95.0 - 101.0% of mass 174	52539	73.7	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	3506	4.92	(6.67) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VL10597-CC10548	L350062.D	11/24/22	00:24	00:00	Continuing cal 50
VL10597-BS	L350064.D	11/24/22	01:10	00:46	Blank Spike
VL10597-MB	L350066.D	11/24/22	01:56	01:32	Method Blank
JD56004-3	L350067.D	11/24/22	02:19	01:55	(used for QC only; not part of job JD56110)
JD56004-3MS	L350069.D	11/24/22	03:05	02:41	Matrix Spike
JD56004-3MSD	L350070.D	11/24/22	03:28	03:04	Matrix Spike Duplicate
ZZZZZZ	L350072.D	11/24/22	04:14	03:50	(unrelated sample)
ZZZZZZ	L350073.D	11/24/22	04:37	04:13	(unrelated sample)
JD56110-4	L350074.D	11/24/22	05:00	04:36	12599404-112122-W-MTK-TRIP-BLANK-1
ZZZZZZ	L350075.D	11/24/22	05:23	04:59	(unrelated sample)
ZZZZZZ	L350076.D	11/24/22	05:46	05:22	(unrelated sample)
ZZZZZZ	L350077.D	11/24/22	06:09	05:45	(unrelated sample)
ZZZZZZ	L350078.D	11/24/22	06:32	06:08	(unrelated sample)
ZZZZZZ	L350079.D	11/24/22	06:55	06:31	(unrelated sample)
ZZZZZZ	L350081.D	11/24/22	07:41	07:17	(unrelated sample)
ZZZZZZ	L350083.D	11/24/22	08:27	08:03	(unrelated sample)
ZZZZZZ	L350084.D	11/24/22	08:49	08:25	(unrelated sample)
ZZZZZZ	L350085.D	11/24/22	09:12	08:48	(unrelated sample)
ZZZZZZ	L350086.D	11/24/22	09:35	09:11	(unrelated sample)
ZZZZZZ	L350087.D	11/24/22	09:58	09:34	(unrelated sample)
ZZZZZZ	L350088.D	11/24/22	10:21	09:57	(unrelated sample)
ZZZZZZ	L350089.D	11/24/22	10:44	10:20	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD56110-4	L350074.D	102	114	105	100
JD56004-3MS	L350069.D	104	114	94	108
JD56004-3MSD	L350070.D	106	110	95	105
VL10597-BS	L350064.D	102	111	95	105
VL10597-MB	L350066.D	102	119	106	101

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

Surrogate Recovery Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8260D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD56110-1	3C180119.D	100	112	93	105
JD56110-2	3C180120.D	105	130	90	105
JD56110-3	3C180121.D	101	113	93	106
JD56061-1MS	3C180112.D	98	104	97	106
JD56061-2DUP	3C180114.D	98	114	93	106
V3C7895-BS	3C180106.D	99	112	97	106
V3C7895-MB	3C180108.D	96	113	93	105

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-124%
S2 = 1,2-Dichloroethane-D4	75-133%
S3 = Toluene-D8	79-125%
S4 = 4-Bromofluorobenzene	58-148%

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MB1	Z161709.D	1	12/01/22	JY	11/30/22	OP43376	EZ8011

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	4.6	ug/kg	
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MB1	Z161709.D	1	12/01/22	JY	11/30/22	OP43376	EZ8011

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MB1	Z161709.D	1	12/01/22	JY	11/30/22	OP43376	EZ8011

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	59%	10-99%
4165-62-2	Phenol-d5	60%	10-96%
118-79-6	2,4,6-Tribromophenol	82%	10-123%
4165-60-0	Nitrobenzene-d5	59%	10-109%
321-60-8	2-Fluorobiphenyl	61%	11-109%
1718-51-0	Terphenyl-d14	86%	10-120%

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MB1	CT547.D	1	12/02/22	KLS	11/30/22	OP43376	ECT29

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	6.1	67	4.6	ug/kg	J
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MB1	CT547.D	1	12/02/22	KLS	11/30/22	OP43376	ECT29

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	6.4	67	5.4	ug/kg	J
117-84-0	Di-n-octyl phthalate	48.7	67	8.3	ug/kg	J
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	47.9	67	7.8	ug/kg	J
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MB1	CT547.D	1	12/02/22	KLS	11/30/22	OP43376	ECT29

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	66%	10-99%
4165-62-2	Phenol-d5	71%	10-96%
118-79-6	2,4,6-Tribromophenol	98%	10-123%
4165-60-0	Nitrobenzene-d5	81%	10-109%
321-60-8	2-Fluorobiphenyl	67%	11-109%
1718-51-0	Terphenyl-d14	91%	10-120%

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-BS1	CT512.D	1	12/01/22	RS	11/30/22	OP43376	ECT28

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	895	54	10-135
59-50-7	4-Chloro-3-methyl phenol	1670	999	60	10-141
120-83-2	2,4-Dichlorophenol	1670	1010	61	10-139
105-67-9	2,4-Dimethylphenol	1670	997	60	10-141
51-28-5	2,4-Dinitrophenol	3330	1710	51	10-138
534-52-1	4,6-Dinitro-o-cresol	1670	1020	61	10-156
95-48-7	2-Methylphenol	1670	926	56	10-139
	3&4-Methylphenol	3330	1740	52	10-174
88-75-5	2-Nitrophenol	1670	1030	62	10-142
100-02-7	4-Nitrophenol	1670	943	57	10-144
87-86-5	Pentachlorophenol	3330	1810	54	10-165
108-95-2	Phenol	1670	975	59	23-115
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1030	62	10-146
95-95-4	2,4,5-Trichlorophenol	1670	995	60	13-136
88-06-2	2,4,6-Trichlorophenol	1670	991	59	10-142
83-32-9	Acenaphthene	1670	1030	62	10-141
208-96-8	Acenaphthylene	1670	1210	73	10-133
98-86-2	Acetophenone	1670	940	56	23-115
120-12-7	Anthracene	1670	1020	61	10-144
1912-24-9	Atrazine	1670	1080	65	17-149
56-55-3	Benzo(a)anthracene	1670	1030	62	11-139
50-32-8	Benzo(a)pyrene	1670	920	55	13-141
205-99-2	Benzo(b)fluoranthene	1670	994	60	14-140
191-24-2	Benzo(g,h,i)perylene	1670	952	57	13-138
207-08-9	Benzo(k)fluoranthene	1670	942	57	12-140
101-55-3	4-Bromophenyl phenyl ether	1670	1060	64	10-146
85-68-7	Butyl benzyl phthalate	1670	1170	70	10-150
92-52-4	1,1'-Biphenyl	1670	974	58	10-141
100-52-7	Benzaldehyde	1670	970	58	10-146
91-58-7	2-Chloronaphthalene	1670	974	58	10-142
106-47-8	4-Chloroaniline	1670	737	44	10-108
86-74-8	Carbazole	1670	995	60	10-145
105-60-2	Caprolactam	1670	1590	95	10-187
218-01-9	Chrysene	1670	934	56	11-139
111-91-1	bis(2-Chloroethoxy)methane	1670	1020	61	10-144
111-44-4	bis(2-Chloroethyl)ether	1670	1040	62	10-145

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-BS1	CT512.D	1	12/01/22	RS	11/30/22	OP43376	ECT28

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	945	57	10-145
7005-72-3	4-Chlorophenyl phenyl ether	1670	1020	61	10-145
121-14-2	2,4-Dinitrotoluene	1670	1040	62	10-148
606-20-2	2,6-Dinitrotoluene	1670	1070	64	12-145
91-94-1	3,3'-Dichlorobenzidine	1670	916	55	10-100
123-91-1	1,4-Dioxane	1670	543	33	10-97
53-70-3	Dibenzo(a,h)anthracene	1670	979	59	14-142
132-64-9	Dibenzofuran	1670	989	59	10-140
84-74-2	Di-n-butyl phthalate	1670	1080	65	11-147
117-84-0	Di-n-octyl phthalate	1670	1160	70	15-145
84-66-2	Diethyl phthalate	1670	986	59	10-145
131-11-3	Dimethyl phthalate	1670	981	59	10-144
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1110	67	26-132
206-44-0	Fluoranthene	1670	1010	61	10-147
86-73-7	Fluorene	1670	1000	60	12-139
118-74-1	Hexachlorobenzene	1670	998	60	10-144
87-68-3	Hexachlorobutadiene	1670	981	59	10-142
77-47-4	Hexachlorocyclopentadiene	3330	2100	63	10-120
67-72-1	Hexachloroethane	1670	950	57	10-141
193-39-5	Indeno(1,2,3-cd)pyrene	1670	971	58	13-144
78-59-1	Isophorone	1670	1030	62	10-139
91-57-6	2-Methylnaphthalene	1670	908	54	10-140
88-74-4	2-Nitroaniline	1670	1120	67	10-148
99-09-2	3-Nitroaniline	1670	765	46	10-127
100-01-6	4-Nitroaniline	1670	962	58	10-143
91-20-3	Naphthalene	1670	955	57	10-141
98-95-3	Nitrobenzene	1670	1050	63	10-139
621-64-7	N-Nitroso-di-n-propylamine	1670	910	55	10-143
86-30-6	N-Nitrosodiphenylamine	1670	983	59	10-145
85-01-8	Phenanthrene	1670	978	59	10-142
129-00-0	Pyrene	1670	1060	64	13-141
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1030	62	10-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-BS1	CT512.D	1	12/01/22	RS	11/30/22	OP43376	ECT28

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	61%	10-99%
4165-62-2	Phenol-d5	59%	10-96%
118-79-6	2,4,6-Tribromophenol	65%	10-123%
4165-60-0	Nitrobenzene-d5	60%	10-109%
321-60-8	2-Fluorobiphenyl	60%	11-109%
1718-51-0	Terphenyl-d14	65%	10-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MS	CT527.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
OP43376-MSD	CT528.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
JD56066-2	CT540.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
JD56066-2	CT726.D	1	12/09/22	CS	11/30/22	OP43376	ECT35

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56066-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		1790	1140	64	1830	1190	65	4	10-137/86
59-50-7	4-Chloro-3-methyl phenol	ND		1790	1300	73	1830	1370	75	5	10-146/84
120-83-2	2,4-Dichlorophenol	ND		1790	1230	69	1830	1280	70	4	10-145/86
105-67-9	2,4-Dimethylphenol	ND		1790	1030	58	1830	1030	56	0	10-148/87
51-28-5	2,4-Dinitrophenol	ND		3570	241	7* [a]	3650	157	4* [a]	42	10-118/90
534-52-1	4,6-Dinitro-o-cresol	ND		1790	556	31	1830	315	17	55	10-131/97
95-48-7	2-Methylphenol	ND		1790	1160	65	1830	1220	67	5	10-143/86
	3&4-Methylphenol	ND		3570	2210	62	3650	2290	63	4	10-162/87
88-75-5	2-Nitrophenol	ND		1790	1220	68	1830	1250	68	2	10-147/93
100-02-7	4-Nitrophenol	ND		1790	1210	68	1830	1230	67	2	10-152/85
87-86-5	Pentachlorophenol	ND		3570	1070	30	3650	704	19	41	10-146/89
108-95-2	Phenol	ND		1790	1260	71	1830	1320	72	5	10-118/84
58-90-2	2,3,4,6-Tetrachlorophenol	ND		1790	1060	59	1830	898	49	17	10-139/87
95-95-4	2,4,5-Trichlorophenol	ND		1790	1180	66	1830	1160	63	2	10-140/86
88-06-2	2,4,6-Trichlorophenol	ND		1790	1170	66	1830	1130	62	3	10-141/86
83-32-9	Acenaphthene	ND		1790	1290	72	1830	1360	74	5	10-156/87
208-96-8	Acenaphthylene	ND		1790	1530	86	1830	1610	88	5	10-143/84
98-86-2	Acetophenone	ND		1790	1200	67	1830	1240	68	3	10-130/90
120-12-7	Anthracene	ND		1790	1310	73	1830	1390	76	6	10-166/88
1912-24-9	Atrazine	ND		1790	1450	81	1830	1550	85	7	10-148/86
56-55-3	Benzo(a)anthracene	42.8 [b]		1790	1350	73	1830	1440	77	6	10-163/88
50-32-8	Benzo(a)pyrene	54.1		1790	1240	66	1830	1300	68	5	10-163/89
205-99-2	Benzo(b)fluoranthene	75.3		1790	1370	72	1830	1410	73	3	10-156/91
191-24-2	Benzo(g,h,i)perylene	66.0		1790	1210	64	1830	1290	67	6	10-158/89
207-08-9	Benzo(k)fluoranthene	26.2	J	1790	1220	67	1830	1340	72	9	10-157/86
101-55-3	4-Bromophenyl phenyl ether	ND		1790	1330	74	1830	1400	77	5	10-143/87
85-68-7	Butyl benzyl phthalate	ND		1790	1590	89	1830	1690	92	6	10-161/89
92-52-4	1,1'-Biphenyl	ND		1790	1220	68	1830	1290	71	6	10-143/86
100-52-7	Benzaldehyde	ND		1790	1220	68	1830	1400	77	14	10-148/88
91-58-7	2-Chloronaphthalene	ND		1790	1240	69	1830	1300	71	5	10-145/86
106-47-8	4-Chloroaniline	ND		1790	579	32	1830	726	40	23	10-109/87
86-74-8	Carbazole	ND		1790	1320	74	1830	1390	76	5	10-158/87
105-60-2	Caprolactam	ND		1790	1230	69	1830	1370	75	11	10-150/82
218-01-9	Chrysene	48.7		1790	1200	64	1830	1270	67	6	10-164/87
111-91-1	bis(2-Chloroethoxy)methane	ND		1790	1320	74	1830	1380	76	4	10-152/86
111-44-4	bis(2-Chloroethyl)ether	ND		1790	1280	72	1830	1350	74	5	10-147/86

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MS	CT527.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
OP43376-MSD	CT528.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
JD56066-2	CT540.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
JD56066-2	CT726.D	1	12/09/22	CS	11/30/22	OP43376	ECT35

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56066-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		1790	1200	67	1830	1240	68	3	10-134/88
7005-72-3	4-Chlorophenyl phenyl ether	ND		1790	1330	74	1830	1400	77	5	10-142/87
121-14-2	2,4-Dinitrotoluene	ND		1790	1380	77	1830	1460	80	6	10-147/86
606-20-2	2,6-Dinitrotoluene	ND		1790	1440	81	1830	1520	83	5	10-147/88
91-94-1	3,3'-Dichlorobenzidine	ND		1790	1160	65	1830	1310	72	12	10-106/93
123-91-1	1,4-Dioxane	ND		1790	652	37	1830	659	36	1	10-102/85
53-70-3	Dibenzo(a,h)anthracene	ND		1790	1240	69	1830	1310	72	5	10-149/89
132-64-9	Dibenzofuran	ND		1790	1260	71	1830	1310	72	4	10-155/86
84-74-2	Di-n-butyl phthalate	ND		1790	1450	81	1830	1500	82	3	10-158/86
117-84-0	Di-n-octyl phthalate	ND		1790	1650	92	1830	1760	96	6	10-154/84
84-66-2	Diethyl phthalate	ND		1790	1330	74	1830	1400	77	5	10-148/84
131-11-3	Dimethyl phthalate	ND		1790	1270	71	1830	1350	74	6	10-144/85
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1790	1480	83	1830	1570	86	6	10-153/84
206-44-0	Fluoranthene	67.3		1790	1360	72	1830	1410	73	4	10-165/93
86-73-7	Fluorene	ND		1790	1290	72	1830	1350	74	5	10-158/87
118-74-1	Hexachlorobenzene	ND		1790	1260	71	1830	1330	73	5	10-139/85
87-68-3	Hexachlorobutadiene	ND		1790	1150	64	1830	1220	67	6	10-139/88
77-47-4	Hexachlorocyclopentadiene	ND		3570	2490	70	3650	2650	73	6	10-116/30
67-72-1	Hexachloroethane	ND		1790	1120	63	1830	1170	64	4	10-141/93
193-39-5	Indeno(1,2,3-cd)pyrene	49.8		1790	1240	67	1830	1310	69	5	10-160/91
78-59-1	Isophorone	ND		1790	1300	73	1830	1360	74	5	10-150/86
91-57-6	2-Methylnaphthalene	ND		1790	1140	64	1830	1210	66	6	10-145/86
88-74-4	2-Nitroaniline	ND		1790	1570	88	1830	1670	91	6	10-152/77
99-09-2	3-Nitroaniline	ND		1790	1110	62	1830	1240	68	11	10-136/83
100-01-6	4-Nitroaniline	ND		1790	1420	80	1830	1540	84	8	10-140/81
91-20-3	Naphthalene	ND		1790	1170	66	1830	1210	66	3	10-146/87
98-95-3	Nitrobenzene	ND		1790	1340	75	1830	1400	77	4	10-146/88
621-64-7	N-Nitroso-di-n-propylamine	ND		1790	1220	68	1830	1270	69	4	10-147/77
86-30-6	N-Nitrosodiphenylamine	ND		1790	1310	73	1830	1370	75	4	10-159/78
85-01-8	Phenanthrene	23.7	J	1790	1260	69	1830	1320	71	5	10-158/95
129-00-0	Pyrene	61.2		1790	1410	76	1830	1470	77	4	10-176/90
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		1790	1250	70	1830	1330	73	6	10-137/87

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43376-MS	CT527.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
OP43376-MSD	CT528.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
JD56066-2	CT540.D	1	12/02/22	RS	11/30/22	OP43376	ECT28
JD56066-2	CT726.D	1	12/09/22	CS	11/30/22	OP43376	ECT35

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD56110-1, JD56110-2, JD56110-3

CAS No.	Surrogate Recoveries	MS	MSD	JD56066-2	JD56066-2	Limits
367-12-4	2-Fluorophenol	75%	74%	59%	68%	10-99%
4165-62-2	Phenol-d5	77%	77%	63%	75%	10-96%
118-79-6	2,4,6-Tribromophenol	75%	70%	70%	80%	10-123%
4165-60-0	Nitrobenzene-d5	76%	76%	59%	84%	10-109%
321-60-8	2-Fluorobiphenyl	74%	74%	64%	70%	11-109%
1718-51-0	Terphenyl-d14	86%	86%	73%	83%	10-120%

(a) Outside control limits due to matrix interference.
(b) Result is from Run #2.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: ECT16-DFTPP
Lab File ID: CT239.D
Instrument ID: GCMSCT
Injection Date: 11/09/22
Injection Time: 17:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	52722	35.7		Pass
68	Less than 2.0% of mass 69	1101	0.74	(1.77) [a]	Pass
69	Mass 69 relative abundance	62358	42.2		Pass
70	Less than 2.0% of mass 69	366	0.25	(0.59) [a]	Pass
127	40.0 - 60.0% of mass 198	81934	55.4		Pass
197	Less than 1.0% of mass 198	1305	0.88		Pass
198	Base peak, 100% relative abundance	147800	100.0		Pass
199	5.0 - 9.0% of mass 198	10003	6.77		Pass
275	10.0 - 30.0% of mass 198	34093	23.1		Pass
365	1.0 - 100.0% of mass 198	5182	3.51		Pass
441	Present, but less than mass 443	19391	13.1	(77.5) [b]	Pass
442	40.0 - 100.0% of mass 198	128040	86.6		Pass
443	17.0 - 23.0% of mass 442	25020	16.9	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ECT16-IC16	CT240.D	11/09/22	17:52	00:40	Initial cal 100
ECT16-IC16	CT241.D	11/09/22	18:09	00:57	Initial cal 1
ECT16-IC16	CT242.D	11/09/22	18:33	01:21	Initial cal 80
ECT16-IC16	CT243.D	11/09/22	19:26	02:14	Initial cal 2
ECT16-ICC16	CT244.D	11/09/22	19:45	02:33	Initial cal 50
ECT16-IC16	CT245.D	11/09/22	20:02	02:50	Initial cal 5
ECT16-IC16	CT246.D	11/09/22	20:19	03:07	Initial cal 25
ECT16-IC16	CT247.D	11/09/22	20:38	03:26	Initial cal 10
ECT16-ICV16	CT248.D	11/09/22	20:55	03:43	Initial cal verification 50
ECT16-ICV16	CT249.D	11/09/22	21:12	04:00	Initial cal verification 50
ECT16-ICV16	CT250.D	11/09/22	21:30	04:18	Initial cal verification 50
ECT16-ICV16	CT251.D	11/09/22	21:47	04:35	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: ECT17-DFTPP
Lab File ID: CT252.D
Instrument ID: GCMSCT
Injection Date: 11/09/22
Injection Time: 22:05

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	43261	32.5		Pass
68	Less than 2.0% of mass 69	876	0.66	(1.70) [a]	Pass
69	Mass 69 relative abundance	51623	38.8		Pass
70	Less than 2.0% of mass 69	328	0.25	(0.64) [a]	Pass
127	40.0 - 60.0% of mass 198	70347	52.9		Pass
197	Less than 1.0% of mass 198	469	0.35		Pass
198	Base peak, 100% relative abundance	132917	100.0		Pass
199	5.0 - 9.0% of mass 198	8878	6.68		Pass
275	10.0 - 30.0% of mass 198	31420	23.6		Pass
365	1.0 - 100.0% of mass 198	4455	3.35		Pass
441	Present, but less than mass 443	18548	14.0	(77.1) [b]	Pass
442	40.0 - 100.0% of mass 198	124661	93.8		Pass
443	17.0 - 23.0% of mass 442	24067	18.1	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ECT17-IC17	CT253.D	11/09/22	22:21	00:16	Initial cal 100
ECT17-IC17	CT254.D	11/09/22	22:38	00:33	Initial cal 80
ECT17-ICC17	CT255.D	11/09/22	22:55	00:50	Initial cal 50
ECT17-IC17	CT256.D	11/09/22	23:12	01:07	Initial cal 25
ECT17-IC17	CT257.D	11/09/22	23:30	01:25	Initial cal 10
ECT17-IC17	CT258.D	11/09/22	23:47	01:42	Initial cal 5
ECT17-IC17	CT259.D	11/10/22	00:04	01:59	Initial cal 2
ECT17-IC17	CT260.D	11/10/22	00:21	02:16	Initial cal 1
ECT17-ICV17	CT261.D	11/10/22	00:51	02:46	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: ECT28-DFTPP
Lab File ID: CT503.D
Instrument ID: GCMSCT
Injection Date: 12/01/22
Injection Time: 20:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	97691	34.2		Pass
68	Less than 2.0% of mass 69	2170	0.76	(1.88) [a]	Pass
69	Mass 69 relative abundance	115636	40.5		Pass
70	Less than 2.0% of mass 69	854	0.30	(0.74) [a]	Pass
127	40.0 - 60.0% of mass 198	153909	53.8		Pass
197	Less than 1.0% of mass 198	301	0.11		Pass
198	Base peak, 100% relative abundance	285821	100.0		Pass
199	5.0 - 9.0% of mass 198	19496	6.82		Pass
275	10.0 - 30.0% of mass 198	66280	23.2		Pass
365	1.0 - 100.0% of mass 198	9596	3.36		Pass
441	Present, but less than mass 443	30467	10.7	(76.4) [b]	Pass
442	40.0 - 100.0% of mass 198	206931	72.4		Pass
443	17.0 - 23.0% of mass 442	39904	14.0	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ECT28-CC16	CT504.D	12/01/22	20:46	00:27	Continuing cal 25
ECT28-CC17	CT505.D	12/01/22	21:04	00:45	Continuing cal 25
OP43377-MB1	CT509.D	12/01/22	23:04	02:45	Method Blank
OP43377-BS1	CT510.D	12/01/22	23:21	03:02	Blank Spike
OP43376-BS1	CT512.D	12/01/22	23:55	03:36	Blank Spike
ZZZZZZ	CT513.D	12/02/22	00:12	03:53	(unrelated sample)
JD56110-1	CT514.D	12/02/22	00:29	04:10	12599404-112122-S-MTK-SOURCE SAND-1
JD56110-2	CT515.D	12/02/22	00:46	04:27	12599404-112122-S-MTK-SOURCE CLAY-1
JD56110-3	CT516.D	12/02/22	01:03	04:44	12599404-112122-S-MTK-SOURCE AGG-1
OP43377-MS	CT517.D	12/02/22	01:20	05:01	Matrix Spike
OP43377-MSD	CT518.D	12/02/22	01:37	05:18	Matrix Spike Duplicate
ZZZZZZ	CT520.D	12/02/22	02:11	05:52	(unrelated sample)
JD56163-18	CT521.D	12/02/22	02:27	06:08	(used for QC only; not part of job JD56110)
ZZZZZZ	CT522.D	12/02/22	02:44	06:25	(unrelated sample)
ZZZZZZ	CT523.D	12/02/22	03:01	06:42	(unrelated sample)
ZZZZZZ	CT524.D	12/02/22	03:18	06:59	(unrelated sample)
ZZZZZZ	CT525.D	12/02/22	03:34	07:15	(unrelated sample)
ZZZZZZ	CT526.D	12/02/22	03:51	07:32	(unrelated sample)
OP43376-MS	CT527.D	12/02/22	04:08	07:49	Matrix Spike

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	ECT28-DFTPP	**Injection Date:**	12/01/22
Lab File ID:	CT503.D	**Injection Time:**	20:19
Instrument ID:	GCMSCT		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
OP43376-MSD	CT528.D	12/02/22	04:24	08:05	Matrix Spike Duplicate
ZZZZZZ	CT529.D	12/02/22	04:41	08:22	(unrelated sample)
ZZZZZZ	CT530.D	12/02/22	04:58	08:39	(unrelated sample)
ZZZZZZ	CT531.D	12/02/22	05:14	08:55	(unrelated sample)
ZZZZZZ	CT532.D	12/02/22	05:31	09:12	(unrelated sample)
ZZZZZZ	CT533.D	12/02/22	05:48	09:29	(unrelated sample)
ZZZZZZ	CT534.D	12/02/22	06:04	09:45	(unrelated sample)
ZZZZZZ	CT535.D	12/02/22	06:21	10:02	(unrelated sample)
ZZZZZZ	CT536.D	12/02/22	06:38	10:19	(unrelated sample)
ZZZZZZ	CT537.D	12/02/22	06:54	10:35	(unrelated sample)
ZZZZZZ	CT538.D	12/02/22	07:11	10:52	(unrelated sample)
ZZZZZZ	CT539.D	12/02/22	07:28	11:09	(unrelated sample)
JD56066-2	CT540.D	12/02/22	07:44	11:25	(used for QC only; not part of job JD56110)
ZZZZZZ	CT541.D	12/02/22	08:01	11:42	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: ECT29-DFTPP
Lab File ID: CT544.D
Instrument ID: GCMSCT
Injection Date: 12/02/22
Injection Time: 20:42

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	91322	34.5		Pass
68	Less than 2.0% of mass 69	1647	0.62	(1.56) [a]	Pass
69	Mass 69 relative abundance	105761	40.0		Pass
70	Less than 2.0% of mass 69	574	0.22	(0.54) [a]	Pass
127	40.0 - 60.0% of mass 198	140712	53.2		Pass
197	Less than 1.0% of mass 198	405	0.15		Pass
198	Base peak, 100% relative abundance	264659	100.0		Pass
199	5.0 - 9.0% of mass 198	17907	6.77		Pass
275	10.0 - 30.0% of mass 198	60733	22.9		Pass
365	1.0 - 100.0% of mass 198	8711	3.29		Pass
441	Present, but less than mass 443	27798	10.5	(76.2) [b]	Pass
442	40.0 - 100.0% of mass 198	185443	70.1		Pass
443	17.0 - 23.0% of mass 442	36500	13.8	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ECT29-CC16	CT545.D	12/02/22	20:56	00:14	Continuing cal 50
ECT29-CC17	CT546.D	12/02/22	21:27	00:45	Continuing cal 50
OP43376-MB1	CT547.D	12/02/22	21:47	01:05	Method Blank
OP43238-MB1	CT548.D	12/02/22	22:24	01:42	Method Blank
OP43227-MB1	CT549.D	12/02/22	22:41	01:59	Method Blank
OP43378-MB1	CT550.D	12/02/22	22:58	02:16	Method Blank
OP43413-MB1	CT551.D	12/02/22	23:15	02:33	Method Blank
OP43413-BS1	CT552.D	12/02/22	23:33	02:51	Blank Spike
OP43378-BS1	CT553.D	12/02/22	23:50	03:08	Blank Spike
OP43378-MS	CT554.D	12/03/22	00:07	03:25	Matrix Spike
OP43378-MSD	CT555.D	12/03/22	00:24	03:42	Matrix Spike Duplicate
JD56093-1	CT556.D	12/03/22	00:42	04:00	(used for QC only; not part of job JD56110)
ZZZZZZ	CT557.D	12/03/22	00:59	04:17	(unrelated sample)
OP43413-MS	CT558.D	12/03/22	01:16	04:34	Matrix Spike
OP43413-MSD	CT559.D	12/03/22	01:33	04:51	Matrix Spike Duplicate
JD55268-9	CT560.D	12/03/22	01:50	05:08	(used for QC only; not part of job JD56110)
ZZZZZZ	CT561.D	12/03/22	02:08	05:26	(unrelated sample)
ZZZZZZ	CT562.D	12/03/22	02:25	05:43	(unrelated sample)
ZZZZZZ	CT563.D	12/03/22	02:42	06:00	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	ECT29-DFTPP	**Injection Date:**	12/02/22
Lab File ID:	CT544.D	**Injection Time:**	20:42
Instrument ID:	GCMSCT		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	CT564.D	12/03/22	02:59	06:17	(unrelated sample)
ZZZZZZ	CT565.D	12/03/22	03:16	06:34	(unrelated sample)
ZZZZZZ	CT566.D	12/03/22	03:34	06:52	(unrelated sample)
JD55740-1	CT567.D	12/03/22	03:51	07:09	(used for QC only; not part of job JD56110)
ZZZZZZ	CT568.D	12/03/22	04:08	07:26	(unrelated sample)
OP43227-MS	CT569.D	12/03/22	04:25	07:43	Matrix Spike
OP43227-MSD	CT570.D	12/03/22	04:42	08:00	Matrix Spike Duplicate
ZZZZZZ	CT571.D	12/03/22	04:59	08:17	(unrelated sample)
ZZZZZZ	CT572.D	12/03/22	05:16	08:34	(unrelated sample)
ZZZZZZ	CT573.D	12/03/22	05:33	08:51	(unrelated sample)
ZZZZZZ	CT574.D	12/03/22	05:50	09:08	(unrelated sample)
ZZZZZZ	CT575.D	12/03/22	06:07	09:25	(unrelated sample)
ZZZZZZ	CT576.D	12/03/22	06:24	09:42	(unrelated sample)
ZZZZZZ	CT577.D	12/03/22	06:41	09:59	(unrelated sample)
ZZZZZZ	CT578.D	12/03/22	06:58	10:16	(unrelated sample)
ZZZZZZ	CT579.D	12/03/22	07:15	10:33	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	EZ7972-DFTPP	**Injection Date:**	10/27/22
Lab File ID:	Z160759.D	**Injection Time:**	19:21
Instrument ID:	GCMSZ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	24855	37.7		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	33772	51.3		Pass
70	Less than 2.0% of mass 69	103	0.16	(0.30) [a]	Pass
127	40.0 - 60.0% of mass 198	35187	53.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	65853	100.0		Pass
199	5.0 - 9.0% of mass 198	4410	6.70		Pass
275	10.0 - 30.0% of mass 198	17462	26.5		Pass
365	1.0 - 100.0% of mass 198	3522	5.35		Pass
441	Present, but less than mass 443	6688	10.2	(93.1) [b]	Pass
442	40.0 - 100.0% of mass 198	42092	63.9		Pass
443	17.0 - 23.0% of mass 442	7182	10.9	(17.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ7972-IC7972	Z160760.D	10/27/22	20:25	01:04	Initial cal 100
EZ7972-IC7972	Z160761.D	10/27/22	20:49	01:28	Initial cal 1
EZ7972-IC7972	Z160762.D	10/27/22	21:13	01:52	Initial cal 80
EZ7972-IC7972	Z160763.D	10/27/22	21:37	02:16	Initial cal 2
EZ7972-ICC7972	Z160764.D	10/27/22	22:01	02:40	Initial cal 50
EZ7972-IC7972	Z160765.D	10/27/22	22:25	03:04	Initial cal 5
EZ7972-IC7972	Z160766.D	10/27/22	22:49	03:28	Initial cal 25
EZ7972-IC7972	Z160767.D	10/27/22	23:13	03:52	Initial cal 10
EZ7972-ICV7972	Z160769.D	10/28/22	00:01	04:40	Initial cal verification 50
EZ7972-ICV7972	Z160770.D	10/28/22	00:25	05:04	Initial cal verification 50
EZ7972-ICV7972	Z160771.D	10/28/22	00:50	05:29	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: EZ7973-DFTPP
Lab File ID: Z160772.D
Instrument ID: GCMSZ
Injection Date: 10/28/22
Injection Time: 01:44

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	19997	35.1		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	28503	50.1		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	27413	48.2		Pass
197	Less than 1.0% of mass 198	211	0.37		Pass
198	Base peak, 100% relative abundance	56924	100.0		Pass
199	5.0 - 9.0% of mass 198	4025	7.07		Pass
275	10.0 - 30.0% of mass 198	15519	27.3		Pass
365	1.0 - 100.0% of mass 198	3028	5.32		Pass
441	Present, but less than mass 443	7568	13.3	(94.6) [b]	Pass
442	40.0 - 100.0% of mass 198	42987	75.5		Pass
443	17.0 - 23.0% of mass 442	8000	14.1	(18.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ7973-IC7973	Z160773.D	10/28/22	02:50	01:06	Initial cal 100
EZ7973-IC7973	Z160774.D	10/28/22	03:14	01:30	Initial cal 80
EZ7973-ICC7973	Z160775.D	10/28/22	03:38	01:54	Initial cal 50
EZ7973-IC7973	Z160776.D	10/28/22	04:02	02:18	Initial cal 25
EZ7973-IC7973	Z160777.D	10/28/22	04:26	02:42	Initial cal 10
EZ7973-IC7973	Z160778.D	10/28/22	04:50	03:06	Initial cal 5
EZ7973-IC7973	Z160779.D	10/28/22	05:14	03:30	Initial cal 2
EZ7973-IC7973	Z160780.D	10/28/22	05:38	03:54	Initial cal 1
EZ7973-ICV7973	Z160781.D	10/28/22	06:02	04:18	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	EZ7974-DFTPP	**Injection Date:**	10/28/22
Lab File ID:	Z160783.D	**Injection Time:**	18:52
Instrument ID:	GCMSZ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	21637	37.0		Pass
68	Less than 2.0% of mass 69	213	0.36	(0.74) [a]	Pass
69	Mass 69 relative abundance	28956	49.6		Pass
70	Less than 2.0% of mass 69	139	0.24	(0.48) [a]	Pass
127	40.0 - 60.0% of mass 198	29274	50.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	58416	100.0		Pass
199	5.0 - 9.0% of mass 198	3995	6.84		Pass
275	10.0 - 30.0% of mass 198	15372	26.3		Pass
365	1.0 - 100.0% of mass 198	2850	4.88		Pass
441	Present, but less than mass 443	6425	11.0	(82.0) [b]	Pass
442	40.0 - 100.0% of mass 198	42496	72.7		Pass
443	17.0 - 23.0% of mass 442	7836	13.4	(18.4) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ7974-ICV7972	Z160784.D	10/28/22	19:11	00:19	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: EZ8011-DFTPP
Lab File ID: Z161704.D
Instrument ID: GCMSZ
Injection Date: 12/01/22
Injection Time: 14:14

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	13020	40.4		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	17089	53.0		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	16158	50.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	32226	100.0		Pass
199	5.0 - 9.0% of mass 198	2308	7.16		Pass
275	10.0 - 30.0% of mass 198	9117	28.3		Pass
365	1.0 - 100.0% of mass 198	1831	5.68		Pass
441	Present, but less than mass 443	3556	11.0	(85.8) [b]	Pass
442	40.0 - 100.0% of mass 198	22272	69.1		Pass
443	17.0 - 23.0% of mass 442	4143	12.9	(18.6) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EZ8011-CC7972	Z161705.D	12/01/22	14:27	00:13	Continuing cal 50
EZ8011-CC7973	Z161706.D	12/01/22	14:58	00:44	Continuing cal 50
OP43376-MB1	Z161709.D	12/01/22	17:13	02:59	Method Blank
OP43186-MB1	Z161727.D	12/01/22	17:38	03:24	Method Blank
ZZZZZZ	Z161710.D	12/01/22	18:02	03:48	(unrelated sample)
ZZZZZZ	Z161711.D	12/01/22	18:27	04:13	(unrelated sample)
ZZZZZZ	Z161712.D	12/01/22	18:52	04:38	(unrelated sample)
ZZZZZZ	Z161713.D	12/01/22	19:17	05:03	(unrelated sample)
ZZZZZZ	Z161714.D	12/01/22	19:42	05:28	(unrelated sample)
ZZZZZZ	Z161715.D	12/01/22	20:07	05:53	(unrelated sample)
ZZZZZZ	Z161716.D	12/01/22	20:31	06:17	(unrelated sample)
ZZZZZZ	Z161717.D	12/01/22	20:56	06:42	(unrelated sample)
ZZZZZZ	Z161718.D	12/01/22	21:21	07:07	(unrelated sample)
ZZZZZZ	Z161719.D	12/01/22	21:45	07:31	(unrelated sample)
ZZZZZZ	Z161720.D	12/01/22	22:10	07:56	(unrelated sample)
ZZZZZZ	Z161721.D	12/01/22	22:34	08:20	(unrelated sample)
ZZZZZZ	Z161722.D	12/01/22	22:59	08:45	(unrelated sample)
ZZZZZZ	Z161723.D	12/01/22	23:23	09:09	(unrelated sample)
ZZZZZZ	Z161724.D	12/01/22	23:48	09:34	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	EZ8011-DFTPP	**Injection Date:**	12/01/22
Lab File ID:	Z161704.D	**Injection Time:**	14:14
Instrument ID:	GCMSZ		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	Z161725.D	12/02/22	00:12	09:58	(unrelated sample)
ZZZZZZ	Z161726.D	12/02/22	00:36	10:22	(unrelated sample)
ZZZZZZ	Z161728.D	12/02/22	01:01	10:47	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8270E **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JD56110-1	CT514.D	60	66	69	59	63	76
JD56110-2	CT515.D	66	70	77	67	68	76
JD56110-3	CT516.D	59	62	63	60	60	70
OP43376-BS1	CT512.D	61	59	65	60	60	65
OP43376-MB1	Z161709.D	59	60	82	59	61	86
OP43376-MB1	CT547.D	66	71	98	81	67	91
OP43376-MS	CT527.D	75	77	75	76	74	86
OP43376-MSD	CT528.D	74	77	70	76	74	86

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-99%
S2 = Phenol-d5	10-96%
S3 = 2,4,6-Tribromophenol	10-123%
S4 = Nitrobenzene-d5	10-109%
S5 = 2-Fluorobiphenyl	11-109%
S6 = Terphenyl-d14	10-120%

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43362-MB1	OA163064.D	1	12/01/22	RK	11/30/22	OP43362	GOA5757

The QC reported here applies to the following samples: **Method:** SW846 8151A

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	17	9.1	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.3	1.9	ug/kg	
93-76-5	2,4,5-T	ND	3.3	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	89%	10-125%
19719-28-9	2,4-DCAA	82%	10-125%

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43383-MB1	4G9729491.D	1	12/01/22	TL	11/30/22	OP43383	G4G3961

The QC reported here applies to the following samples: **Method:** SW846 8081B

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.67	0.55	ug/kg	
319-84-6	alpha-BHC	ND	0.67	0.54	ug/kg	
319-85-7	beta-BHC	ND	0.67	0.60	ug/kg	
319-86-8	delta-BHC	ND	0.67	0.64	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.67	0.49	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.67	0.54	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.67	0.30	ug/kg	
60-57-1	Dieldrin	ND	0.67	0.46	ug/kg	
72-54-8	4,4'-DDD	ND	0.67	0.61	ug/kg	
72-55-9	4,4'-DDE	ND	0.67	0.58	ug/kg	
50-29-3	4,4'-DDT	1.4	0.67	0.59	ug/kg	B
72-20-8	Endrin	ND	0.67	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.67	0.52	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.67	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.67	0.38	ug/kg	
33213-65-9	Endosulfan-II	ND	0.67	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.67	0.57	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.67	0.47	ug/kg	
72-43-5	Methoxychlor	ND	1.3	0.53	ug/kg	
53494-70-5	Endrin ketone	ND	0.67	0.48	ug/kg	
8001-35-2	Toxaphene	ND	17	16	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	89%	14-145%
877-09-8	Tetrachloro-m-xylene	74%	14-145%
2051-24-3	Decachlorobiphenyl	115%	10-197%
2051-24-3	Decachlorobiphenyl	82%	10-197%

Method Blank Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43384-MB1	RL3186.D	1	12/01/22	MLC	11/30/22	OP43384	GRL55

The QC reported here applies to the following samples: **Method:** SW846 8082A

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	16	ug/kg	
11104-28-2	Aroclor 1221	ND	33	21	ug/kg	
11141-16-5	Aroclor 1232	ND	33	21	ug/kg	
53469-21-9	Aroclor 1242	ND	33	14	ug/kg	
12672-29-6	Aroclor 1248	ND	33	30	ug/kg	
11097-69-1	Aroclor 1254	ND	33	18	ug/kg	
11096-82-5	Aroclor 1260	ND	33	14	ug/kg	
11100-14-4	Aroclor 1268	ND	33	14	ug/kg	
37324-23-5	Aroclor 1262	ND	33	22	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	99%	10-163%
877-09-8	Tetrachloro-m-xylene	132%	10-163%
2051-24-3	Decachlorobiphenyl	106%	10-215%
2051-24-3	Decachlorobiphenyl	105%	10-215%

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43362-BS1	OA163065.D	1	12/01/22	RK	11/30/22	OP43362	GOA5757

The QC reported here applies to the following samples: **Method:** SW846 8151A

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	133	120	90	18-112
93-72-1	2,4,5-TP (Silvex)	26.7	26.0	98	24-114
93-76-5	2,4,5-T	26.7	25.8	97	20-100

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	88%	10-125%
19719-28-9	2,4-DCAA	82%	10-125%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43383-BS1	4G9729492.D	1	12/01/22	TL	11/30/22	OP43383	G4G3961

The QC reported here applies to the following samples: **Method:** SW846 8081B

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	16.7	21.4	128	41-146
319-84-6	alpha-BHC	16.7	20.4	122	39-138
319-85-7	beta-BHC	16.7	19.5	117	44-134
319-86-8	delta-BHC	16.7	20.3	122	10-147
58-89-9	gamma-BHC (Lindane)	16.7	19.7	118	42-133
5103-71-9	alpha-Chlordane	16.7	20.0	120	43-140
5103-74-2	gamma-Chlordane	16.7	20.1	121	45-135
60-57-1	Dieldrin	16.7	20.3	122	40-151
72-54-8	4,4'-DDD	16.7	19.5	117	42-133
72-55-9	4,4'-DDE	16.7	19.5	117	43-139
50-29-3	4,4'-DDT	16.7	21.6	130	44-150
72-20-8	Endrin	16.7	22.1	133	43-145
1031-07-8	Endosulfan sulfate	16.7	20.3	122	27-131
7421-93-4	Endrin aldehyde	16.7	19.9	119	34-139
959-98-8	Endosulfan-I	16.7	19.6	118	41-137
33213-65-9	Endosulfan-II	16.7	20.3	122	35-143
76-44-8	Heptachlor	16.7	17.7	106	44-136
1024-57-3	Heptachlor epoxide	16.7	19.7	118	45-138
72-43-5	Methoxychlor	16.7	15.2	91	39-149
53494-70-5	Endrin ketone	16.7	19.2	115	41-153

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	122%	14-145%
877-09-8	Tetrachloro-m-xylene	109%	14-145%
2051-24-3	Decachlorobiphenyl	127%	10-197%
2051-24-3	Decachlorobiphenyl	107%	10-197%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43384-BS1	RL3187.D	1	12/01/22	MLC	11/30/22	OP43384	GRL55
OP43384-BSD	RL3188.D	1	12/01/22	MLC	11/30/22	OP43384	GRL55

The QC reported here applies to the following samples: **Method:** SW846 8082A

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	133	224	168* [a]	181	136	23	53-157/32
11096-82-5	Aroclor 1260	133	205	154	162	121	23	53-159/45

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	143%	92%	10-163%
877-09-8	Tetrachloro-m-xylene	165%* [a]	123%	10-163%
2051-24-3	Decachlorobiphenyl	127%	100%	10-215%
2051-24-3	Decachlorobiphenyl	127%	98%	10-215%

(a) Outside control limits biased high. Associated samples ND.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43362-MS	OA163068.D	1	12/01/22	RK	11/30/22	OP43362	GOA5757
OP43362-MSD	OA163069.D	1	12/01/22	RK	11/30/22	OP43362	GOA5757
JD56110-1	OA163085.D	1	12/01/22	RK	11/30/22	OP43362	GOA5757

The QC reported here applies to the following samples: **Method:** SW846 8151A

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56110-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND		141	31.4	22	136	86.5	63	93	10-120/107
93-72-1	2,4,5-TP (Silvex)	ND		28.1	5.5	20	27.2	22.1	81	120* [a]	10-122/99
93-76-5	2,4,5-T	ND		28.1	6.5	23	27.2	20.2	74	103* [a]	10-115/92

CAS No.	Surrogate Recoveries	MS	MSD	JD56110-1	Limits
19719-28-9	2,4-DCAA	36%	35%	46%	10-125%
19719-28-9	2,4-DCAA	35%	33%	57%	10-125%

(a) Analytical precision exceeds in-house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43383-MS	4G9729497.D	1	12/01/22	TL	11/30/22	OP43383	G4G3961
OP43383-MSD	4G9729498.D	1	12/01/22	TL	11/30/22	OP43383	G4G3961
JD56066-2	4G9729496.D	1	12/01/22	TL	11/30/22	OP43383	G4G3961

The QC reported here applies to the following samples: **Method:** SW846 8081B

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56066-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		17.3	13.5	78	17.3	10.8	62	22	23-156/72
319-84-6	alpha-BHC	ND		17.3	13.8	80	17.3	10.9	63	23	15-162/63
319-85-7	beta-BHC	ND		17.3	11.2	65	17.3	10.2	59	9	17-148/79
319-86-8	delta-BHC	ND		17.3	12.4	71	17.3	11.2	65	10	10-159/81
58-89-9	gamma-BHC (Lindane)	ND		17.3	13.1	76	17.3	10.7	62	20	30-139/67
5103-71-9	alpha-Chlordane	ND		17.3	11.8	68	17.3	9.6	55	21	12-167/63
5103-74-2	gamma-Chlordane	ND		17.3	12.7	73	17.3	10.4	60	20	10-184/65
60-57-1	Dieldrin	ND		17.3	12.7	73	17.3	11.0	63	14	10-266/78
72-54-8	4,4'-DDD	ND		17.3	12.0	69	17.3	10.1	58	17	24-143/82
72-55-9	4,4'-DDE	ND		17.3	12.9	74	17.3	10.0	58	25	10-172/71
50-29-3	4,4'-DDT	3.8	B	17.3	14.4	61	17.3	11.8	46	20	10-191/84
72-20-8	Endrin	ND		17.3	13.9	80	17.3	11.8	68	16	10-200/74
1031-07-8	Endosulfan sulfate	ND		17.3	12.6	73	17.3	10.6	61	17	10-149/69
7421-93-4	Endrin aldehyde	ND		17.3	13.5	78	17.3	11.6	67	15	10-165/81
959-98-8	Endosulfan-I	ND		17.3	13.2	76	17.3	11.3	65	16	10-171/75
33213-65-9	Endosulfan-II	ND		17.3	13.1	76	17.3	10.6	61	21	10-153/76
76-44-8	Heptachlor	ND		17.3	10.8	62	17.3	9.3	54	15	15-162/77
1024-57-3	Heptachlor epoxide	ND		17.3	13.4	77	17.3	10.7	62	22	26-151/66
72-43-5	Methoxychlor	ND		17.3	11.1	64	17.3	9.4	54	17	10-172/85
53494-70-5	Endrin ketone	ND		17.3	12.3	71	17.3	10.6	61	15	10-182/72
8001-35-2	Toxaphene	ND			ND			ND		nc	50-150/30

CAS No.	Surrogate Recoveries	MS	MSD	JD56066-2	Limits
877-09-8	Tetrachloro-m-xylene	71%	55%	106%	14-145%
877-09-8	Tetrachloro-m-xylene	61%	47%	93%	14-145%
2051-24-3	Decachlorobiphenyl	73%	61%	114%	10-197%
2051-24-3	Decachlorobiphenyl	65%	48%	93%	10-197%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43384-MS	RL3189.D	1	12/01/22	MLC	11/30/22	OP43384	GRL55
OP43384-MSD	RL3190.D	1	12/01/22	MLC	11/30/22	OP43384	GRL55
JD56093-1	RL3191.D	1	12/01/22	MLC	11/30/22	OP43384	GRL55

The QC reported here applies to the following samples: **Method:** SW846 8082A

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	JD56093-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		147	159	108	141	252	179	45	10-243/69
11096-82-5	Aroclor 1260	ND		147	130	88	141	228	162	55	10-200/64

CAS No.	Surrogate Recoveries	MS	MSD	JD56093-1	Limits
877-09-8	Tetrachloro-m-xylene	76%	124%	101%	10-163%
877-09-8	Tetrachloro-m-xylene	77%	126%	103%	10-163%
2051-24-3	Decachlorobiphenyl	72%	118%	80%	10-215%
2051-24-3	Decachlorobiphenyl	72%	131%	86%	10-215%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8151A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
JD56110-1	OA163085.D	46	57
JD56110-2	OA163086.D	49	47
JD56110-3	OA163087.D	92	86
OP43362-BS1	OA163065.D	88	82
OP43362-MB1	OA163064.D	89	82
OP43362-MS	OA163068.D	36	35
OP43362-MSD	OA163069.D	35	33

Surrogate Compounds	Recovery Limits
S1 = 2,4-DCAA	10-125%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

Surrogate Recovery Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8081B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JD56110-1	4G9729493.D	78	70	75	68
JD56110-2	4G9729494.D	69	60	73	59
JD56110-3	4G9729495.D	93	81	99	80
OP43383-BS1	4G9729492.D	122	109	127	107
OP43383-MB1	4G9729491.D	89	74	115	82
OP43383-MS	4G9729497.D	71	61	73	65
OP43383-MSD	4G9729498.D	55	47	61	48

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	14-145%
S2 = Decachlorobiphenyl	10-197%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Surrogate Recovery Summary

Job Number: JD56110
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JD56110-1	RL3200.D	119	121	102	102
JD56110-2	RL3201.D	99	99	85	86
JD56110-3	RL3202.D	115	116	96	97
OP43384-BS1	RL3187.D	143	165* [c]	127	127
OP43384-BSD	RL3188.D	92	123	100	98
OP43384-MB1	RL3186.D	99	132	106	105
OP43384-MS	RL3189.D	76	77	72	72
OP43384-MSD	RL3190.D	124	126	118	131

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	10-163%
S2 = Decachlorobiphenyl	10-215%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits biased high. Associated samples ND.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/23/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	1.7	8.1	1.0	<50
Antimony	2.0	.17	.41	0.060	<2.0
Arsenic	2.0	.21	.28	0.12	<2.0
Barium	20	.08	1.9	0.010	<20
Beryllium	0.20	.03	.08	0.0	<0.20
Bismuth	2.0	.23	.52		
Boron	10	.23	3.7		
Cadmium	0.50	.03	.07	0.010	<0.50
Calcium	500	.66	21	12.1	<500
Chromium	1.0	.03	.37	0.060	<1.0
Cobalt	5.0	.04	.28	0.0	<5.0
Copper	2.5	.08	.84	0.25	<2.5
Iron	50	.53	19	2.0	<50
Lead	2.0	.11	.41	0.020	<2.0
Lithium	5.0	.48	.92		
Magnesium	500	3.2	14	0.94	<500
Manganese	1.5	.01	.41	0.050	<1.5
Molybdenum	2.0	.06	.32		
Nickel	4.0	.04	.35	0.060	<4.0
Phosphorus	20	.12	3.3		
Potassium	1000	7.7	32	14.5	<1000
Selenium	2.0	.32	.65	0.020	<2.0
Silicon	20	.17	11		
Silver	0.50	.1	.17	-0.010	<0.50
Sodium	1000	3.4	78	4.3	<1000
Strontium	5.0	.03	.18		
Sulfur	10	.3	3.9		
Thallium	1.0	.18	.58	0.19	<1.0
Tin	20	.08	3.8		
Titanium	1.0	.05	.34		
Tungsten	5.0	.26	1.8		
Vanadium	5.0	.06	.19	0.020	<5.0
Zinc	5.0	.01	2.3	0.39	<5.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/23/22

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.03	.54		

Associated samples MP36551: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/23/22

Metal	JD55906-4 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	23200	33400	3210	318.1(a)	75-125
Antimony	0.0	107	257	41.7N(b)	75-125
Arsenic	2.1	217	257	83.8	75-125
Barium	76.6	321	257	95.3	75-125
Beryllium	0.57	230	257	89.4	75-125
Bismuth					
Boron	anr				
Cadmium	0.17	229	257	89.2	75-125
Calcium	454	3500	3210	95.0	75-125
Chromium	21.2	260	257	93.1	75-125
Cobalt	3.9	233	257	89.3	75-125
Copper	8.2	244	257	91.9	75-125
Iron	12200	16800	3210	143.5N(b	75-125
Lead	13.4	245	257	90.3	75-125
Lithium					
Magnesium	1790	5150	3210	104.8	75-125
Manganese	44.8	285	257	93.6	75-125
Molybdenum					
Nickel	10.7	242	257	90.2	75-125
Phosphorus					
Potassium	734	4710	3210	124.0	75-125
Selenium	0.53	216	257	84.0	75-125
Silicon					
Silver	0.17	30.7	32.1	95.2	75-125
Sodium	60.2	3040	3210	92.9	75-125
Strontium					
Sulfur					
Thallium	0.46	235	257	91.4	75-125
Tin	anr				
Titanium					
Tungsten					
Vanadium	34.0	278	257	95.1	75-125
Zinc	44.0	272	257	88.9	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/23/22

Metal	JD55906-4 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP36551: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/23/22

Metal	JD55906-4 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	23200	33200	3300	302.8(a)	0.6	20
Antimony	0.0	109	264	41.3N(b)	1.9	20
Arsenic	2.1	223	264	83.6	2.7	20
Barium	76.6	320	264	92.1	0.3	20
Beryllium	0.57	233	264	88.0	1.3	20
Bismuth						
Boron	anr					
Cadmium	0.17	232	264	87.7	1.3	20
Calcium	454	3540	3300	93.4	1.1	20
Chromium	21.2	263	264	91.5	1.1	20
Cobalt	3.9	238	264	88.6	2.1	20
Copper	8.2	246	264	90.0	0.8	20
Iron	12200	17800	3300	169.6N(b	5.8	20
Lead	13.4	248	264	88.8	1.2	20
Lithium						
Magnesium	1790	5240	3300	104.5	1.7	20
Manganese	44.8	289	264	92.4	1.4	20
Molybdenum						
Nickel	10.7	246	264	89.1	1.6	20
Phosphorus						
Potassium	734	4760	3300	121.9	1.1	20
Selenium	0.53	221	264	83.4	2.3	20
Silicon						
Silver	0.17	31.1	33	93.7	1.3	20
Sodium	60.2	3100	3300	92.0	2.0	20
Strontium						
Sulfur						
Thallium	0.46	241	264	91.0	2.5	20
Tin	anr					
Titanium						
Tungsten						
Vanadium	34.0	280	264	93.1	0.7	20
Zinc	44.0	278	264	88.6	2.2	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/23/22

Metal	JD55906-4 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP36551: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/23/22

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2280	2500	91.2	80-120
Antimony	177	200	88.5	80-120
Arsenic	175	200	87.5	80-120
Barium	180	200	90.0	80-120
Beryllium	181	200	90.5	80-120
Bismuth				
Boron	anr			
Cadmium	181	200	90.5	80-120
Calcium	2280	2500	91.2	80-120
Chromium	181	200	90.5	80-120
Cobalt	177	200	88.5	80-120
Copper	177	200	88.5	80-120
Iron	2260	2500	90.4	80-120
Lead	179	200	89.5	80-120
Lithium				
Magnesium	2260	2500	90.4	80-120
Manganese	183	200	91.5	80-120
Molybdenum				
Nickel	178	200	89.0	80-120
Phosphorus				
Potassium	2280	2500	91.2	80-120
Selenium	175	200	87.5	80-120
Silicon				
Silver	23.3	25	93.2	80-120
Sodium	2300	2500	92.0	80-120
Strontium				
Sulfur				
Thallium	186	200	93.0	80-120
Tin	anr			
Titanium				
Tungsten				
Vanadium	179	200	89.5	80-120
Zinc	182	200	91.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 11/23/22

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP36551: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/23/22

Metal	JD55906-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum	176000	178000	1.1	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	15.6	17.8	14.1 (a)	0-10
Barium	580	588	1.4	0-10
Beryllium	4.30	3.60	16.3 (a)	0-10
Bismuth				
Boron	anr			
Cadmium	1.30	0.00	100.0(a)	0-10
Calcium	3440	3490	1.3	0-10
Chromium	160	160	0.3	0-10
Cobalt	29.5	27.0	8.5	0-10
Copper	62.3	63.2	1.4	0-10
Iron	92400	95400	3.2	0-10
Lead	102	102	0.0	0-10
Lithium				
Magnesium	13500	13800	2.2	0-10
Manganese	340	342	0.6	0-10
Molybdenum				
Nickel	80.9	78.4	3.1	0-10
Phosphorus				
Potassium	5560	6080	9.4	0-10
Selenium	4.00	0.00	100.0(a)	0-10
Silicon				
Silver	1.30	0.00	100.0(a)	0-10
Sodium	456	366	19.6 (a)	0-10
Strontium				
Sulfur				
Thallium	3.50	0.00	100.0(a)	0-10
Tin	anr			
Titanium				
Tungsten				
Vanadium	257	257	0.1	0-10
Zinc	333	340	2.1	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/23/22

Metal	JD55906-4 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP36551: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/23/22

Metal	Sample ml	Final ml	JD55906-4 Raw	JD55906-4 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20			1836	0.2	200	2000	91.8	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36551
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 11/23/22

Metal	Sample ml	Final ml	JD55906-4 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP36551: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36603 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/23/22

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0057	.015	-0.0030	<0.033

Associated samples MP36603: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36603
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/23/22

Metal	JD56076-1 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.019	0.38	0.322	112.2	80-120

Associated samples MP36603: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36603 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 11/23/22

Metal	JD56076-1 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.019	0.29	0.299	90.7	26.9 (a)	20

Associated samples MP36603: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) High rpd due to possible sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP36603
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/23/22

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.32	0.333	96.0	80-120

Associated samples MP36603: JD56110-1, JD56110-2, JD56110-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP43760/GN36153	0.40	0.0	mg/kg	40	36.6	91.5	80-120%
Chromium, Hexavalent	GP43760/GN36153			mg/kg	926.733	878	94.7	80-120%
Cyanide	GP43728/GN36023	0.24	0.0	mg/kg	2	1.90	95.0	90-110%

Associated Samples:
Batch GP43728: JD56110-1, JD56110-2, JD56110-3
Batch GP43760: JD56110-1, JD56110-2, JD56110-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP43760/GN36153	JD56093-2	mg/kg	0.0	0.0	0.0	0-20%
Cyanide	GP43728/GN36023	JD56110-1	mg/kg	0.0	0.0	0.0	0-49%
Solids, Percent	GN36108	JD55783-3	%	91.9	92.7	0.9	0-10%

Associated Samples:
Batch GN36108: JD56110-1, JD56110-2, JD56110-3
Batch GP43728: JD56110-1, JD56110-2, JD56110-3
Batch GP43760: JD56110-1, JD56110-2, JD56110-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD56110
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP43760/GN36153	JD56093-2	mg/kg	0.0	914	901	98.6(a)	75-125%
Chromium, Hexavalent	GP43760/GN36153	JD56093-2	mg/kg	0.0	45.8	44.2	96.5(b)	75-125%
Cyanide	GP43728/GN36023	JD56110-1	mg/kg	0.0	2.14	2.4	112.2	75-125%
Cyanide	GP43728/GN36023	JD56110-2	mg/kg	0.0	2.52	2.8	110.9	75-125%

Associated Samples:
Batch GP43728: JD56110-1, JD56110-2, JD56110-3
Batch GP43760: JD56110-1, JD56110-2, JD56110-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.
(b) Good recovery on soluble XCR matrix spike. Good recovery (105 %) on the post-spike.

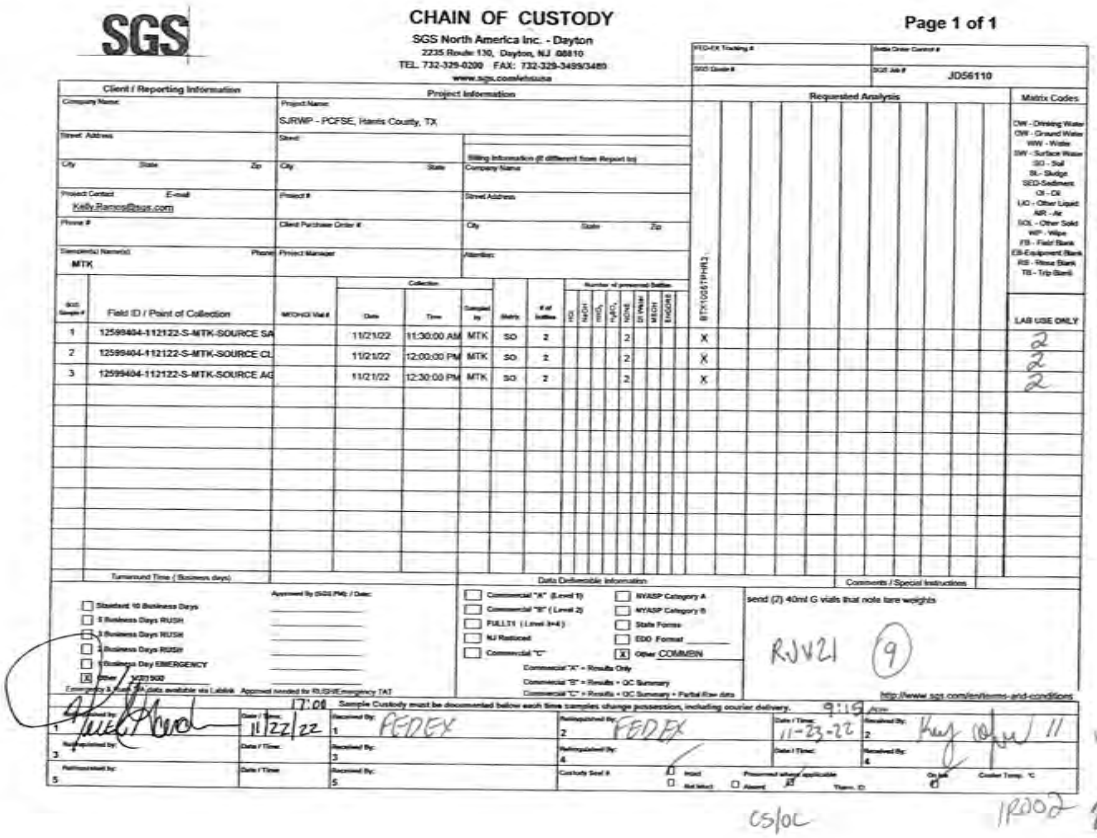
Misc. Forms

Custody Documents and Other Forms

(SGS Scott, LA)

Includes the following where applicable:

- Chain of Custody



SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #:
Bottle Order Control #:
SGS Quote #:
SGS Job #: JD56110

Client / Reporting Information

Company Name:
Street Address:
City: State: Zip:
Project Contact: E-mail: Kelly.Ramos@sgs.com
Phone #:
Sample(s) Name(s): MTK
Phone:

Project Information

Project Name: SJRWP - PCFSE, Harris County, TX
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

Sample #	Field ID / Point of Collection	MTCH/CI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENGINE	BTX100STPHR3	LAB USE ONLY
1	12599404-112122-S-MTK-SOURCE SA		11/21/22	11:30:00 AM	MTK	SO	2					2				X	2
2	12599404-112122-S-MTK-SOURCE CL		11/21/22	12:00:00 PM	MTK	SO	2					2				X	2
3	12599404-112122-S-MTK-SOURCE AG		11/21/22	12:30:00 PM	MTK	SO	2					2				X	2

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RS - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days):
Approved by (SGS PM): / Date:
- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [x] Other 1/27/2022

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information:
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULL31 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [x] Other COMMBN

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions:
send (2) 40ml G vials that note tare weights

RJV21 (9)

http://www.sgs.com/en/terms-and-conditions

17:00 Sample Custody must be documented below each time samples change possession, including courier delivery. 9:15 AM

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	11/22/22	1 FEDEX	2 FEDEX	11-23-22	2 [signature] 11
3		3	4		4
5		5			

Custody Seal #: ☐ Intact ☐ Not Intact ☐ Absent ☐ Preserved where applicable ☐ Thermo. ID ☐ On Ice ☐ Cooler Temp. °C

11-23-22 9:15

CS/OC 1R002 2.2

11.1

11

JD56110: Chain of Custody
Page 1 of 3
SGS Scott, LA

Date / Time: 11/22/2022 11:35:57 AM
CSR: KELLYR
Job #: JD56110
Client Project: SJRWP - PCFSE, Harris County, TX
Deliverable: COMMBN
TAT: 3

Sub Lab: SGS - Scott, LA
Address: 500 Ambassador Caffery Parkway
City: Scott
State: LA Zip: 70583
Contact: Sample Mgmt
Phone: 337-237-4775

SGS Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
JD56110-1	12599404-112122-S-MTK-SOURCE SAND-1	BTX1005TPHR3 ,	14D3 ,4937 ,D16 ,L6 T1 ,P16 ,	MTK	11/21/2022	11:30:00 AM	
JD56110-2	12599404-112122-S-MTK-SOURCE CLAY-1	BTX1005TPHR3 ,	14D3 ,4937 ,D16 ,L6 T1 ,P16 ,	MTK	11/21/2022	12:00:00 PM	
JD56110-3	12599404-112122-S-MTK-SOURCE AGGREGATE-1	BTX1005TPHR3 ,	14D3 ,4937 ,D16 ,L6 T1 ,P16 ,	MTK	11/21/2022	12:30:00 PM	

Comments: send (2) 40ml G vials that note tare weights

Sample Management Receipt: _____ Date: _____

JD56110: Chain of Custody
Page 2 of 3

ORIGIN ID:ZRPA (732) 329-0200
SAMPLE MANAGEMENT
SGS NORTH AMERICA INC.
2235 US HIGHWAY 130

DAYTON, NJ 08810
UNITED STATES US

SHIP DATE: 22NOV22
ACTWGT: 20.90 LB
CAD: 0692838/CAFE3211

BILL SENDER

TO SAMPLE MANAGEMENT
SGS EHS ALLA
500 AMBASSADOR CAFFERY PARKWAY

SCOTT LA 70583
(337) 237-4776 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 5894 7368 9304

WED - 23 NOV 10:30A
PRIORITY OVERNIGHT

XH LFTA

70583
LA-US LFT

JD56110: Chain of Custody
Page 3 of 3

GC/LC Semi-volatiles

QC Data Summaries

(SGS Scott, LA)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD56110
Account: ALNJ SGS Dayton, NJ
Project: CRATXH: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21838-MB	JF124365.D	1	12/01/22	KM	12/01/22	OP21838	GJJ2448

The QC reported here applies to the following samples: **Method:** TNRCC 1005

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	25	13	mg/kg	
	TPH (> C12-C28)	ND	25	13	mg/kg	
	TPH (> C28-C35)	ND	25	13	mg/kg	
	TPH (C6-C35)	ND	25	13	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	80% [a]	70-130%
98-08-8	aaa-Trifluorotoluene	70% [a]	70-130%

(a) Recovery corrected for double spike.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD56110
Account: ALNJ SGS Dayton, NJ
Project: CRATXH: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21838-BS	JF124366.D	1	12/01/22	KM	12/01/22	OP21838	GJJ2448
OP21838-BSD	JF124367.D	1	12/02/22	KM	12/01/22	OP21838	GJJ2448

The QC reported here applies to the following samples: **Method:** TNRCC 1005

JD56110-1, JD56110-2, JD56110-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	262	105	219	88	18	75-125/20
	TPH (> C12-C28)	250	283	113	286	114	1	75-125/20
	TPH (C6-C35)	500	545	109	505	101	8	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	110%	109%	70-130%
98-08-8	aaa-Trifluorotoluene	113%	113%	70-130%

12.2.1

12

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JD56110
Account: ALNJ SGS Dayton, NJ
Project: CRATXH: SJRWP - PCFSE, Harris County, TX

Method: TNRCC 1005 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]
JD56110-1	JF124368.D	105	106
JD56110-2	JF124369.D	110	113
JD56110-3	JF124371.D	109	112
OP21838-BS	JF124366.D	110	113
OP21838-BSD	JF124367.D	109	113
OP21838-MB	JF124365.D	80 [b]	70 [b]

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	70-130%
S2 = aaa-Trifluorotoluene	70-130%

(a) Recovery from GC signal #1
(b) Recovery corrected for double spike.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-001; PO# 340-009816

SGS Job Number: JD60799

Sampling Date: 02/23/23

Report to:

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Kathleen.Shaw@ghd.com;mary.cameron@ghd.com
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Total number of pages in report: **30**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sample Summary

GHD Services Inc.

Job No: JD60799

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001; PO# 340-009816

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD60799-1	02/23/23	13:07	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-1
JD60799-2	02/23/23	13:08	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-2
JD60799-3	02/23/23	13:09	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-3
JD60799-4	02/23/23	13:10	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-4
JD60799-5	02/23/23	13:20	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-5
JD60799-6	02/23/23	13:21	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-6
JD60799-7	02/23/23	13:22	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-7
JD60799-8	02/23/23	13:23	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-8
JD60799-9	02/23/23	13:30	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-9
JD60799-10	02/23/23	13:31	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-10
JD60799-11	02/23/23	13:32	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-11
JD60799-12	02/23/23	13:33	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-12
JD60799-13	02/23/23	14:00	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-13

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

GHD Services Inc.

Job No: JD60799

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001; PO# 340-009816

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD60799-14	02/23/23	14:01	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-14
JD60799-15	02/23/23	14:02	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-15
JD60799-16	02/23/23	14:03	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-16
JD60799-17	02/23/23	14:10	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-17
JD60799-18	02/23/23	14:11	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-18
JD60799-19	02/23/23	14:12	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-19
JD60799-20	02/23/23	14:13	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-20
JD60799-21	02/23/23	14:20	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-21
JD60799-22	02/23/23	14:21	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-22
JD60799-23	02/23/23	14:22	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-23
JD60799-24	02/23/23	14:33	MTK	02/24/23	SO	Soil	12599404-022323-S-MTK-FILL-24

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-1		
Lab Sample ID:	JD60799-1	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	82.7
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5810	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.2	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	42.1	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.46	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	17200	590	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	6.9	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.3	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	7000	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	4.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	886	590	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	138	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.4	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	12.8	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	14.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-2		
Lab Sample ID:	JD60799-2	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	82.9
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7550	62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.2	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	68.7	25	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.57	0.25	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.62	0.62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	29300	1200	mg/kg	2	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	9.1	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.2	6.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.1	3.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10100	62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.2	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1210	620	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	202	1.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.7	5.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.62	0.62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	18.4	6.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.8	6.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-3		
Lab Sample ID:	JD60799-3	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	80.8
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9150	64	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.6	2.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.4	2.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	53.2	26	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.65	0.26	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.64	0.64	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	17600	640	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.3	1.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.4	6.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.3	3.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11000	64	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.3	2.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1290	640	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	93.6	1.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.7	5.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.6	2.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.64	0.64	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	18.5	6.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.9	6.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-4		
Lab Sample ID:	JD60799-4	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	82.2
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	5430	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.5	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	33.1	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.46	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	23300	580	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	7.0	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.8	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.2	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	6810	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	3.9	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	913	580	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	119	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.039	0.039	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.4	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	12.4	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	16.4	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-5		
Lab Sample ID:	JD60799-5	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	83.2
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4740	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.6	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	31.5	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.39	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	24300	1200	mg/kg	2	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	6.5	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.8	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.0	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	6220	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	3.4	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	802	580	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	119	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.035	0.035	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.3	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	11.4	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	13.5	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-6		
Lab Sample ID:	JD60799-6	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	83.0
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	4100	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.6	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	26.7	24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.35	0.24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	26400	1200	mg/kg	2	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	4.8	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	< 3.0	3.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	4840	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	3.0	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	636	590	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	73.2	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 4.7	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	10.2	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	9.6	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-7		
Lab Sample ID:	JD60799-7	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	91.0
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10200	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.7	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	74.9	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.70	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	35200	1100	mg/kg	2	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.7	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	7.8	2.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10900	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.5	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1560	570	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	186	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.3	4.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	20.5	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.0	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-8		
Lab Sample ID:	JD60799-8	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	84.1
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12900	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.9	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	111	24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.84	0.24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	39700	2900	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.6	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	7.6	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	13500	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.8	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1960	590	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	312	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.036	0.036	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.1	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	1400	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	25.7	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	29.0	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-9		
Lab Sample ID:	JD60799-9	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	83.5
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8800	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.6	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	70.3	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.65	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	39000	2900	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.0	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10500	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.0	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1360	570	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	213	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.039	0.039	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.5	4.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	18.9	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	23.0	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-10		
Lab Sample ID:	JD60799-10	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	90.6
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8690	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.4	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	73.0	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.61	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	34400	2800	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.2	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.9	2.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10200	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.8	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1370	570	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	269	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.2	4.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	18.7	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.1	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-11		
Lab Sample ID:	JD60799-11	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	82.7
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9840	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.7	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	60.8	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.67	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	32900	2900	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.9	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.1	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10000	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.4	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1370	590	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	146	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.036	0.036	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.8	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	19.1	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.2	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-12		
Lab Sample ID:	JD60799-12	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	79.3
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9270	61	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.9	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	69.5	24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.64	0.24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	15300	610	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.3	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.8	3.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11900	61	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.3	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1390	610	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	150	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.8	4.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	17.7	6.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.8	6.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-13		
Lab Sample ID:	JD60799-13	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	86.1
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	6150	56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.0	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	51.4	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.48	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	32400	2800	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	8.0	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.7	2.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8150	56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	4.5	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1040	560	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	174	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.6	4.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	14.0	5.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	19.3	5.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-14		
Lab Sample ID:	JD60799-14	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	83.5
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8990	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	6.0	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	83.2	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.73	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	33600	2900	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	10.6	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	8.6	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12300	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.5	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1470	580	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	363	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.035	0.035	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	13.2	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.8	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	38.1	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-15		
Lab Sample ID:	JD60799-15	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	81.3
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9560	63	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.8	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	83.8	25	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.68	0.25	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.63	0.63	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	21600	630	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.9	1.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.3	6.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	7.8	3.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11400	63	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.6	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1560	630	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	151	1.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.6	5.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.63	0.63	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	16.2	6.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	29.9	6.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-16		
Lab Sample ID:	JD60799-16	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	85.0
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8320	56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.9	2.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	53.5	22	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.64	0.22	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	23200	1100	mg/kg	2	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.1	2.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	9430	56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.7	2.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1260	560	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	133	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.7	4.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	15.4	5.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.8	5.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-17		
Lab Sample ID:	JD60799-17	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	83.4
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9250	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.6	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	63.3	24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.63	0.24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	31300	3000	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.8	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.6	3.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	9260	59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.9	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1390	590	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	183	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.032	0.032	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.8	4.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	16.9	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.4	5.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-18		
Lab Sample ID:	JD60799-18	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	81.9
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10300	62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.0	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	52.7	25	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.67	0.25	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.62	0.62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	8230	620	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.5	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.2	6.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.0	3.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10600	62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.7	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1260	620	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	37.6	1.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.031	0.031	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	5.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.62	0.62	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	15.0	6.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	17.8	6.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-19		
Lab Sample ID:	JD60799-19	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	86.0
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8550	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	8.8	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	99.9	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.84	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4690	570	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	9.3	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	76.7	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	8.9	2.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	18600	57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	26.7	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1080	570	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	715	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.036	0.036	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.8	4.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	0.64	0.57	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	1.1	1.1	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	28.0	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	16.7	5.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-20		
Lab Sample ID:	JD60799-20	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	82.9
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9930	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.9	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	86.6	23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.80	0.23	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	9140	580	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.1	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	14.6	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.9	2.9	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11600	58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	13.2	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1300	580	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	316	1.7	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.031	0.031	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.4	4.6	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	16.4	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	21.0	5.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38061
(4) Prep QC Batch: MP38098

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-21		
Lab Sample ID:	JD60799-21	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	76.0
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12700	67	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony [a]	< 13	13	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic [a]	38.1	13	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	168	27	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.9	0.27	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium [a]	< 3.4	3.4	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	17700	670	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium [a]	20.0	6.7	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	20.0	6.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper [a]	29.5	17	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	49100	340	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	28.7	2.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2250	670	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese [a]	724	10	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.034	0.034	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	42.7	5.4	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium [a]	< 13	13	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver [a]	< 3.4	3.4	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium [a]	< 6.7	6.7	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	74.7	6.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	57.3	6.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38062
(4) Prep QC Batch: MP38099

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-22		
Lab Sample ID:	JD60799-22	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	80.1
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	17600	61	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.4	2.4	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	116	24	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.6	0.24	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	78400	3100	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	23.0	1.2	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	8.2	6.1	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	12.8	3.1	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	19400	61	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	11.2	2.4	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	3130	610	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	536	1.8	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.037	0.037	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	20.8	4.9	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	2590	1200	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	2.0	1.2	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	38.4	6.1	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	47.0	6.1	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38062
(4) Prep QC Batch: MP38099

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-23		
Lab Sample ID:	JD60799-23	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	84.8
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	8660	57	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.1	2.3	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	60.2	23	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.68	0.23	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	52600	2900	mg/kg	5	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.8	1.1	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.2	2.9	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11200	57	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.8	2.3	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1650	570	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	175	1.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.030	0.030	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.0	4.6	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	19.1	5.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	23.7	5.7	mg/kg	1	02/25/23	02/28/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Prep QC Batch: MP38062
(4) Prep QC Batch: MP38099

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-022323-S-MTK-FILL-24		
Lab Sample ID:	JD60799-24	**Date Sampled:**	02/23/23
Matrix:	SO - Soil	**Date Received:**	02/24/23
		Percent Solids:	84.1
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10800	60	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	7.6	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	108	24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.91	0.24	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.60	0.60	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	29000	1200	mg/kg	2	02/25/23	02/28/23	ND	SW846 6010D [3]	SW846 3050B [4]
Chromium	12.6	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	< 6.0	6.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	7.4	3.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	16800	60	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	11.3	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1610	600	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	250	1.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.032	0.032	mg/kg	1	02/27/23	02/28/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	12.3	4.8	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.4	2.4	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.60	0.60	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	36.9	6.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	24.7	6.0	mg/kg	1	02/25/23	02/27/23	ND	SW846 6010D [2]	SW846 3050B [4]

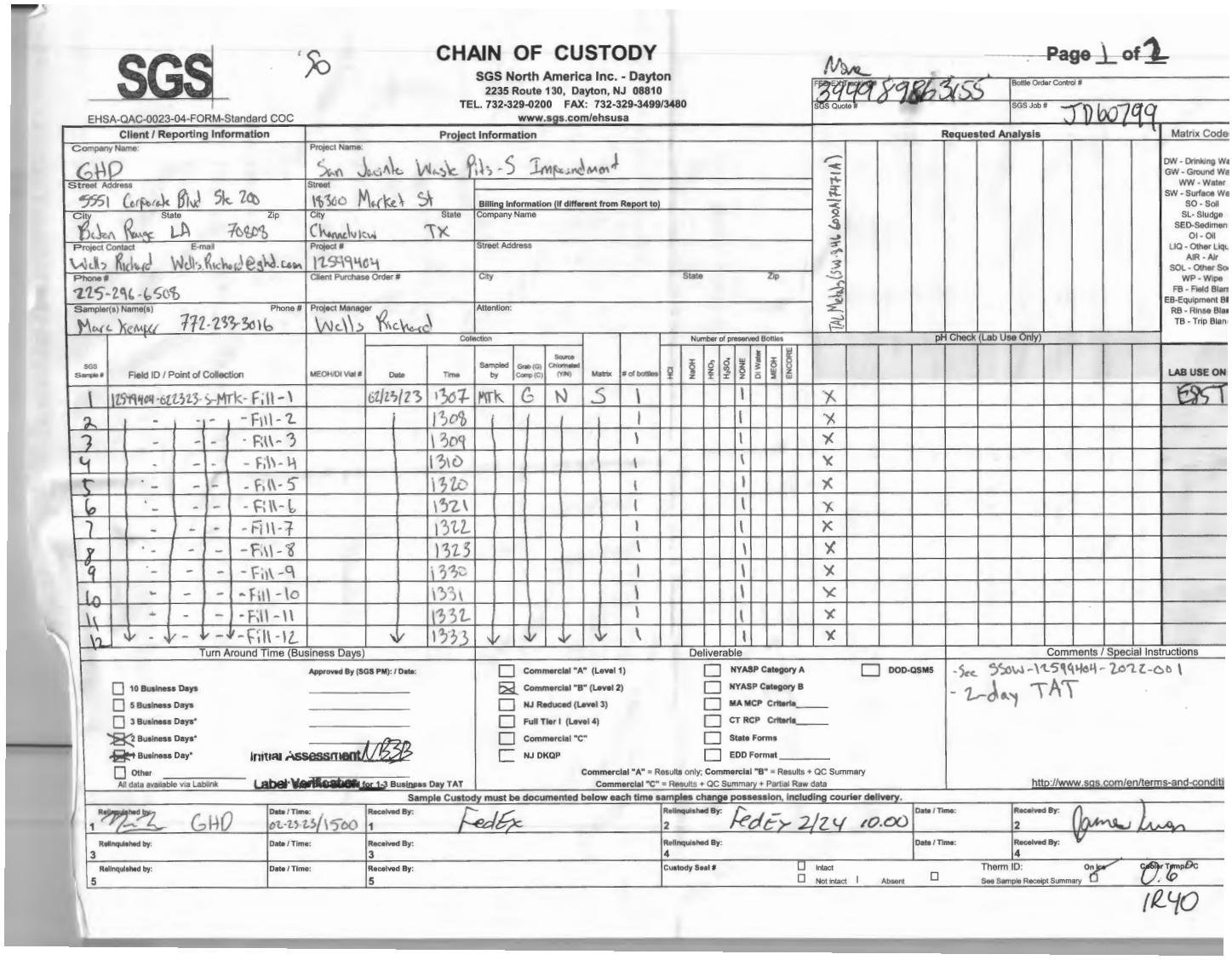
(1) Instrument QC Batch: MA53795
(2) Instrument QC Batch: MA53797
(3) Instrument QC Batch: MA53800
(4) Prep QC Batch: MP38062
(5) Prep QC Batch: MP38099

RL = Reporting Limit

SGS

EHSA-QAC-0023-04-FORM-Standard COC

'So



CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

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None

FED EXT Tracking # 399989863155

Bottle Order Control #

SGS Quote #

SGS Job # JD60799

Client / Reporting Information	Project Information	Requested Analysis
Company Name: GHD	Project Name: San Jacinto Waste Pits-S Impoundment	TAL Metals (SW-846 6010A/7471A)
Street Address: 5551 Corporate Blvd Ste 200	Street: 18300 Market St	
City: Baton Rouge State: LA Zip: 70808	City: Channelview State: TX	Billing Information (If different from Report to) Company Name
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com	Project #: 12599404	Street Address
Phone #: 225-296-6508	Client Purchase Order #	City State Zip
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016	Project Manager: Wells Richard	Attention:

Matrix Code: DW - Drinking Wa; GW - Ground Wa; WW - Water; SW - Surface Wa; SO - Soil; SL- Sludge; SED-Sedimen; OI - Oil; LIQ - Other Liqu; AIR - Air; SOL - Other So; WP - Wipe; FB - Field Blan; EB-Equipment Bl; RB - Rinse Blan; TB - Trip Blan

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ON
1	12599404-022323-S-MTK-Fill-1		02/23/23	1307	MTK	G	N	S	1					1				X	E85T
2	- - - - Fill-2			1308					1					1				X	
3	- - - - Fill-3			1309					1					1				X	
4	- - - - Fill-4			1310					1					1				X	
5	- - - - Fill-5			1320					1					1				X	
6	- - - - Fill-6			1321					1					1				X	
7	- - - - Fill-7			1322					1					1				X	
8	- - - - Fill-8			1323					1					1				X	
9	- - - - Fill-9			1330					1					1				X	
10	- - - - Fill-10			1331					1					1				X	
11	- - - - Fill-11			1332					1					1				X	
12	- - - - Fill-12			1333					1					1				X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [x] 2 Business Days*
- [x] 1 Business Day*
- [ ] Other

All data available via Lablink

Initial Assessment NB3B

Label Verification for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria____
- [ ] CT RCP Criteria____
- [ ] State Forms
- [ ] EDD Format____
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

- See SSOW-12599404-2022-001
- 2-day TAT

http://www.sgs.com/en/terms-and-conditi

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature] GHD	02-23-23/1500	1 FedEx	2 FedEx 2/24 10.00		2 James Lucas
3		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact ☐ Absent	Therm ID: On Ice ☑ See Sample Receipt Summary ☐ Cooler Temp °C 0.6

1R40

JD60799: Chain of Custody
Page 1 of 3

CHAIN OF CUSTODY

SGS

EHSA-QAC-0023-04-FORM-Standard COC

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD60799

Client / Reporting Information

Company Name: GHD
Street Address: 5551 Corporate Blv St 200
City: Baton Rouge State: LA Zip: 70808
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com
Phone #: 225-296-6508
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016

Project Information

Project Name: San Jacinto Waste Pits - S Impoundment
Street: 18300 Market St
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

TAL Metals (Sw-846 6020A/7471A)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
13	12599404-022323-S-MTK- Fill-13		02/23/23	1400	MTK	G	N	S	1					1				X	
14	- - - - Fill-14			1401					1					1				X	
15	- - - - Fill-15			1402					1					1				X	
16	- - - - Fill-16			1403					1					1				X	
17	- - - - Fill-17			1410					1					1				X	
18	- - - - Fill-18			1411					1					1				X	
19	- - - - Fill-19			1412					1					1				X	
20	- - - - Fill-20			1413					1					1				X	
21	- - - - Fill-21			1420					1					1				X	
22	- - - - Fill-22			1421					1					1				X	
23	- - - - Fill-23			1422					1					1				X	
24	↓ - ↓ - ↓ - ↓ - Fill-24		↓	1433	↓	↓	↓	↓	1					1				X	

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [x] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria_____
- [ ] CT RCP Criteria_____
- [ ] State Forms
- [ ] EDD Format _____
- [ ] DOD-QSM5

"Commercial "A" = Results only; "Commercial "B" = Results + QC Summary
"Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

See SSOW-12599404-2022-001
-2-day TAT

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	GHD	02-23-23/1500	Fed Ex	Fed Ex 2/24 6:00		
2						
3						
4						
5						

Custody Seal # | Intact | Not intact | Absent | Therm ID: | On Ice | Cooler Temp. °C | See Sample Receipt Summary

SGS Sample Receipt Summary

Job Number: JD60799 **Client:** GHD **Project:** SAN JACINTO WASTE PITS

Date / Time Received: 2/24/2023 10:00:00 AM **Delivery Method:** FED EX **Airbill #'s:** 3949 8986 3155

Cooler Temps (Raw Measured) °C: Cooler 1: (0.6);

Cooler Temps (Corrected) °C: Cooler 1: (0.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-001

SGS Job Number: JD61207

Sampling Date: 03/01/23

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: **221**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Kelly Ramos 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD61207

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD61207-1	03/01/23	13:30	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-1 (6-8)
JD61207-2	03/01/23	13:32	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-2 (4-6)
JD61207-3	03/01/23	13:35	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-3 (2-4)
JD61207-4	03/01/23	13:39	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-4 (6-8)
JD61207-5	03/01/23	13:41	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-5 (4-6)
JD61207-6	03/01/23	13:44	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-6 (2-4)
JD61207-7	03/01/23	13:48	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-7 (6-8)
JD61207-8	03/01/23	13:51	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-8 (4-6)
JD61207-9	03/01/23	13:55	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-9 (2-4)
JD61207-10	03/01/23	13:59	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-10 (6-8)
JD61207-11	03/01/23	14:02	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-11 (4-6)
JD61207-12	03/01/23	14:05	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-12 (2-4)
JD61207-13	03/01/23	13:23	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-13 (2-4)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

GHD Services Inc.

Job No: JD61207

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD61207-14	03/01/23	13:20	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-14 (6-8)
JD61207-15	03/01/23	13:18	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-15 (4-6)
JD61207-16	03/01/23	13:16	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-16 (2-4)
JD61207-17	03/01/23	13:14	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-17 (6-8)
JD61207-18	03/01/23	13:11	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-18 (4-6)
JD61207-19	03/01/23	13:07	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-19 (2-4)
JD61207-20	03/01/23	13:04	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-20 (6-8)
JD61207-21	03/01/23	13:01	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-21 (4-6)
JD61207-22	03/01/23	12:57	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-22 (2-4)
JD61207-23	03/01/23	12:55	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-23 (6-8)
JD61207-24	03/01/23	12:53	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-24 (4-6)
JD61207-25	03/01/23	10:57	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-25 (4-6)
JD61207-26	03/01/23	11:00	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-26 (2-4)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

GHD Services Inc.

Job No: JD61207

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD61207-27	03/01/23	11:03	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-27 (6-8)
JD61207-28	03/01/23	11:05	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-28 (4-6)
JD61207-29	03/01/23	11:08	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-29 (2-4)
JD61207-30	03/01/23	11:10	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-30 (6-8)
JD61207-31	03/01/23	12:25	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-31 (4-6)
JD61207-32	03/01/23	12:28	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-32 (2-4)
JD61207-33	03/01/23	12:31	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-33 (6-8)
JD61207-34	03/01/23	12:34	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-34 (4-6)
JD61207-35	03/01/23	12:36	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-35 (2-4)
JD61207-36	03/01/23	12:39	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-36 (6-8)
JD61207-37	03/01/23	10:54	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-37 (6-8)
JD61207-38	03/01/23	10:53	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-38 (4-6)
JD61207-39	03/01/23	10:50	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-39 (2-4)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

GHD Services Inc.

Job No: JD61207

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD61207-40	03/01/23	10:48	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-40 (6-8)
JD61207-41	03/01/23	10:46	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-41 (4-6)
JD61207-42	03/01/23	10:45	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-42 (2-4)
JD61207-43	03/01/23	10:42	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-43 (6-8)
JD61207-44	03/01/23	10:41	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-44 (4-6)
JD61207-45	03/01/23	10:39	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-45 (2-4)
JD61207-46	03/01/23	10:35	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-46 (6-8)
JD61207-47	03/01/23	10:30	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-47 (4-6)
JD61207-48	03/01/23	10:27	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-48 (2-4)
JD61207-49	03/01/23	09:45	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-49 (2-4)
JD61207-50	03/01/23	09:47	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-50 (6-8)
JD61207-51	03/01/23	09:50	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-51 (4-6)
JD61207-52	03/01/23	09:53	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-52 (2-4)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SGS North America Inc.

Sample Summary
(continued)

GHD Services Inc.

Job No: JD61207

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD61207-53	03/01/23	09:56	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-53 (6-8)
JD61207-54	03/01/23	09:59	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-54 (4-6)
JD61207-55	03/01/23	10:06	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-55 (2-4)
JD61207-56	03/01/23	10:11	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-56 (6-8)
JD61207-57	03/01/23	10:16	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-57 (4-6)
JD61207-58	03/01/23	10:20	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-58 (2-4)
JD61207-59	03/01/23	10:22	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-59 (6-8)
JD61207-60	03/01/23	10:25	MTK	03/02/23	SO	Soil	12599404-030123-S-MTK-BACKFILL-60 (4-6)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: GHD Services Inc. **Job No:** JD61207

Site: SJRWP - PCFSE, Harris County, TX **Report Date** 3/10/2023 3:53:57 PM

On 03/02/2023, 60 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 3.8 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD61207 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP38190

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-20MSD, JD61207-20PS, JD61207-20SDL, JD61207-20MS, JD61207-20MSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Aluminum, Antimony, Magnesium, Manganese are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony, Magnesium, Manganese are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Iron are outside control limits. Needs post spike
- The RPD(s) for the MS and MSD recoveries of Manganese are outside control limits for sample MP38190-S2. High rpd due to possible sample nonhomogeneity.
- The serial dilution RPD(s) for Cadmium, Silver are outside control limits for sample MP38190-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JD61207-5 for Thallium: Elevated detection limit due to dilution required for high interfering element.

Matrix: SO **Batch ID:** MP38191

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-21PS, JD61207-21SDL, JD61207-21MSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Aluminum, Antimony, Calcium, Magnesium, Manganese are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony, Selenium, Manganese, Barium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Iron are outside control limits. needs post spike
- The RPD(s) for the MS and MSD recoveries of Manganese, Barium are outside control limits for sample MP38191-S2. High rpd due to possible sample nonhomogeneity.
- The serial dilution RPD(s) for Cadmium, Silver, Thallium, Copper, Zinc are outside control limits for sample MP38191-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- JD61207-28 for Thallium: Elevated detection limit due to dilution required for high interfering element.
- MP38191-SD1 for Zinc: Serial dilution indicates possible matrix interference.
- MP38191-SD1 for Copper: Serial dilution indicates possible matrix interference.

Matrix: SO **Batch ID:** MP38192

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP38192

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-60MSD, JD61207-60PS, JD61207-60SDL, JD61207-60MS were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Antimony, Calcium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Antimony are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Aluminum, Iron are outside control limits. Needs post spike
- The serial dilution RPD(s) for Cadmium, Silver, Copper, Potassium, Zinc are outside control limits for sample MP38192-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP38192-SD1 for Potassium: Serial dilution indicates possible matrix interference.
- MP38192-SD1 for Copper: Serial dilution indicates possible matrix interference.
- MP38192-SD1 for Zinc: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 7471B

Matrix: SO **Batch ID:** MP38204

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61212-1MS, JD61212-1MSD were used as the QC samples for the metals analysis.

Matrix: SO **Batch ID:** MP38205

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-12MS, JD61207-12MSD were used as the QC samples for the metals analysis.

Matrix: SO **Batch ID:** MP38206

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-32MS, JD61207-32MSD were used as the QC samples for the metals analysis.

Matrix: SO **Batch ID:** MP38208

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-52MSD, JD61207-52MS were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Mercury are outside control limits. Probable cause due to matrix interference.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO	Batch ID: GN38952

- Sample(s) JD61207-1DUP were used as the QC samples for the Solids, Percent analysis.

Matrix: SO	Batch ID: GN38953

- Sample(s) JD61207-21DUP were used as the QC samples for the Solids, Percent analysis.

Matrix: SO	Batch ID: GN38954

- Sample(s) JD61207-41DUP were used as the QC samples for the Solids, Percent analysis.

General Chemistry By Method SW846 3060A/7196A

Matrix: SO	Batch ID: GP45439

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-1DUP, JD61207-1MS were used as the QC samples for the Chromium, Hexavalent analysis.
- GP45439-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (92.1%) on the post-spike.

Matrix: SO	Batch ID: GP45440

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-21DUP, JD61207-21MS were used as the QC samples for the Chromium, Hexavalent analysis.
- GP45440-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (86.9%) on the post-spike.

Matrix: SO	Batch ID: GP45441

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD61207-41MS, JD61207-41DUP were used as the QC samples for the Chromium, Hexavalent analysis.
- The duplicate RPD(s) for Chromium, Hexavalent are outside control limits for sample GP45441-D1. RPD acceptable due to low duplicate and sample concentrations.
- GP45441-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (106 %) on the post-spike.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD61207-1	**12599404-030123-S-MTK-BACKFILL-1 (6-8)**					
Aluminum		14600	60		mg/kg	SW846 6010D
Arsenic		7.7	2.4		mg/kg	SW846 6010D
Barium		78.8	24		mg/kg	SW846 6010D
Beryllium		0.96	0.24		mg/kg	SW846 6010D
Calcium		18600	600		mg/kg	SW846 6010D
Chromium		16.8	1.2		mg/kg	SW846 6010D
Copper		8.4	3.0		mg/kg	SW846 6010D
Iron		20500	60		mg/kg	SW846 6010D
Lead		7.7	2.4		mg/kg	SW846 6010D
Magnesium		2160	600		mg/kg	SW846 6010D
Manganese		143	1.8		mg/kg	SW846 6010D
Nickel		16.7	4.8		mg/kg	SW846 6010D
Vanadium		28.3	6.0		mg/kg	SW846 6010D
Zinc		35.2	6.0		mg/kg	SW846 6010D
JD61207-2	**12599404-030123-S-MTK-BACKFILL-2 (4-6)**					
Aluminum		13400	59		mg/kg	SW846 6010D
Arsenic		5.6	2.3		mg/kg	SW846 6010D
Barium		107	23		mg/kg	SW846 6010D
Beryllium		0.86	0.23		mg/kg	SW846 6010D
Calcium		69400	2900		mg/kg	SW846 6010D
Chromium		13.8	1.2		mg/kg	SW846 6010D
Copper		5.6	2.9		mg/kg	SW846 6010D
Iron		14500	59		mg/kg	SW846 6010D
Lead		6.4	2.3		mg/kg	SW846 6010D
Magnesium		1740	590		mg/kg	SW846 6010D
Manganese		166	1.8		mg/kg	SW846 6010D
Nickel		14.7	4.7		mg/kg	SW846 6010D
Vanadium		23.6	5.9		mg/kg	SW846 6010D
Zinc		22.5	5.9		mg/kg	SW846 6010D
JD61207-3	**12599404-030123-S-MTK-BACKFILL-3 (2-4)**					
Aluminum		10600	61		mg/kg	SW846 6010D
Arsenic		2.5	2.4		mg/kg	SW846 6010D
Barium		37.7	24		mg/kg	SW846 6010D
Beryllium		0.61	0.24		mg/kg	SW846 6010D
Calcium		3720	610		mg/kg	SW846 6010D
Chromium		10.4	1.2		mg/kg	SW846 6010D
Copper		4.4	3.1		mg/kg	SW846 6010D
Iron		7970	61		mg/kg	SW846 6010D
Lead		8.3	2.4		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Magnesium		1130	610		mg/kg	SW846 6010D
Manganese		19.6	1.8		mg/kg	SW846 6010D
Nickel		5.2	4.9		mg/kg	SW846 6010D
Vanadium		16.3	6.1		mg/kg	SW846 6010D
Zinc		16.2	6.1		mg/kg	SW846 6010D
JD61207-4	**12599404-030123-S-MTK-BACKFILL-4 (6-8)**					
Aluminum		9240	60		mg/kg	SW846 6010D
Barium		73.5	24		mg/kg	SW846 6010D
Beryllium		0.41	0.24		mg/kg	SW846 6010D
Calcium		3050	600		mg/kg	SW846 6010D
Chromium		10.9	1.2		mg/kg	SW846 6010D
Copper		3.8	3.0		mg/kg	SW846 6010D
Iron		8080	60		mg/kg	SW846 6010D
Lead		4.4	2.4		mg/kg	SW846 6010D
Magnesium		1450	600		mg/kg	SW846 6010D
Manganese		177	1.8		mg/kg	SW846 6010D
Nickel		7.6	4.8		mg/kg	SW846 6010D
Vanadium		11.9	6.0		mg/kg	SW846 6010D
Zinc		19.6	6.0		mg/kg	SW846 6010D
JD61207-5	**12599404-030123-S-MTK-BACKFILL-5 (4-6)**					
Aluminum		16000	60		mg/kg	SW846 6010D
Arsenic		10.7	2.4		mg/kg	SW846 6010D
Barium		136	24		mg/kg	SW846 6010D
Beryllium		1.4	0.24		mg/kg	SW846 6010D
Calcium		39900	1200		mg/kg	SW846 6010D
Chromium		15.8	1.2		mg/kg	SW846 6010D
Cobalt		156	6.0		mg/kg	SW846 6010D
Copper		6.1	3.0		mg/kg	SW846 6010D
Iron		16800	60		mg/kg	SW846 6010D
Lead		96.6	2.4		mg/kg	SW846 6010D
Magnesium		1970	600		mg/kg	SW846 6010D
Manganese		714	1.8		mg/kg	SW846 6010D
Nickel		28.1	4.8		mg/kg	SW846 6010D
Vanadium		41.4	6.0		mg/kg	SW846 6010D
Zinc		22.5	6.0		mg/kg	SW846 6010D
JD61207-6	**12599404-030123-S-MTK-BACKFILL-6 (2-4)**					
Aluminum		7020	55		mg/kg	SW846 6010D
Arsenic		2.6	2.2		mg/kg	SW846 6010D
Barium		201	22		mg/kg	SW846 6010D

Summary of Hits

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Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Beryllium		0.42	0.22		mg/kg	SW846 6010D
Calcium		53800	2800		mg/kg	SW846 6010D
Chromium		6.7	1.1		mg/kg	SW846 6010D
Iron		5160	55		mg/kg	SW846 6010D
Lead		5.8	2.2		mg/kg	SW846 6010D
Magnesium		964	550		mg/kg	SW846 6010D
Manganese		288	1.7		mg/kg	SW846 6010D
Nickel		12.1	4.4		mg/kg	SW846 6010D
Vanadium		12.0	5.5		mg/kg	SW846 6010D
Zinc		9.2	5.5		mg/kg	SW846 6010D
JD61207-7	**12599404-030123-S-MTK-BACKFILL-7 (6-8)**					
Aluminum		10100	59		mg/kg	SW846 6010D
Arsenic		3.0	2.4		mg/kg	SW846 6010D
Barium		64.3	24		mg/kg	SW846 6010D
Beryllium		0.52	0.24		mg/kg	SW846 6010D
Calcium		122000	5900		mg/kg	SW846 6010D
Chromium		10.5	1.2		mg/kg	SW846 6010D
Copper		3.9	2.9		mg/kg	SW846 6010D
Iron		8200	59		mg/kg	SW846 6010D
Lead		5.3	2.4		mg/kg	SW846 6010D
Magnesium		1600	590		mg/kg	SW846 6010D
Manganese		148	1.8		mg/kg	SW846 6010D
Nickel		7.4	4.7		mg/kg	SW846 6010D
Vanadium		13.7	5.9		mg/kg	SW846 6010D
Zinc		19.0	5.9		mg/kg	SW846 6010D
JD61207-8	**12599404-030123-S-MTK-BACKFILL-8 (4-6)**					
Aluminum		14300	59		mg/kg	SW846 6010D
Arsenic		3.4	2.4		mg/kg	SW846 6010D
Barium		129	24		mg/kg	SW846 6010D
Beryllium		0.77	0.24		mg/kg	SW846 6010D
Calcium		41200	2900		mg/kg	SW846 6010D
Chromium		14.6	1.2		mg/kg	SW846 6010D
Copper		3.2	2.9		mg/kg	SW846 6010D
Iron		12300	59		mg/kg	SW846 6010D
Lead		6.4	2.4		mg/kg	SW846 6010D
Magnesium		2320	590		mg/kg	SW846 6010D
Manganese		84.7	1.8		mg/kg	SW846 6010D
Nickel		8.4	4.7		mg/kg	SW846 6010D
Vanadium		23.3	5.9		mg/kg	SW846 6010D
Zinc		23.1	5.9		mg/kg	SW846 6010D

Summary of Hits

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD61207-9	**12599404-030123-S-MTK-BACKFILL-9 (2-4)**					
Aluminum		13900	56		mg/kg	SW846 6010D
Barium		128	22		mg/kg	SW846 6010D
Beryllium		0.59	0.22		mg/kg	SW846 6010D
Calcium		47000	2800		mg/kg	SW846 6010D
Chromium		13.5	1.1		mg/kg	SW846 6010D
Copper		5.7	2.8		mg/kg	SW846 6010D
Iron		9750	56		mg/kg	SW846 6010D
Lead		5.4	2.2		mg/kg	SW846 6010D
Magnesium		2060	560		mg/kg	SW846 6010D
Manganese		35.9	1.7		mg/kg	SW846 6010D
Nickel		6.2	4.4		mg/kg	SW846 6010D
Vanadium		20.1	5.6		mg/kg	SW846 6010D
Zinc		20.0	5.6		mg/kg	SW846 6010D
JD61207-10	**12599404-030123-S-MTK-BACKFILL-10 (6-8)**					
Aluminum		15400	61		mg/kg	SW846 6010D
Arsenic		8.8	2.5		mg/kg	SW846 6010D
Barium		228	25		mg/kg	SW846 6010D
Beryllium		0.94	0.25		mg/kg	SW846 6010D
Calcium		48800	3100		mg/kg	SW846 6010D
Chromium		17.2	1.2		mg/kg	SW846 6010D
Cobalt		15.8	6.1		mg/kg	SW846 6010D
Copper		10.4	3.1		mg/kg	SW846 6010D
Iron		18900	61		mg/kg	SW846 6010D
Lead		14.7	2.5		mg/kg	SW846 6010D
Magnesium		2480	610		mg/kg	SW846 6010D
Manganese		1210	9.2		mg/kg	SW846 6010D
Nickel		28.4	4.9		mg/kg	SW846 6010D
Potassium		1430	1200		mg/kg	SW846 6010D
Vanadium		32.5	6.1		mg/kg	SW846 6010D
Zinc		34.9	6.1		mg/kg	SW846 6010D
JD61207-11	**12599404-030123-S-MTK-BACKFILL-11 (4-6)**					
Aluminum		13500	60		mg/kg	SW846 6010D
Arsenic		9.4	2.4		mg/kg	SW846 6010D
Barium		106	24		mg/kg	SW846 6010D
Beryllium		0.98	0.24		mg/kg	SW846 6010D
Calcium		27400	1200		mg/kg	SW846 6010D
Chromium		14.2	1.2		mg/kg	SW846 6010D
Cobalt		11.5	6.0		mg/kg	SW846 6010D
Copper		11.9	3.0		mg/kg	SW846 6010D

Summary of Hits

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Iron		18800	60		mg/kg	SW846 6010D
Lead		10.6	2.4		mg/kg	SW846 6010D
Magnesium		2000	600		mg/kg	SW846 6010D
Manganese		383	1.8		mg/kg	SW846 6010D
Nickel		15.0	4.8		mg/kg	SW846 6010D
Vanadium		30.3	6.0		mg/kg	SW846 6010D
Zinc		24.9	6.0		mg/kg	SW846 6010D
JD61207-12	**12599404-030123-S-MTK-BACKFILL-12 (2-4)**					
Aluminum		14700	60		mg/kg	SW846 6010D
Arsenic		3.4	2.4		mg/kg	SW846 6010D
Barium		98.8	24		mg/kg	SW846 6010D
Beryllium		0.71	0.24		mg/kg	SW846 6010D
Calcium		4150	600		mg/kg	SW846 6010D
Chromium		13.7	1.2		mg/kg	SW846 6010D
Copper		5.2	3.0		mg/kg	SW846 6010D
Iron		11500	60		mg/kg	SW846 6010D
Lead		9.4	2.4		mg/kg	SW846 6010D
Magnesium		1480	600		mg/kg	SW846 6010D
Manganese		44.9	1.8		mg/kg	SW846 6010D
Nickel		7.6	4.8		mg/kg	SW846 6010D
Vanadium		22.1	6.0		mg/kg	SW846 6010D
Zinc		19.6	6.0		mg/kg	SW846 6010D
JD61207-13	**12599404-030123-S-MTK-BACKFILL-13 (2-4)**					
Aluminum		10800	56		mg/kg	SW846 6010D
Arsenic		3.2	2.2		mg/kg	SW846 6010D
Barium		55.0	22		mg/kg	SW846 6010D
Beryllium		0.51	0.22		mg/kg	SW846 6010D
Calcium		25800	1100		mg/kg	SW846 6010D
Chromium		10.5	1.1		mg/kg	SW846 6010D
Copper		3.1	2.8		mg/kg	SW846 6010D
Iron		10100	56		mg/kg	SW846 6010D
Lead		6.2	2.2		mg/kg	SW846 6010D
Magnesium		1240	560		mg/kg	SW846 6010D
Manganese		14.6	1.7		mg/kg	SW846 6010D
Nickel		5.6	4.4		mg/kg	SW846 6010D
Vanadium		19.0	5.6		mg/kg	SW846 6010D
Zinc		13.9	5.6		mg/kg	SW846 6010D
JD61207-14	**12599404-030123-S-MTK-BACKFILL-14 (6-8)**					
Aluminum		14200	63		mg/kg	SW846 6010D

Summary of Hits

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Arsenic		7.7	2.5		mg/kg	SW846 6010D
Barium		222	25		mg/kg	SW846 6010D
Beryllium		1.1	0.25		mg/kg	SW846 6010D
Calcium		9250	630		mg/kg	SW846 6010D
Chromium		16.1	1.3		mg/kg	SW846 6010D
Cobalt		21.1	6.3		mg/kg	SW846 6010D
Copper		10.0	3.1		mg/kg	SW846 6010D
Iron		18400	63		mg/kg	SW846 6010D
Lead		15.9	2.5		mg/kg	SW846 6010D
Magnesium		2450	630		mg/kg	SW846 6010D
Manganese		939	1.9		mg/kg	SW846 6010D
Nickel		36.4	5.0		mg/kg	SW846 6010D
Vanadium		25.6	6.3		mg/kg	SW846 6010D
Zinc		35.8	6.3		mg/kg	SW846 6010D
JD61207-15	**12599404-030123-S-MTK-BACKFILL-15 (4-6)**					
Aluminum		9260	59		mg/kg	SW846 6010D
Barium		61.4	24		mg/kg	SW846 6010D
Beryllium		0.59	0.24		mg/kg	SW846 6010D
Calcium		2850	590		mg/kg	SW846 6010D
Chromium		9.2	1.2		mg/kg	SW846 6010D
Iron		8100	59		mg/kg	SW846 6010D
Lead		7.4	2.4		mg/kg	SW846 6010D
Magnesium		1060	590		mg/kg	SW846 6010D
Manganese		16.9	1.8		mg/kg	SW846 6010D
Nickel		5.0	4.7		mg/kg	SW846 6010D
Vanadium		14.3	5.9		mg/kg	SW846 6010D
Zinc		13.8	5.9		mg/kg	SW846 6010D
JD61207-16	**12599404-030123-S-MTK-BACKFILL-16 (2-4)**					
Aluminum		10600	57		mg/kg	SW846 6010D
Barium		91.9	23		mg/kg	SW846 6010D
Beryllium		0.48	0.23		mg/kg	SW846 6010D
Calcium		29700	1100		mg/kg	SW846 6010D
Chromium		10.0	1.1		mg/kg	SW846 6010D
Copper		3.1	2.8		mg/kg	SW846 6010D
Iron		8370	57		mg/kg	SW846 6010D
Lead		6.1	2.3		mg/kg	SW846 6010D
Magnesium		1180	570		mg/kg	SW846 6010D
Manganese		26.0	1.7		mg/kg	SW846 6010D
Vanadium		15.8	5.7		mg/kg	SW846 6010D
Zinc		13.8	5.7		mg/kg	SW846 6010D
Chromium, Hexavalent		1.7	0.45		mg/kg	SW846 3060A/7196A

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD61207-17	**12599404-030123-S-MTK-BACKFILL-17 (6-8)**					
Aluminum		12500	60		mg/kg	SW846 6010D
Arsenic		3.0	2.4		mg/kg	SW846 6010D
Barium		33.2	24		mg/kg	SW846 6010D
Beryllium		0.68	0.24		mg/kg	SW846 6010D
Calcium		4730	600		mg/kg	SW846 6010D
Chromium		12.1	1.2		mg/kg	SW846 6010D
Copper		5.7	3.0		mg/kg	SW846 6010D
Iron		11200	60		mg/kg	SW846 6010D
Lead		7.7	2.4		mg/kg	SW846 6010D
Magnesium		1440	600		mg/kg	SW846 6010D
Manganese		52.8	1.8		mg/kg	SW846 6010D
Nickel		8.2	4.8		mg/kg	SW846 6010D
Vanadium		19.8	6.0		mg/kg	SW846 6010D
Zinc		18.4	6.0		mg/kg	SW846 6010D
Chromium, Hexavalent		0.61	0.48		mg/kg	SW846 3060A/7196A
JD61207-18	**12599404-030123-S-MTK-BACKFILL-18 (4-6)**					
Aluminum		12600	60		mg/kg	SW846 6010D
Arsenic		9.4	2.4		mg/kg	SW846 6010D
Barium		160	24		mg/kg	SW846 6010D
Beryllium		0.93	0.24		mg/kg	SW846 6010D
Calcium		4060	600		mg/kg	SW846 6010D
Chromium		12.9	1.2		mg/kg	SW846 6010D
Cobalt		7.5	6.0		mg/kg	SW846 6010D
Copper		7.7	3.0		mg/kg	SW846 6010D
Iron		15600	60		mg/kg	SW846 6010D
Lead		10.1	2.4		mg/kg	SW846 6010D
Magnesium		1580	600		mg/kg	SW846 6010D
Manganese		597	1.8		mg/kg	SW846 6010D
Nickel		19.3	4.8		mg/kg	SW846 6010D
Vanadium		25.6	6.0		mg/kg	SW846 6010D
Zinc		22.4	6.0		mg/kg	SW846 6010D
JD61207-19	**12599404-030123-S-MTK-BACKFILL-19 (2-4)**					
Aluminum		12400	64		mg/kg	SW846 6010D
Arsenic		2.9	2.5		mg/kg	SW846 6010D
Barium		136	25		mg/kg	SW846 6010D
Beryllium		0.74	0.25		mg/kg	SW846 6010D
Calcium		14900	640		mg/kg	SW846 6010D
Chromium		12.9	1.3		mg/kg	SW846 6010D

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Copper		6.7	3.2		mg/kg	SW846 6010D
Iron		10400	64		mg/kg	SW846 6010D
Lead		9.5	2.5		mg/kg	SW846 6010D
Magnesium		1410	640		mg/kg	SW846 6010D
Manganese		88.2	1.9		mg/kg	SW846 6010D
Nickel		7.2	5.1		mg/kg	SW846 6010D
Vanadium		21.1	6.4		mg/kg	SW846 6010D
Zinc		22.5	6.4		mg/kg	SW846 6010D
Chromium, Hexavalent		0.95	0.50		mg/kg	SW846 3060A/7196A
JD61207-20	**12599404-030123-S-MTK-BACKFILL-20 (6-8)**					
Aluminum		11800	61		mg/kg	SW846 6010D
Arsenic		6.8	2.5		mg/kg	SW846 6010D
Barium		54.9	25		mg/kg	SW846 6010D
Beryllium		1.1	0.25		mg/kg	SW846 6010D
Calcium		4390	610		mg/kg	SW846 6010D
Chromium		12.5	1.2		mg/kg	SW846 6010D
Copper		7.3	3.1		mg/kg	SW846 6010D
Iron		16000	61		mg/kg	SW846 6010D
Lead		7.4	2.5		mg/kg	SW846 6010D
Magnesium		1470	610		mg/kg	SW846 6010D
Manganese		132	1.8		mg/kg	SW846 6010D
Nickel		16.8	4.9		mg/kg	SW846 6010D
Vanadium		24.4	6.1		mg/kg	SW846 6010D
Zinc		22.9	6.1		mg/kg	SW846 6010D
JD61207-21	**12599404-030123-S-MTK-BACKFILL-21 (4-6)**					
Aluminum		11400	64		mg/kg	SW846 6010D
Arsenic		4.4	2.6		mg/kg	SW846 6010D
Barium		58.2	26		mg/kg	SW846 6010D
Beryllium		1.2	0.26		mg/kg	SW846 6010D
Calcium		7250	640		mg/kg	SW846 6010D
Chromium		11.5	1.3		mg/kg	SW846 6010D
Copper		5.9	3.2		mg/kg	SW846 6010D
Iron		13000	64		mg/kg	SW846 6010D
Lead		7.4	2.6		mg/kg	SW846 6010D
Magnesium		1290	640		mg/kg	SW846 6010D
Manganese		36.3	1.9		mg/kg	SW846 6010D
Nickel		14.2	5.1		mg/kg	SW846 6010D
Vanadium		17.5	6.4		mg/kg	SW846 6010D
Zinc		18.4	6.4		mg/kg	SW846 6010D

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD61207-22	**12599404-030123-S-MTK-BACKFILL-22 (2-4)**					
Aluminum		9880	63		mg/kg	SW846 6010D
Barium		90.2	25		mg/kg	SW846 6010D
Beryllium		0.86	0.25		mg/kg	SW846 6010D
Calcium		4500	630		mg/kg	SW846 6010D
Chromium		9.0	1.3		mg/kg	SW846 6010D
Copper		4.9	3.2		mg/kg	SW846 6010D
Iron		7920	63		mg/kg	SW846 6010D
Lead		10.9	2.5		mg/kg	SW846 6010D
Magnesium		861	630		mg/kg	SW846 6010D
Manganese		31.2	1.9		mg/kg	SW846 6010D
Nickel		8.4	5.1		mg/kg	SW846 6010D
Vanadium		12.6	6.3		mg/kg	SW846 6010D
Zinc		15.1	6.3		mg/kg	SW846 6010D
JD61207-23	**12599404-030123-S-MTK-BACKFILL-23 (6-8)**					
Aluminum		15400	61		mg/kg	SW846 6010D
Arsenic		3.3	2.4		mg/kg	SW846 6010D
Barium		81.7	24		mg/kg	SW846 6010D
Beryllium		0.81	0.24		mg/kg	SW846 6010D
Calcium		45200	3100		mg/kg	SW846 6010D
Chromium		15.5	1.2		mg/kg	SW846 6010D
Copper		6.8	3.1		mg/kg	SW846 6010D
Iron		13300	61		mg/kg	SW846 6010D
Lead		7.9	2.4		mg/kg	SW846 6010D
Magnesium		1750	610		mg/kg	SW846 6010D
Manganese		105	1.8		mg/kg	SW846 6010D
Nickel		10.1	4.9		mg/kg	SW846 6010D
Vanadium		20.3	6.1		mg/kg	SW846 6010D
Zinc		25.4	6.1		mg/kg	SW846 6010D
JD61207-24	**12599404-030123-S-MTK-BACKFILL-24 (4-6)**					
Aluminum		7150	63		mg/kg	SW846 6010D
Barium		72.1	25		mg/kg	SW846 6010D
Beryllium		0.62	0.25		mg/kg	SW846 6010D
Calcium		74100	3200		mg/kg	SW846 6010D
Chromium		6.9	1.3		mg/kg	SW846 6010D
Iron		6140	63		mg/kg	SW846 6010D
Lead		4.8	2.5		mg/kg	SW846 6010D
Magnesium		1110	630		mg/kg	SW846 6010D
Manganese		44.0	1.9		mg/kg	SW846 6010D
Vanadium		11.4	6.3		mg/kg	SW846 6010D

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Zinc		12.5	6.3		mg/kg	SW846 6010D
JD61207-25	**12599404-030123-S-MTK-BACKFILL-25 (4-6)**					
Aluminum		12100	64		mg/kg	SW846 6010D
Arsenic		3.2	2.6		mg/kg	SW846 6010D
Barium		51.8	26		mg/kg	SW846 6010D
Beryllium		0.83	0.26		mg/kg	SW846 6010D
Calcium		4990	640		mg/kg	SW846 6010D
Chromium		12.5	1.3		mg/kg	SW846 6010D
Copper		5.3	3.2		mg/kg	SW846 6010D
Iron		11300	64		mg/kg	SW846 6010D
Lead		8.4	2.6		mg/kg	SW846 6010D
Magnesium		1400	640		mg/kg	SW846 6010D
Manganese		47.2	1.9		mg/kg	SW846 6010D
Nickel		9.1	5.1		mg/kg	SW846 6010D
Vanadium		16.4	6.4		mg/kg	SW846 6010D
Zinc		18.5	6.4		mg/kg	SW846 6010D
JD61207-26	**12599404-030123-S-MTK-BACKFILL-26 (2-4)**					
Aluminum		11400	56		mg/kg	SW846 6010D
Arsenic		6.2	2.2		mg/kg	SW846 6010D
Barium		70.6	22		mg/kg	SW846 6010D
Beryllium		0.67	0.22		mg/kg	SW846 6010D
Calcium		5340	560		mg/kg	SW846 6010D
Chromium		12.0	1.1		mg/kg	SW846 6010D
Copper		5.9	2.8		mg/kg	SW846 6010D
Iron		14100	56		mg/kg	SW846 6010D
Lead		9.5	2.2		mg/kg	SW846 6010D
Magnesium		1310	560		mg/kg	SW846 6010D
Manganese		27.4	1.7		mg/kg	SW846 6010D
Nickel		7.9	4.5		mg/kg	SW846 6010D
Vanadium		28.2	5.6		mg/kg	SW846 6010D
Zinc		16.4	5.6		mg/kg	SW846 6010D
Chromium, Hexavalent		0.60	0.47		mg/kg	SW846 3060A/7196A
JD61207-27	**12599404-030123-S-MTK-BACKFILL-27 (6-8)**					
Aluminum		10500	61		mg/kg	SW846 6010D
Arsenic		8.0	2.4		mg/kg	SW846 6010D
Barium		61.3	24		mg/kg	SW846 6010D
Beryllium		0.75	0.24		mg/kg	SW846 6010D
Calcium		3360	610		mg/kg	SW846 6010D
Chromium		12.1	1.2		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Copper		6.4	3.1		mg/kg	SW846 6010D
Iron		16700	61		mg/kg	SW846 6010D
Lead		8.8	2.4		mg/kg	SW846 6010D
Magnesium		1590	610		mg/kg	SW846 6010D
Manganese		108	1.8		mg/kg	SW846 6010D
Nickel		12.3	4.9		mg/kg	SW846 6010D
Vanadium		21.3	6.1		mg/kg	SW846 6010D
Zinc		25.3	6.1		mg/kg	SW846 6010D
JD61207-28	**12599404-030123-S-MTK-BACKFILL-28 (4-6)**					
Aluminum		13200	60		mg/kg	SW846 6010D
Arsenic		6.6	2.4		mg/kg	SW846 6010D
Barium		276	24		mg/kg	SW846 6010D
Beryllium		1.3	0.24		mg/kg	SW846 6010D
Calcium		4160	600		mg/kg	SW846 6010D
Chromium		13.7	1.2		mg/kg	SW846 6010D
Cobalt		22.0	6.0		mg/kg	SW846 6010D
Copper		9.2	3.0		mg/kg	SW846 6010D
Iron		15700	60		mg/kg	SW846 6010D
Lead		14.8	2.4		mg/kg	SW846 6010D
Magnesium		1870	600		mg/kg	SW846 6010D
Manganese		1840	9.0		mg/kg	SW846 6010D
Nickel		39.8	4.8		mg/kg	SW846 6010D
Silver		0.64	0.60		mg/kg	SW846 6010D
Vanadium		22.3	6.0		mg/kg	SW846 6010D
Zinc		26.1	6.0		mg/kg	SW846 6010D
Chromium, Hexavalent		0.56	0.48		mg/kg	SW846 3060A/7196A
JD61207-29	**12599404-030123-S-MTK-BACKFILL-29 (2-4)**					
Aluminum		11500	57		mg/kg	SW846 6010D
Arsenic		3.1	2.3		mg/kg	SW846 6010D
Barium		76.7	23		mg/kg	SW846 6010D
Beryllium		0.57	0.23		mg/kg	SW846 6010D
Calcium		48200	2900		mg/kg	SW846 6010D
Chromium		11.8	1.1		mg/kg	SW846 6010D
Cobalt		7.2	5.7		mg/kg	SW846 6010D
Copper		4.4	2.9		mg/kg	SW846 6010D
Iron		10000	57		mg/kg	SW846 6010D
Lead		8.9	2.3		mg/kg	SW846 6010D
Magnesium		1570	570		mg/kg	SW846 6010D
Manganese		194	1.7		mg/kg	SW846 6010D
Nickel		10.6	4.6		mg/kg	SW846 6010D
Vanadium		18.4	5.7		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Zinc		16.7	5.7		mg/kg	SW846 6010D
JD61207-30	**12599404-030123-S-MTK-BACKFILL-30 (6-8)**					
Aluminum		11700	64		mg/kg	SW846 6010D
Barium		63.5	25		mg/kg	SW846 6010D
Beryllium		0.53	0.25		mg/kg	SW846 6010D
Calcium		6490	640		mg/kg	SW846 6010D
Chromium		11.9	1.3		mg/kg	SW846 6010D
Iron		9340	64		mg/kg	SW846 6010D
Lead		5.0	2.5		mg/kg	SW846 6010D
Magnesium		1580	640		mg/kg	SW846 6010D
Manganese		46.2	1.9		mg/kg	SW846 6010D
Nickel		5.7	5.1		mg/kg	SW846 6010D
Vanadium		9.8	6.4		mg/kg	SW846 6010D
Zinc		20.3	6.4		mg/kg	SW846 6010D
JD61207-31	**12599404-030123-S-MTK-BACKFILL-31 (4-6)**					
Aluminum		12800	59		mg/kg	SW846 6010D
Arsenic		5.1	2.4		mg/kg	SW846 6010D
Barium		170	24		mg/kg	SW846 6010D
Beryllium		0.81	0.24		mg/kg	SW846 6010D
Calcium		19600	590		mg/kg	SW846 6010D
Chromium		12.4	1.2		mg/kg	SW846 6010D
Cobalt		14.8	5.9		mg/kg	SW846 6010D
Copper		6.7	2.9		mg/kg	SW846 6010D
Iron		12300	59		mg/kg	SW846 6010D
Lead		14.9	2.4		mg/kg	SW846 6010D
Magnesium		1670	590		mg/kg	SW846 6010D
Manganese		833	1.8		mg/kg	SW846 6010D
Nickel		18.2	4.7		mg/kg	SW846 6010D
Vanadium		21.7	5.9		mg/kg	SW846 6010D
Zinc		21.8	5.9		mg/kg	SW846 6010D
JD61207-32	**12599404-030123-S-MTK-BACKFILL-32 (2-4)**					
Aluminum		14500	62		mg/kg	SW846 6010D
Arsenic		4.3	2.5		mg/kg	SW846 6010D
Barium		121	25		mg/kg	SW846 6010D
Beryllium		0.64	0.25		mg/kg	SW846 6010D
Calcium		37600	3100		mg/kg	SW846 6010D
Chromium		13.5	1.2		mg/kg	SW846 6010D
Copper		5.3	3.1		mg/kg	SW846 6010D
Iron		12300	62		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead		8.3	2.5		mg/kg	SW846 6010D
Magnesium		2140	620		mg/kg	SW846 6010D
Manganese		28.2	1.8		mg/kg	SW846 6010D
Nickel		5.7	4.9		mg/kg	SW846 6010D
Sodium		1720	1200		mg/kg	SW846 6010D
Vanadium		28.0	6.2		mg/kg	SW846 6010D
Zinc		19.8	6.2		mg/kg	SW846 6010D
JD61207-33	**12599404-030123-S-MTK-BACKFILL-33 (6-8)**					
Aluminum		11200	62		mg/kg	SW846 6010D
Barium		63.0	25		mg/kg	SW846 6010D
Beryllium		0.50	0.25		mg/kg	SW846 6010D
Calcium		22700	620		mg/kg	SW846 6010D
Chromium		10.7	1.2		mg/kg	SW846 6010D
Copper		4.2	3.1		mg/kg	SW846 6010D
Iron		8910	62		mg/kg	SW846 6010D
Lead		6.6	2.5		mg/kg	SW846 6010D
Magnesium		1640	620		mg/kg	SW846 6010D
Manganese		15.9	1.9		mg/kg	SW846 6010D
Sodium		1510	1200		mg/kg	SW846 6010D
Vanadium		16.7	6.2		mg/kg	SW846 6010D
Zinc		16.1	6.2		mg/kg	SW846 6010D
JD61207-34	**12599404-030123-S-MTK-BACKFILL-34 (4-6)**					
Aluminum		11000	57		mg/kg	SW846 6010D
Arsenic		3.3	2.3		mg/kg	SW846 6010D
Barium		68.4	23		mg/kg	SW846 6010D
Beryllium		0.79	0.23		mg/kg	SW846 6010D
Calcium		8750	570		mg/kg	SW846 6010D
Chromium		11.0	1.1		mg/kg	SW846 6010D
Copper		4.6	2.8		mg/kg	SW846 6010D
Iron		12400	57		mg/kg	SW846 6010D
Lead		7.7	2.3		mg/kg	SW846 6010D
Magnesium		1580	570		mg/kg	SW846 6010D
Manganese		66.5	1.7		mg/kg	SW846 6010D
Nickel		9.0	4.6		mg/kg	SW846 6010D
Sodium		1230	1100		mg/kg	SW846 6010D
Vanadium		14.2	5.7		mg/kg	SW846 6010D
Zinc		22.4	5.7		mg/kg	SW846 6010D
JD61207-35	**12599404-030123-S-MTK-BACKFILL-35 (2-4)**					
Aluminum		14600	59		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Barium		94.2	24		mg/kg	SW846 6010D
Beryllium		0.58	0.24		mg/kg	SW846 6010D
Calcium		9760	590		mg/kg	SW846 6010D
Chromium		13.9	1.2		mg/kg	SW846 6010D
Copper		5.2	2.9		mg/kg	SW846 6010D
Iron		10400	59		mg/kg	SW846 6010D
Lead		6.5	2.4		mg/kg	SW846 6010D
Magnesium		1660	590		mg/kg	SW846 6010D
Manganese		16.6	1.8		mg/kg	SW846 6010D
Nickel		5.3	4.7		mg/kg	SW846 6010D
Sodium		1470	1200		mg/kg	SW846 6010D
Vanadium		19.5	5.9		mg/kg	SW846 6010D
Zinc		18.9	5.9		mg/kg	SW846 6010D
JD61207-36	**12599404-030123-S-MTK-BACKFILL-36 (6-8)**					
Aluminum		9810	58		mg/kg	SW846 6010D
Arsenic		4.0	2.3		mg/kg	SW846 6010D
Barium		101	23		mg/kg	SW846 6010D
Beryllium		0.47	0.23		mg/kg	SW846 6010D
Calcium		92400	2900		mg/kg	SW846 6010D
Chromium		10.6	1.2		mg/kg	SW846 6010D
Cobalt		5.9	5.8		mg/kg	SW846 6010D
Copper		3.6	2.9		mg/kg	SW846 6010D
Iron		8480	58		mg/kg	SW846 6010D
Lead		6.5	2.3		mg/kg	SW846 6010D
Magnesium		1470	580		mg/kg	SW846 6010D
Manganese		323	1.7		mg/kg	SW846 6010D
Nickel		8.4	4.6		mg/kg	SW846 6010D
Vanadium		19.8	5.8		mg/kg	SW846 6010D
Zinc		17.2	5.8		mg/kg	SW846 6010D
JD61207-37	**12599404-030123-S-MTK-BACKFILL-37 (6-8)**					
Aluminum		11500	58		mg/kg	SW846 6010D
Arsenic		6.6	2.3		mg/kg	SW846 6010D
Barium		50.8	23		mg/kg	SW846 6010D
Beryllium		0.75	0.23		mg/kg	SW846 6010D
Calcium		4600	580		mg/kg	SW846 6010D
Chromium		13.1	1.2		mg/kg	SW846 6010D
Copper		6.6	2.9		mg/kg	SW846 6010D
Iron		14100	58		mg/kg	SW846 6010D
Lead		6.7	2.3		mg/kg	SW846 6010D
Magnesium		1780	580		mg/kg	SW846 6010D
Manganese		215	1.7		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nickel		14.5	4.6		mg/kg	SW846 6010D
Vanadium		21.8	5.8		mg/kg	SW846 6010D
Zinc		26.0	5.8		mg/kg	SW846 6010D
JD61207-38	**12599404-030123-S-MTK-BACKFILL-38 (4-6)**					
Aluminum		12700	60		mg/kg	SW846 6010D
Arsenic		5.3	2.4		mg/kg	SW846 6010D
Barium		112	24		mg/kg	SW846 6010D
Beryllium		0.83	0.24		mg/kg	SW846 6010D
Calcium		11600	600		mg/kg	SW846 6010D
Chromium		13.6	1.2		mg/kg	SW846 6010D
Copper		5.9	3.0		mg/kg	SW846 6010D
Iron		12900	60		mg/kg	SW846 6010D
Lead		7.0	2.4		mg/kg	SW846 6010D
Magnesium		1710	600		mg/kg	SW846 6010D
Manganese		157	1.8		mg/kg	SW846 6010D
Nickel		13.4	4.8		mg/kg	SW846 6010D
Vanadium		23.4	6.0		mg/kg	SW846 6010D
Zinc		20.2	6.0		mg/kg	SW846 6010D
JD61207-39	**12599404-030123-S-MTK-BACKFILL-39 (2-4)**					
Aluminum		14300	63		mg/kg	SW846 6010D
Arsenic		3.3	2.5		mg/kg	SW846 6010D
Barium		68.3	25		mg/kg	SW846 6010D
Beryllium		0.77	0.25		mg/kg	SW846 6010D
Calcium		3510	630		mg/kg	SW846 6010D
Chromium		13.4	1.3		mg/kg	SW846 6010D
Copper		4.6	3.1		mg/kg	SW846 6010D
Iron		11500	63		mg/kg	SW846 6010D
Lead		9.6	2.5		mg/kg	SW846 6010D
Magnesium		1450	630		mg/kg	SW846 6010D
Manganese		15.9	1.9		mg/kg	SW846 6010D
Nickel		6.6	5.0		mg/kg	SW846 6010D
Vanadium		21.5	6.3		mg/kg	SW846 6010D
Zinc		20.0	6.3		mg/kg	SW846 6010D
JD61207-40	**12599404-030123-S-MTK-BACKFILL-40 (6-8)**					
Aluminum		12000	59		mg/kg	SW846 6010D
Arsenic		5.7	2.4		mg/kg	SW846 6010D
Barium		37.0	24		mg/kg	SW846 6010D
Beryllium		0.85	0.24		mg/kg	SW846 6010D
Calcium		3560	590		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chromium		13.2	1.2		mg/kg	SW846 6010D
Copper		5.1	3.0		mg/kg	SW846 6010D
Iron		14100	59		mg/kg	SW846 6010D
Lead		10.3	2.4		mg/kg	SW846 6010D
Magnesium		1770	590		mg/kg	SW846 6010D
Manganese		127	1.8		mg/kg	SW846 6010D
Nickel		11.6	4.7		mg/kg	SW846 6010D
Vanadium		22.2	5.9		mg/kg	SW846 6010D
Zinc		27.6	5.9		mg/kg	SW846 6010D
JD61207-41	**12599404-030123-S-MTK-BACKFILL-41 (4-6)**					
Aluminum		14500	60		mg/kg	SW846 6010D
Arsenic		3.8	2.4		mg/kg	SW846 6010D
Barium		47.6	24		mg/kg	SW846 6010D
Beryllium		0.75	0.24		mg/kg	SW846 6010D
Calcium		8460	600		mg/kg	SW846 6010D
Chromium		14.8	1.2		mg/kg	SW846 6010D
Copper		6.7	3.0		mg/kg	SW846 6010D
Iron		13500	60		mg/kg	SW846 6010D
Lead		6.5	2.4		mg/kg	SW846 6010D
Magnesium		1980	600		mg/kg	SW846 6010D
Manganese		80.5	1.8		mg/kg	SW846 6010D
Nickel		9.2	4.8		mg/kg	SW846 6010D
Vanadium		22.7	6.0		mg/kg	SW846 6010D
Zinc		22.5	6.0		mg/kg	SW846 6010D
JD61207-42	**12599404-030123-S-MTK-BACKFILL-42 (2-4)**					
Aluminum		11900	59		mg/kg	SW846 6010D
Arsenic		2.6	2.3		mg/kg	SW846 6010D
Barium		73.3	23		mg/kg	SW846 6010D
Beryllium		0.46	0.23		mg/kg	SW846 6010D
Calcium		28800	1200		mg/kg	SW846 6010D
Chromium		11.6	1.2		mg/kg	SW846 6010D
Copper		3.6	2.9		mg/kg	SW846 6010D
Iron		8530	59		mg/kg	SW846 6010D
Lead		5.8	2.3		mg/kg	SW846 6010D
Magnesium		1750	590		mg/kg	SW846 6010D
Manganese		97.4	1.8		mg/kg	SW846 6010D
Nickel		5.3	4.7		mg/kg	SW846 6010D
Vanadium		19.9	5.9		mg/kg	SW846 6010D
Zinc		17.5	5.9		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD61207-43	**12599404-030123-S-MTK-BACKFILL-43 (6-8)**					
Aluminum		13300	57		mg/kg	SW846 6010D
Arsenic		4.4	2.3		mg/kg	SW846 6010D
Barium		105	23		mg/kg	SW846 6010D
Beryllium		0.76	0.23		mg/kg	SW846 6010D
Calcium		23300	1100		mg/kg	SW846 6010D
Chromium		14.3	1.1		mg/kg	SW846 6010D
Copper		7.1	2.9		mg/kg	SW846 6010D
Iron		12700	57		mg/kg	SW846 6010D
Lead		7.5	2.3		mg/kg	SW846 6010D
Magnesium		2290	570		mg/kg	SW846 6010D
Manganese		245	1.7		mg/kg	SW846 6010D
Nickel		11.7	4.6		mg/kg	SW846 6010D
Vanadium		22.7	5.7		mg/kg	SW846 6010D
Zinc		23.9	5.7		mg/kg	SW846 6010D
JD61207-44	**12599404-030123-S-MTK-BACKFILL-44 (4-6)**					
Aluminum		15700	61		mg/kg	SW846 6010D
Arsenic		3.6	2.5		mg/kg	SW846 6010D
Barium		55.7	25		mg/kg	SW846 6010D
Beryllium		1.0	0.25		mg/kg	SW846 6010D
Calcium		3470	610		mg/kg	SW846 6010D
Chromium		15.9	1.2		mg/kg	SW846 6010D
Copper		5.0	3.1		mg/kg	SW846 6010D
Iron		13000	61		mg/kg	SW846 6010D
Lead		6.4	2.5		mg/kg	SW846 6010D
Magnesium		2270	610		mg/kg	SW846 6010D
Manganese		79.3	1.8		mg/kg	SW846 6010D
Nickel		12.9	4.9		mg/kg	SW846 6010D
Vanadium		23.1	6.1		mg/kg	SW846 6010D
Zinc		26.0	6.1		mg/kg	SW846 6010D
JD61207-45	**12599404-030123-S-MTK-BACKFILL-45 (2-4)**					
Aluminum		19900	59		mg/kg	SW846 6010D
Arsenic		3.9	2.4		mg/kg	SW846 6010D
Barium		57.1	24		mg/kg	SW846 6010D
Beryllium		0.98	0.24		mg/kg	SW846 6010D
Calcium		11900	590		mg/kg	SW846 6010D
Chromium		19.4	1.2		mg/kg	SW846 6010D
Copper		6.5	3.0		mg/kg	SW846 6010D
Iron		13600	59		mg/kg	SW846 6010D
Lead		8.1	2.4		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Magnesium		2620	590		mg/kg	SW846 6010D
Manganese		27.8	1.8		mg/kg	SW846 6010D
Nickel		8.7	4.7		mg/kg	SW846 6010D
Vanadium		33.9	5.9		mg/kg	SW846 6010D
Zinc		27.8	5.9		mg/kg	SW846 6010D
JD61207-46	**12599404-030123-S-MTK-BACKFILL-46 (6-8)**					
Aluminum		13100	60		mg/kg	SW846 6010D
Arsenic		3.9	2.4		mg/kg	SW846 6010D
Barium		75.7	24		mg/kg	SW846 6010D
Beryllium		0.72	0.24		mg/kg	SW846 6010D
Calcium		21400	600		mg/kg	SW846 6010D
Chromium		14.0	1.2		mg/kg	SW846 6010D
Copper		6.2	3.0		mg/kg	SW846 6010D
Iron		12200	60		mg/kg	SW846 6010D
Lead		6.2	2.4		mg/kg	SW846 6010D
Magnesium		1900	600		mg/kg	SW846 6010D
Manganese		111	1.8		mg/kg	SW846 6010D
Nickel		8.6	4.8		mg/kg	SW846 6010D
Vanadium		22.2	6.0		mg/kg	SW846 6010D
Zinc		24.3	6.0		mg/kg	SW846 6010D
JD61207-47	**12599404-030123-S-MTK-BACKFILL-47 (4-6)**					
Aluminum		15200	59		mg/kg	SW846 6010D
Arsenic		2.9	2.4		mg/kg	SW846 6010D
Barium		50.9	24		mg/kg	SW846 6010D
Beryllium		0.93	0.24		mg/kg	SW846 6010D
Calcium		7650	590		mg/kg	SW846 6010D
Chromium		14.8	1.2		mg/kg	SW846 6010D
Copper		4.2	3.0		mg/kg	SW846 6010D
Iron		10800	59		mg/kg	SW846 6010D
Lead		9.3	2.4		mg/kg	SW846 6010D
Magnesium		1510	590		mg/kg	SW846 6010D
Manganese		38.9	1.8		mg/kg	SW846 6010D
Nickel		7.0	4.7		mg/kg	SW846 6010D
Vanadium		23.4	5.9		mg/kg	SW846 6010D
Zinc		22.4	5.9		mg/kg	SW846 6010D
JD61207-48	**12599404-030123-S-MTK-BACKFILL-48 (2-4)**					
Aluminum		12800	60		mg/kg	SW846 6010D
Arsenic		2.6	2.4		mg/kg	SW846 6010D
Barium		144	24		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Beryllium		0.97	0.24		mg/kg	SW846 6010D
Calcium		5210	600		mg/kg	SW846 6010D
Chromium		12.0	1.2		mg/kg	SW846 6010D
Copper		7.5	3.0		mg/kg	SW846 6010D
Iron		8600	60		mg/kg	SW846 6010D
Lead		8.7	2.4		mg/kg	SW846 6010D
Magnesium		1610	600		mg/kg	SW846 6010D
Manganese		17.0	1.8		mg/kg	SW846 6010D
Nickel		6.0	4.8		mg/kg	SW846 6010D
Vanadium		15.3	6.0		mg/kg	SW846 6010D
Zinc		21.7	6.0		mg/kg	SW846 6010D
Chromium, Hexavalent		0.70	0.50		mg/kg	SW846 3060A/7196A
JD61207-49	**12599404-030123-S-MTK-BACKFILL-49 (2-4)**					
Aluminum		13700	61		mg/kg	SW846 6010D
Arsenic		3.5	2.4		mg/kg	SW846 6010D
Barium		117	24		mg/kg	SW846 6010D
Beryllium		1.1	0.24		mg/kg	SW846 6010D
Calcium		18600	610		mg/kg	SW846 6010D
Chromium		14.4	1.2		mg/kg	SW846 6010D
Copper		4.8	3.1		mg/kg	SW846 6010D
Iron		11000	61		mg/kg	SW846 6010D
Lead		5.3	2.4		mg/kg	SW846 6010D
Magnesium		1760	610		mg/kg	SW846 6010D
Manganese		73.3	1.8		mg/kg	SW846 6010D
Nickel		8.9	4.9		mg/kg	SW846 6010D
Vanadium		23.8	6.1		mg/kg	SW846 6010D
Zinc		22.4	6.1		mg/kg	SW846 6010D
JD61207-50	**12599404-030123-S-MTK-BACKFILL-50 (6-8)**					
Aluminum		14800	60		mg/kg	SW846 6010D
Arsenic		4.3	2.4		mg/kg	SW846 6010D
Barium		86.9	24		mg/kg	SW846 6010D
Beryllium		0.76	0.24		mg/kg	SW846 6010D
Calcium		13300	600		mg/kg	SW846 6010D
Chromium		17.0	1.2		mg/kg	SW846 6010D
Copper		5.7	3.0		mg/kg	SW846 6010D
Iron		14000	60		mg/kg	SW846 6010D
Lead		6.2	2.4		mg/kg	SW846 6010D
Magnesium		2410	600		mg/kg	SW846 6010D
Manganese		267	1.8		mg/kg	SW846 6010D
Nickel		12.1	4.8		mg/kg	SW846 6010D
Potassium		1270	1200		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Silver		0.60	0.60		mg/kg	SW846 6010D
Vanadium		21.0	6.0		mg/kg	SW846 6010D
Zinc		31.6	6.0		mg/kg	SW846 6010D
JD61207-51	**12599404-030123-S-MTK-BACKFILL-51 (4-6)**					
Aluminum		17200	60		mg/kg	SW846 6010D
Barium		53.8	24		mg/kg	SW846 6010D
Beryllium		0.85	0.24		mg/kg	SW846 6010D
Calcium		6480	600		mg/kg	SW846 6010D
Chromium		15.8	1.2		mg/kg	SW846 6010D
Copper		6.3	3.0		mg/kg	SW846 6010D
Iron		10900	60		mg/kg	SW846 6010D
Lead		10.1	2.4		mg/kg	SW846 6010D
Magnesium		2010	600		mg/kg	SW846 6010D
Manganese		19.4	1.8		mg/kg	SW846 6010D
Nickel		7.5	4.8		mg/kg	SW846 6010D
Sodium		1760	1200		mg/kg	SW846 6010D
Vanadium		22.9	6.0		mg/kg	SW846 6010D
Zinc		25.6	6.0		mg/kg	SW846 6010D
JD61207-52	**12599404-030123-S-MTK-BACKFILL-52 (2-4)**					
Aluminum		17800	62		mg/kg	SW846 6010D
Arsenic		2.5	2.5		mg/kg	SW846 6010D
Barium		90.8	25		mg/kg	SW846 6010D
Beryllium		0.72	0.25		mg/kg	SW846 6010D
Calcium		5050	620		mg/kg	SW846 6010D
Chromium		16.4	1.2		mg/kg	SW846 6010D
Copper		5.4	3.1		mg/kg	SW846 6010D
Iron		11300	62		mg/kg	SW846 6010D
Lead		10	2.5		mg/kg	SW846 6010D
Magnesium		1940	620		mg/kg	SW846 6010D
Manganese		30.6	1.9		mg/kg	SW846 6010D
Nickel		6.4	4.9		mg/kg	SW846 6010D
Vanadium		23.6	6.2		mg/kg	SW846 6010D
Zinc		24.4	6.2		mg/kg	SW846 6010D
Chromium, Hexavalent		0.55	0.47		mg/kg	SW846 3060A/7196A
JD61207-53	**12599404-030123-S-MTK-BACKFILL-53 (6-8)**					
Aluminum		16100	61		mg/kg	SW846 6010D
Arsenic		5.0	2.4		mg/kg	SW846 6010D
Barium		233	24		mg/kg	SW846 6010D
Beryllium		1.3	0.24		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Calcium		5410	610		mg/kg	SW846 6010D
Chromium		18.5	1.2		mg/kg	SW846 6010D
Cobalt		7.7	6.1		mg/kg	SW846 6010D
Copper		9.6	3.0		mg/kg	SW846 6010D
Iron		16500	61		mg/kg	SW846 6010D
Lead		9.6	2.4		mg/kg	SW846 6010D
Magnesium		2820	610		mg/kg	SW846 6010D
Manganese		1050	3.7		mg/kg	SW846 6010D
Nickel		28.4	4.9		mg/kg	SW846 6010D
Silver		0.82	0.61		mg/kg	SW846 6010D
Vanadium		26.0	6.1		mg/kg	SW846 6010D
Zinc		32.4	6.1		mg/kg	SW846 6010D
JD61207-54	**12599404-030123-S-MTK-BACKFILL-54 (4-6)**					
Aluminum		14800	61		mg/kg	SW846 6010D
Arsenic		10.1	2.4		mg/kg	SW846 6010D
Barium		62.5	24		mg/kg	SW846 6010D
Beryllium		0.93	0.24		mg/kg	SW846 6010D
Calcium		2370	610		mg/kg	SW846 6010D
Chromium		14.0	1.2		mg/kg	SW846 6010D
Copper		6.9	3.0		mg/kg	SW846 6010D
Iron		14500	61		mg/kg	SW846 6010D
Lead		11.8	2.4		mg/kg	SW846 6010D
Magnesium		1670	610		mg/kg	SW846 6010D
Manganese		50.6	1.8		mg/kg	SW846 6010D
Nickel		7.9	4.8		mg/kg	SW846 6010D
Silver		0.69	0.61		mg/kg	SW846 6010D
Vanadium		52.2	6.1		mg/kg	SW846 6010D
Zinc		19.9	6.1		mg/kg	SW846 6010D
JD61207-55	**12599404-030123-S-MTK-BACKFILL-55 (2-4)**					
Aluminum		14500	58		mg/kg	SW846 6010D
Arsenic		4.7	2.3		mg/kg	SW846 6010D
Barium		46.6	23		mg/kg	SW846 6010D
Beryllium		0.81	0.23		mg/kg	SW846 6010D
Calcium		2350	580		mg/kg	SW846 6010D
Chromium		12.7	1.2		mg/kg	SW846 6010D
Cobalt		16.2	5.8		mg/kg	SW846 6010D
Copper		5.7	2.9		mg/kg	SW846 6010D
Iron		12400	58		mg/kg	SW846 6010D
Lead		19.0	2.3		mg/kg	SW846 6010D
Magnesium		1690	580		mg/kg	SW846 6010D
Manganese		431	1.8		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nickel		13.2	4.7		mg/kg	SW846 6010D
Sodium		1810	1200		mg/kg	SW846 6010D
Vanadium		27.5	5.8		mg/kg	SW846 6010D
Zinc		21.1	5.8		mg/kg	SW846 6010D
JD61207-56	**12599404-030123-S-MTK-BACKFILL-56 (6-8)**					
Aluminum		10700	59		mg/kg	SW846 6010D
Barium		43.7	24		mg/kg	SW846 6010D
Beryllium		0.74	0.24		mg/kg	SW846 6010D
Calcium		3570	590		mg/kg	SW846 6010D
Chromium		9.4	1.2		mg/kg	SW846 6010D
Copper		4.2	3.0		mg/kg	SW846 6010D
Iron		10100	59		mg/kg	SW846 6010D
Lead		6.5	2.4		mg/kg	SW846 6010D
Magnesium		1440	590		mg/kg	SW846 6010D
Manganese		37.5	1.8		mg/kg	SW846 6010D
Nickel		7.3	4.7		mg/kg	SW846 6010D
Vanadium		13.2	5.9		mg/kg	SW846 6010D
Zinc		15.9	5.9		mg/kg	SW846 6010D
JD61207-57	**12599404-030123-S-MTK-BACKFILL-57 (4-6)**					
Aluminum		12300	59		mg/kg	SW846 6010D
Barium		52.3	24		mg/kg	SW846 6010D
Beryllium		0.81	0.24		mg/kg	SW846 6010D
Calcium		3620	590		mg/kg	SW846 6010D
Chromium		10.9	1.2		mg/kg	SW846 6010D
Copper		4.1	3.0		mg/kg	SW846 6010D
Iron		9780	59		mg/kg	SW846 6010D
Lead		7.2	2.4		mg/kg	SW846 6010D
Magnesium		1240	590		mg/kg	SW846 6010D
Manganese		13.6	1.8		mg/kg	SW846 6010D
Nickel		6.9	4.8		mg/kg	SW846 6010D
Vanadium		14.8	5.9		mg/kg	SW846 6010D
Zinc		18.2	5.9		mg/kg	SW846 6010D
JD61207-58	**12599404-030123-S-MTK-BACKFILL-58 (2-4)**					
Aluminum		14500	59		mg/kg	SW846 6010D
Barium		55.2	23		mg/kg	SW846 6010D
Beryllium		0.60	0.23		mg/kg	SW846 6010D
Calcium		32400	1200		mg/kg	SW846 6010D
Chromium		13.9	1.2		mg/kg	SW846 6010D
Copper		4.7	2.9		mg/kg	SW846 6010D

Summary of Hits

Job Number: JD61207
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 03/01/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Iron		9980	59		mg/kg	SW846 6010D
Lead		7.1	2.3		mg/kg	SW846 6010D
Magnesium		1400	590		mg/kg	SW846 6010D
Manganese		17.8	1.8		mg/kg	SW846 6010D
Nickel		6.0	4.7		mg/kg	SW846 6010D
Vanadium		20.9	5.9		mg/kg	SW846 6010D
Zinc		21.2	5.9		mg/kg	SW846 6010D
JD61207-59	**12599404-030123-S-MTK-BACKFILL-59 (6-8)**					
Aluminum		11800	57		mg/kg	SW846 6010D
Arsenic		4.3	2.3		mg/kg	SW846 6010D
Barium		87.2	23		mg/kg	SW846 6010D
Beryllium		1.0	0.23		mg/kg	SW846 6010D
Calcium		4200	570		mg/kg	SW846 6010D
Chromium		12.4	1.1		mg/kg	SW846 6010D
Copper		5.3	2.9		mg/kg	SW846 6010D
Iron		12400	57		mg/kg	SW846 6010D
Lead		7.6	2.3		mg/kg	SW846 6010D
Magnesium		1480	570		mg/kg	SW846 6010D
Manganese		239	1.7		mg/kg	SW846 6010D
Nickel		13.8	4.6		mg/kg	SW846 6010D
Silver		0.57	0.57		mg/kg	SW846 6010D
Vanadium		17.9	5.7		mg/kg	SW846 6010D
Zinc		22.3	5.7		mg/kg	SW846 6010D
JD61207-60	**12599404-030123-S-MTK-BACKFILL-60 (4-6)**					
Aluminum		14300	60		mg/kg	SW846 6010D
Arsenic		3.0	2.4		mg/kg	SW846 6010D
Barium		77.7	24		mg/kg	SW846 6010D
Beryllium		0.66	0.24		mg/kg	SW846 6010D
Calcium		9150	600		mg/kg	SW846 6010D
Chromium		13.9	1.2		mg/kg	SW846 6010D
Copper		4.5	3.0		mg/kg	SW846 6010D
Iron		11700	60		mg/kg	SW846 6010D
Lead		7.1	2.4		mg/kg	SW846 6010D
Magnesium		1580	600		mg/kg	SW846 6010D
Manganese		34.3	1.8		mg/kg	SW846 6010D
Nickel		5.9	4.8		mg/kg	SW846 6010D
Vanadium		21.8	6.0		mg/kg	SW846 6010D
Zinc		23.0	6.0		mg/kg	SW846 6010D
Chromium, Hexavalent		0.60	0.47		mg/kg	SW846 3060A/7196A

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-1 (6-8)
Lab Sample ID: JD61207-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14600	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	7.7	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	78.8	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.96	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	18600	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	16.8	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	8.4	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	20500	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.7	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2160	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	143	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.039	0.039	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	16.7	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	28.3	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	35.2	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-1 (6-8)
Lab Sample ID: JD61207-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.5

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 15:47	DB	SW846 3060A/7196A
Solids, Percent	83.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-2 (4-6)
Lab Sample ID: JD61207-2
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 85.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13400	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.6	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	107	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.86	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	69400	2900	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.8	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.6	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	14500	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.4	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1740	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	166	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.039	0.039	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	14.7	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.6	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.5	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-2 (4-6)		
Lab Sample ID:	JD61207-2	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	85.3
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:31	DB	SW846 3060A/7196A
Solids, Percent	85.3		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-3 (2-4)
Lab Sample ID: JD61207-3
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10600	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.5	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	37.7	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.61	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3720	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.4	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.4	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	7970	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1130	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	19.6	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.037	0.037	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.2	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	16.3	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	16.2	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-3 (2-4)		
Lab Sample ID:	JD61207-3	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	81.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-4 (6-8)
Lab Sample ID: JD61207-4
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.1

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9240	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	73.5	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.41	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3050	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	3.8	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8080	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	4.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1450	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	177	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.038	0.038	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.6	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	11.9	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	19.6	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-4 (6-8)		
Lab Sample ID:	JD61207-4	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.1
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	82.1		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-5 (4-6)
Lab Sample ID: JD61207-5
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 84.1

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	16000	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	10.7	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	136	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.4	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	39900	1200	mg/kg	2	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	15.8	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	156	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	6.1	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	16800	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	96.6	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1970	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	714	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.039	0.039	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	28.1	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium [a]	< 6.0	6.0	mg/kg	5	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Vanadium	41.4	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	22.5	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53838
(4) Prep QC Batch: MP38190
(5) Prep QC Batch: MP38204

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-5 (4-6)		
Lab Sample ID:	JD61207-5	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	84.1
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	84.1		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-6 (2-4)
Lab Sample ID: JD61207-6
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 88.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7020	55	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.6	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	201	22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.42	0.22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.55	0.55	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	53800	2800	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	6.7	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.5	5.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	< 2.8	2.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	5160	55	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.8	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	964	550	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	288	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.029	0.029	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	12.1	4.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.55	0.55	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	12.0	5.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	9.2	5.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-6 (2-4)		
Lab Sample ID:	JD61207-6	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	88.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.44	0.44	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	88.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-7 (6-8)
Lab Sample ID: JD61207-7
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 84.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10100	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.0	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	64.3	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.52	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	122000	5900	mg/kg	10	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.5	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	3.9	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8200	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1600	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	148	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.038	0.038	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.4	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	13.7	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	19.0	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-7 (6-8)		
Lab Sample ID:	JD61207-7	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	84.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	84.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-8 (4-6)
Lab Sample ID: JD61207-8
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 84.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14300	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	129	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.77	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	41200	2900	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.6	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	3.2	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12300	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2320	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	84.7	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.036	0.036	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.4	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.3	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	23.1	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-8 (4-6)		
Lab Sample ID:	JD61207-8	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	84.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	84.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-9 (2-4)
Lab Sample ID: JD61207-9
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 87.4

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13900	56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	128	22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.59	0.22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	47000	2800	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.5	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.7	2.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	9750	56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.4	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2060	560	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	35.9	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.031	0.031	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.2	4.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	20.1	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.0	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-9 (2-4)		
Lab Sample ID:	JD61207-9	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	87.4
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.46	0.46	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	87.4		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-10 (6-8)
Lab Sample ID: JD61207-10
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	15400	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	8.8	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	228	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.94	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	48800	3100	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	17.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	15.8	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	10.4	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	18900	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	14.7	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2480	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	1210	9.2	mg/kg	5	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Mercury	< 0.038	0.038	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	28.4	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	1430	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	32.5	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	34.9	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53838
(4) Prep QC Batch: MP38190
(5) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-10 (6-8)		
Lab Sample ID:	JD61207-10	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	81.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-11 (4-6)		
Lab Sample ID:	JD61207-11	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.4
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13500	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	9.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	106	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.98	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	27400	1200	mg/kg	2	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	11.5	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	11.9	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	18800	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	10.6	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2000	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	383	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.039	0.039	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	15.0	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	30.3	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	24.9	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38204

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-11 (4-6)		
Lab Sample ID:	JD61207-11	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.4
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	83.4		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-12 (2-4)
Lab Sample ID: JD61207-12
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14700	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	98.8	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.71	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4150	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.7	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.2	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11500	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	9.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1480	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	44.9	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.072	0.072	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.6	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	22.1	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	19.6	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-12 (2-4)		
Lab Sample ID:	JD61207-12	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	82.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-13 (2-4)		
Lab Sample ID:	JD61207-13	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	86.6
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10800	56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	55.0	22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.51	0.22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	25800	1100	mg/kg	2	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.5	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	3.1	2.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10100	56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1240	560	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	14.6	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.072	0.072	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.6	4.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	19.0	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	13.9	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-13 (2-4)		
Lab Sample ID:	JD61207-13	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	86.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	86.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-14 (6-8)
Lab Sample ID: JD61207-14
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14200	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	7.7	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	222	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.1	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	9250	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	16.1	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	21.1	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	10.0	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	18400	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	15.9	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2450	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	939	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.075	0.075	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	36.4	5.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	25.6	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	35.8	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-14 (6-8)		
Lab Sample ID:	JD61207-14	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.0
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	80		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-15 (4-6)
Lab Sample ID: JD61207-15
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 85.1

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9260	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	61.4	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.59	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	2850	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	9.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	< 2.9	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8100	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1060	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	16.9	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.0	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	14.3	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	13.8	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-15 (4-6)		
Lab Sample ID:	JD61207-15	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	85.1
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	85.1		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-16 (2-4)
Lab Sample ID: JD61207-16
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 87.0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10600	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	91.9	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.48	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	29700	1100	mg/kg	2	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.0	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	3.1	2.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8370	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.1	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1180	570	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	26.0	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.076	0.076	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 4.6	4.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	15.8	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	13.8	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-16 (2-4)		
Lab Sample ID:	JD61207-16	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	87.0
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	1.7	0.45	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	87		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-17 (6-8)
Lab Sample ID: JD61207-17
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12500	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.0	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	33.2	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.68	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4730	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.1	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.7	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11200	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.7	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1440	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	52.8	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.2	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	19.8	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	18.4	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-17 (6-8)		
Lab Sample ID:	JD61207-17	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.61	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	82.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-18 (4-6)
Lab Sample ID: JD61207-18
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12600	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	9.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	160	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.93	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4060	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	7.5	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	7.7	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	15600	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	10.1	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1580	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	597	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.072	0.072	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	19.3	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	25.6	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.4	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-18 (4-6)		
Lab Sample ID:	JD61207-18	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	81.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-19 (2-4)		
Lab Sample ID:	JD61207-19	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.3
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12400	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.9	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	136	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.74	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	14900	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.9	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.4	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.7	3.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10400	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	9.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1410	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	88.2	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.2	5.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.1	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.5	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-19 (2-4)		
Lab Sample ID:	JD61207-19	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.3
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.95	0.50	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	80.3		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-20 (6-8)
Lab Sample ID: JD61207-20
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11800	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	6.8	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	54.9	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.1	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4390	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.5	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	7.3	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	16000	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.4	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1470	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	132	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.072	0.072	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	16.8	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	24.4	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.9	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38190
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-20 (6-8)		
Lab Sample ID:	JD61207-20	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 16:55	DB	SW846 3060A/7196A
Solids, Percent	81.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-21 (4-6)
Lab Sample ID: JD61207-21
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11400	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.6	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.4	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	58.2	26	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.2	0.26	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	7250	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.5	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.4	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.9	3.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	13000	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.4	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1290	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	36.3	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	14.2	5.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.6	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	17.5	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	18.4	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-21 (4-6)		
Lab Sample ID:	JD61207-21	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 19:34	DB	SW846 3060A/7196A
Solids, Percent	80.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-22 (2-4)		
Lab Sample ID:	JD61207-22	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.6
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9880	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	90.2	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.86	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4500	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	9.0	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.3	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.9	3.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	7920	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	10.9	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	861	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	31.2	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.4	5.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	12.6	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	15.1	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-22 (2-4)		
Lab Sample ID:	JD61207-22	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.50	0.50	mg/kg	1	03/05/23 20:23	DB	SW846 3060A/7196A
Solids, Percent	80.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-23 (6-8)		
Lab Sample ID:	JD61207-23	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	15400	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	81.7	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.81	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	45200	3100	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	15.5	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.8	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	13300	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.9	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1750	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	105	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.1	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	20.3	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	25.4	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-23 (6-8)		
Lab Sample ID:	JD61207-23	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	82.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-24 (4-6)
Lab Sample ID: JD61207-24
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	7150	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	72.1	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.62	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	74100	3200	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	6.9	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.3	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	< 3.2	3.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	6140	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	4.8	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1110	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	44.0	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.072	0.072	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 5.1	5.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	11.4	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	12.5	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-24 (4-6)		
Lab Sample ID:	JD61207-24	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	80.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-25 (4-6)		
Lab Sample ID:	JD61207-25	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.3
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12100	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.6	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.2	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	51.8	26	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.83	0.26	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4990	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.5	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.4	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.3	3.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11300	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.4	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1400	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	47.2	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.074	0.074	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.1	5.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.6	2.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	16.4	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	18.5	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-25 (4-6)		
Lab Sample ID:	JD61207-25	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.3
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	82.3		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-26 (2-4)		
Lab Sample ID:	JD61207-26	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	84.7
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11400	56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	6.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	70.6	22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.67	0.22	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	5340	560	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.0	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.9	2.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	14100	56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	9.5	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1310	560	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	27.4	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.072	0.072	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	4.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	28.2	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	16.4	5.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-26 (2-4)		
Lab Sample ID:	JD61207-26	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	84.7
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.60	0.47	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	84.7		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-27 (6-8)
Lab Sample ID: JD61207-27
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 77.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10500	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	8.0	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	61.3	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.75	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3360	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.1	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.4	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	16700	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.8	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1590	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	108	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.074	0.074	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	12.3	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.3	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	25.3	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-27 (6-8)		
Lab Sample ID:	JD61207-27	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	77.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.50	0.50	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	77.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-28 (4-6)
Lab Sample ID: JD61207-28
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.2

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13200	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	6.6	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	276	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.3	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	4160	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	13.7	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	22.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	9.2	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	15700	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	14.8	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1870	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	1840	9.0	mg/kg	5	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Mercury	< 0.080	0.080	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	39.8	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.64	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium [a]	< 6.0	6.0	mg/kg	5	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Vanadium	22.3	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	26.1	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53838
(4) Prep QC Batch: MP38191
(5) Prep QC Batch: MP38205

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-28 (4-6)		
Lab Sample ID:	JD61207-28	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.2
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.56	0.48	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	82.2		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-29 (2-4)
Lab Sample ID: JD61207-29
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 85.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11500	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.1	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	76.7	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.57	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	48200	2900	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.8	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	7.2	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.4	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10000	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.9	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1570	570	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	194	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	10.6	4.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	18.4	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	16.7	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-29 (2-4)		
Lab Sample ID:	JD61207-29	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	85.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	85.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-30 (6-8)
Lab Sample ID: JD61207-30
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11700	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	63.5	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.53	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	6490	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.9	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.4	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	< 3.2	3.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	9340	64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.0	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1580	640	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	46.2	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.7	5.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.64	0.64	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	9.8	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.3	6.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-30 (6-8)		
Lab Sample ID:	JD61207-30	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.0
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.50	0.50	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	82		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-31 (4-6)
Lab Sample ID: JD61207-31
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 84.1

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12800	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.1	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	170	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.81	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	19600	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.4	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	14.8	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.7	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12300	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	14.9	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1670	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	833	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	18.2	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.7	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	21.8	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38205

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-31 (4-6)		
Lab Sample ID:	JD61207-31	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	84.1
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	84.1		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-32 (2-4)
Lab Sample ID: JD61207-32
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.7

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14500	62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.3	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	121	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.64	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.62	0.62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	37600	3100	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.5	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.2	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.3	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12300	62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.3	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2140	620	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	28.2	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.060	0.060	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.7	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.62	0.62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	1720	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	28.0	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	19.8	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-32 (2-4)		
Lab Sample ID:	JD61207-32	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.7
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	83.7		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-33 (6-8)
Lab Sample ID: JD61207-33
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11200	62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	63.0	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.50	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.62	0.62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	22700	620	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.7	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.2	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.2	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8910	62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.6	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1640	620	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	15.9	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.074	0.074	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	< 5.0	5.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.62	0.62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	1510	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	16.7	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	16.1	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-33 (6-8)		
Lab Sample ID:	JD61207-33	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.51	0.51	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	80.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-34 (4-6)
Lab Sample ID: JD61207-34
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11000	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	68.4	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.79	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	8750	570	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.0	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.6	2.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12400	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.7	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1580	570	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	66.5	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.0	4.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	1230	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	14.2	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.4	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-34 (4-6)		
Lab Sample ID:	JD61207-34	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	83.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-35 (2-4)
Lab Sample ID: JD61207-35
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.2

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14600	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	94.2	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.58	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	9760	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.2	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10400	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.5	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1660	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	16.6	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.3	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	1470	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	19.5	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	18.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-35 (2-4)		
Lab Sample ID:	JD61207-35	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.2
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	83.2		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-36 (6-8)
Lab Sample ID: JD61207-36
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	9810	58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.0	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	101	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.47	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.58	0.58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	92400	2900	mg/kg	5	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	10.6	1.2	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Cobalt	5.9	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	3.6	2.9	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Iron	8480	58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	6.5	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1470	580	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	323	1.7	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Mercury	< 0.080	0.080	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	8.4	4.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.58	0.58	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	19.8	5.8	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Zinc	17.2	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53838
(4) Prep QC Batch: MP38191
(5) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-36 (6-8)		
Lab Sample ID:	JD61207-36	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.50	0.50	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	82.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-37 (6-8)
Lab Sample ID: JD61207-37
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11500	58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	6.6	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	50.8	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.75	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.58	0.58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4600	580	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.1	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.8	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.6	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	14100	58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.7	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1780	580	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	215	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.076	0.076	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	14.5	4.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.58	0.58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.8	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	26.0	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-37 (6-8)		
Lab Sample ID:	JD61207-37	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	83.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-38 (4-6)
Lab Sample ID: JD61207-38
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12700	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	112	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.83	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	11600	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.6	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.9	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12900	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.0	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1710	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	157	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.066	0.066	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	13.4	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.4	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.2	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-38 (4-6)		
Lab Sample ID:	JD61207-38	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	83.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-39 (2-4)
Lab Sample ID: JD61207-39
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14300	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.3	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	68.3	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.77	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3510	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.4	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.3	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.6	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11500	63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	9.6	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1450	630	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	15.9	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.080	0.080	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.6	5.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.63	0.63	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1300	1300	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.3	1.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.5	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	20.0	6.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-39 (2-4)		
Lab Sample ID:	JD61207-39	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.3
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.51	0.51	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	80.3		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-40 (6-8)
Lab Sample ID: JD61207-40
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12000	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	5.7	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	37.0	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.85	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3560	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.1	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	14100	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	10.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1770	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	127	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.076	0.076	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	11.6	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	22.2	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.6	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38191
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-40 (6-8)		
Lab Sample ID:	JD61207-40	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/05/23 20:42	DB	SW846 3060A/7196A
Solids, Percent	82.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-41 (4-6)
Lab Sample ID: JD61207-41
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14500	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.8	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	47.6	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.75	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	8460	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.8	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.7	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	13500	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.5	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1980	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	80.5	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.062	0.062	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	9.2	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	22.7	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.5	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-41 (4-6)		
Lab Sample ID:	JD61207-41	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:34	RI	SW846 3060A/7196A
Solids, Percent	82.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-42 (2-4)
Lab Sample ID: JD61207-42
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11900	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	2.6	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	73.3	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.46	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	28800	1200	mg/kg	2	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Chromium	11.6	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	3.6	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	8530	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	5.8	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1750	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	97.4	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	5.3	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	19.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	17.5	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53840
(4) Prep QC Batch: MP38192
(5) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-42 (2-4)		
Lab Sample ID:	JD61207-42	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	82.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-43 (6-8)
Lab Sample ID: JD61207-43
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 85.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13300	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.4	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	105	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.76	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	23300	1100	mg/kg	2	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Chromium	14.3	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	< 5.7	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	7.1	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	12700	57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	7.5	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2290	570	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	245	1.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.062	0.062	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	11.7	4.6	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.57	0.57	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	22.7	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	23.9	5.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53840
(4) Prep QC Batch: MP38192
(5) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-43 (6-8)		
Lab Sample ID:	JD61207-43	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	85.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	85.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-44 (4-6)
Lab Sample ID: JD61207-44
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	15700	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.6	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	55.7	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.0	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3470	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	15.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.0	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	13000	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.4	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2270	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	79.3	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.076	0.076	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	12.9	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	26.0	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-44 (4-6)		
Lab Sample ID:	JD61207-44	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.50	0.50	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	80.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-45 (2-4)
Lab Sample ID: JD61207-45
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	19900	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.9	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	57.1	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.98	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	11900	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	19.4	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.5	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	13600	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.1	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2620	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	27.8	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.070	0.070	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.7	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	33.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	27.8	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-45 (2-4)		
Lab Sample ID:	JD61207-45	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	82.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-46 (6-8)		
Lab Sample ID:	JD61207-46	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.6
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13100	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.9	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	75.7	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.72	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	21400	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.0	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.2	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12200	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.2	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1900	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	111	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.074	0.074	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.6	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	22.2	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	24.3	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-46 (6-8)		
Lab Sample ID:	JD61207-46	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	82.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-47 (4-6)		
Lab Sample ID:	JD61207-47	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.9
Project:	SJRWP - PCFSE, Harris County, TX		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	15200	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.9	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	50.9	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.93	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	7650	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.8	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.2	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10800	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	9.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1510	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	38.9	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.078	0.078	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.0	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.4	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.4	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-47 (4-6)		
Lab Sample ID:	JD61207-47	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	83.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-48 (2-4)
Lab Sample ID: JD61207-48
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 80.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12800	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.6	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	144	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.97	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	5210	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.0	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	7.5	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8600	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	8.7	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1610	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	17.0	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.066	0.066	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.0	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	15.3	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	21.7	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-48 (2-4)		
Lab Sample ID:	JD61207-48	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	80.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.70	0.50	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	80.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-49 (2-4)
Lab Sample ID: JD61207-49
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.7

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	13700	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.5	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	117	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.1	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	18600	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.4	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.8	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11000	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	5.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1760	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	73.3	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.040	0.062	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	8.9	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.8	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.4	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-49 (2-4)		
Lab Sample ID:	JD61207-49	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.7
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	82.7		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-50 (6-8)
Lab Sample ID: JD61207-50
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.2

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14800	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.3	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	86.9	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.76	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	13300	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	17.0	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.7	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	14000	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.2	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2410	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	267	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.062	0.062	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	12.1	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	1270	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	31.6	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-50 (6-8)		
Lab Sample ID:	JD61207-50	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.2
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	82.2		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-51 (4-6)
Lab Sample ID: JD61207-51
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.6

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	17200	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	53.8	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.85	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	6480	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	15.8	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.3	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10900	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	10.1	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	2010	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	19.4	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	0.042	0.074	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.5	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	1760	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	22.9	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	25.6	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38206

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-51 (4-6)		
Lab Sample ID:	JD61207-51	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.6
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/06/23 15:45	RI	SW846 3060A/7196A
Solids, Percent	81.6		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-52 (2-4)
Lab Sample ID: JD61207-52
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	17800	62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	90.8	25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.72	0.25	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.62	0.62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	5050	620	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	16.4	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.2	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.4	3.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11300	62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	10	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1940	620	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	30.6	1.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.066	0.066	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.4	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.5	2.5	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.62	0.62	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	23.6	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	24.4	6.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-52 (2-4)		
Lab Sample ID:	JD61207-52	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.55	0.47	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	81.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-53 (6-8)
Lab Sample ID: JD61207-53
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	16100	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	5.0	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	233	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	1.3	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	5410	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	18.5	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	7.7	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	9.6	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	16500	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	9.6	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	2820	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	1050	3.7	mg/kg	2	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Mercury	< 0.070	0.070	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	28.4	4.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	0.82	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 2.4	2.4	mg/kg	2	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Vanadium	26.0	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	32.4	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53840
(4) Prep QC Batch: MP38192
(5) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-53 (6-8)		
Lab Sample ID:	JD61207-53	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.3
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	81.3		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-54 (4-6)
Lab Sample ID: JD61207-54
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 81.0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14800	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	10.1	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	62.5	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.93	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.61	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	2370	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	14.0	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.1	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	6.9	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	14500	61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	11.8	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1670	610	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	50.6	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.9	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	0.69	0.61	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	52.2	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	19.9	6.1	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-54 (4-6)		
Lab Sample ID:	JD61207-54	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	81.0
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	81		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-55 (2-4)
Lab Sample ID: JD61207-55
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 83.8

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14500	58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	4.7	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	46.6	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.81	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.58	0.58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	2350	580	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Chromium	12.7	1.2	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Cobalt	16.2	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	5.7	2.9	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Iron	12400	58	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	19.0	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1690	580	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	431	1.8	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	13.2	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.58	0.58	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Sodium	1810	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	27.5	5.8	mg/kg	1	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Zinc	21.1	5.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53840
(4) Prep QC Batch: MP38192
(5) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-55 (2-4)		
Lab Sample ID:	JD61207-55	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	83.8
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.47	0.47	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	83.8		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-56 (6-8)
Lab Sample ID: JD61207-56
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.2

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	10700	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	43.7	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.74	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3570	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	9.4	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.2	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	10100	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	6.5	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1440	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	37.5	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.068	0.068	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	7.3	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	13.2	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	15.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-56 (6-8)		
Lab Sample ID:	JD61207-56	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.2
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.48	0.48	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	82.2		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-57 (4-6)
Lab Sample ID: JD61207-57
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12300	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	52.3	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.81	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	3620	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	10.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.1	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	9780	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.2	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1240	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	13.6	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.066	0.066	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.9	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	14.8	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	18.2	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-57 (4-6)		
Lab Sample ID:	JD61207-57	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.5
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.50	0.50	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	82.5		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-58 (2-4)
Lab Sample ID: JD61207-58
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 86.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14500	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Arsenic	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Barium	55.2	23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Beryllium	0.60	0.23	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cadmium	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Calcium	32400	1200	mg/kg	2	03/07/23	03/09/23	ND	SW846 6010D [3]	SW846 3050B [4]
Chromium	13.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Cobalt	< 5.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Copper	4.7	2.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Iron	9980	59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Lead	7.1	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Magnesium	1400	590	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Manganese	17.8	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [5]
Nickel	6.0	4.7	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Silver	< 0.59	0.59	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Vanadium	20.9	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]
Zinc	21.2	5.9	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Instrument QC Batch: MA53840
(4) Prep QC Batch: MP38192
(5) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-58 (2-4)		
Lab Sample ID:	JD61207-58	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	86.3
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.46	0.46	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	86.3		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-59 (6-8)
Lab Sample ID: JD61207-59
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11800	57	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.3	2.3	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	4.3	2.3	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	87.2	23	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	1.0	0.23	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.57	0.57	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4200	570	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	12.4	1.1	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.7	5.7	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	5.3	2.9	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	12400	57	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.6	2.3	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1480	570	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	239	1.7	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.064	0.064	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	13.8	4.6	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.3	2.3	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	0.57	0.57	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	17.9	5.7	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	22.3	5.7	mg/kg	1	03/07/23	03/08/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-59 (6-8)		
Lab Sample ID:	JD61207-59	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.49	0.49	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	82.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-030123-S-MTK-BACKFILL-60 (4-6)
Lab Sample ID: JD61207-60
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 03/01/23
Date Received: 03/02/23
Percent Solids: 82.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	14300	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	3.0	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	77.7	24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.66	0.24	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	9150	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	13.9	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 6.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.5	3.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	11700	60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	7.1	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1580	600	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	34.3	1.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.074	0.074	mg/kg	1	03/05/23	03/06/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	5.9	4.8	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.4	2.4	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.60	0.60	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1200	1200	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.2	1.2	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	21.8	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	23.0	6.0	mg/kg	1	03/07/23	03/07/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA53821
(2) Instrument QC Batch: MA53832
(3) Prep QC Batch: MP38192
(4) Prep QC Batch: MP38208

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-030123-S-MTK-BACKFILL-60 (4-6)		
Lab Sample ID:	JD61207-60	**Date Sampled:**	03/01/23
Matrix:	SO - Soil	**Date Received:**	03/02/23
		Percent Solids:	82.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	0.60	0.47	mg/kg	1	03/06/23 15:51	RI	SW846 3060A/7196A
Solids, Percent	82.9		%	1	03/04/23 16:00	MK	SM2540 G 18TH ED MOD

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS

SO

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 6

FED-EX Tracking # 7952-7847-1504
Bottle Order Control # KR-112322-41
SGS Quote #
SGS Job # JD 61207

Client / Reporting Information	Project Information
Company Name: GHD	Project Name: San Jacinto Waste Pits - S. Impoundment
Street Address: 5551 Corporate Blvd St 200	Street: 18300 Market St
City: Baton Rouge State: LA Zip: 70808	City: Channelview State: TX
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com	Project #: 12599404
Phone #:	Client Purchase Order #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016	Project Manager: Wells Richard

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TAL Metals (SW-846 6020A/7471A)	Hexavalent Chromium (SW-846 7196A)	LAB USE ONLY
1	12599404-030123 S-MTK-Backfill-1	(6-8)	03/01/23	1330	MTK	G	N	S	1					1				X	X	
2	- - - -Backfill-2	(4-6)		1332					1					1				X	X	
3	- - - -Backfill-3	(2-4)		1335					1					1				X	X	
4	- - - -Backfill-4	(6-8)		1339					1					1				X	X	
5	- - - -Backfill-5	(4-6)		1341					1					1				X	X	
6	- - - -Backfill-6	(2-4)		1344					1					1				X	X	
7	- - - -Backfill-7	(6-8)		1348					1					1				X	X	
8	- - - -Backfill-8	(4-6)		1351					1					1				X	X	
9	- - - -Backfill-9	(2-4)		1355					1					1				X	X	
10	- - - -Backfill-10	(6-8)		1359					1					1				X	X	
11	- - - -Backfill-11	(4-6)		1402					1					1				X	X	
12	- - - -Backfill-12	(2-4)		1405					1					1				X	X	

pH Check (Lab Use Only)

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- ☐ 10 Business Days
- ☐ 5 Business Days
- ☐ 3 Business Days*
- ☒ 2 Business Days*
- ☐ 1 Business Day*
- ☐ Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☒ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria
- ☐ CT RCP Criteria
- ☐ State Forms
- ☐ EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

See SSOW 12599404-2022-001

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature] GHD	3-1-23 / 1600	1 FedEx	2 FedEx	03/02/23 10:20	2 [signature]
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not intact ☐ Absent	Therm ID: See Sample Receipt Summary	On Ice ☑ Cooler Temp. °C 2.7 2.6 3.8 IR40

EHSA-QAC-0023-05 Rev.Date:8/5/22

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JD61207: Chain of Custody
Page 1 of 8

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD 61207

Client / Reporting Information	Project Information
Company Name: GHD	Project Name: San Jacinto Waste Pits-S Impoundment
Street Address: 5551 Corp Blvd St 200	Street: 18300 Market St
City: Baton Rouge State: LA Zip: 70808	City: Channelview State: TX
Project Contact: Wells Richard E-mail: WellsRichard@ghd.com	Project #: 12599404
Phone #	Client Purchase Order #
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016	Project Manager: Wells Richard

Billing Information (If different from Report to)
Company Name
Street Address
City State Zip
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TAL Metals (SW-846 6020A/7471A)	Hex Chromium (SW-846 7196A)	LAB USE ONLY
13	12599404-03-01-23-S-MTK-Backfill-13	(2-4)	03/01/23	1323	MTK	G	N	S	1					1				X	X	
14	- - - -Backfill-14	(6-8)		1320					1					1				X	X	
15	- - - -Backfill-15	(4-6)		1318					1					1				X	X	
16	- - - -Backfill-16	(2-4)		1316					1					1				X	X	
17	- - - -Backfill-17	(6-8)		1314					1					1				X	X	
18	- - - -Backfill-18	(4-6)		1311					1					1				X	X	
19	- - - -Backfill-19	(2-4)		1307					1					1				X	X	
20	- - - -Backfill-20	(6-8)		1304					1					1				X	X	
21	- - - -Backfill-21	(4-6)		1301					1					1				X	X	
22	- - - -Backfill-22	(2-4)		1257					1					1				X	X	
23	- - - -Backfill-23	(6-8)		1255					1					1				X	X	
24	- - - -Backfill-24	(4-6)		1253					1					1				X	X	

pH Check (Lab Use Only)

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- ☐ 10 Business Days
- ☐ 5 Business Days
- ☐ 3 Business Days*
- ☒ 2 Business Days*
- ☐ 1 Business Day*
- ☐ Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☒ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria ____
- ☐ CT RCP Criteria ____
- ☐ State Forms
- ☐ EDD Format ____

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SSOW 12599404-2022-001

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature] GHD	03-01-23 / 1600	1 Fedex	2 Fedex	10:30 03/02/23	2 [signature]
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not Intact ☐ Absent	Therm ID: See Sample Receipt Summary ☐ On Ice	Cooler Temp. °C

EHSA-QAC-0023-05 Rev.Date:8/5/22

JD61207: Chain of Custody
Page 2 of 8

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 3 of 6

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD 61207

Client / Reporting Information	Project Information
Company Name: GHD	Project Name: San Jacinto Waste Pits - S. Impoundment
Street Address: 5551 Corporate Blvd St 200	Street: 18300 Market St
City: Baton Rouge State: LA Zip: 70808	City: Channelview State: TX
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com	Project #: 12599404
Phone #:	Client Purchase Order #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233 3016	Project Manager: Wells Richard

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TAL Metals (SW-846 6020A/7471A)	Hex Chromium (SW-846/7196A)	LAB USE ONLY
25	12599404-03-23-S-MTK-Backfill-25	(4-6)	03/01/23	1057	MTK	G	N	S	1					1				X	X	
26	-Backfill-26	(2-4)		1100										1				X	X	
27	-Backfill-27	(6-8)		1103										1				X	X	
28	-Backfill-28	(4-6)		1105										1				X	X	
29	-Backfill-29	(2-4)		1108										1				X	X	
30	-Backfill-30	(6-8)		1110										1				X	X	
31	-Backfill-31	(4-6)		1225										1				X	X	
32	-Backfill-32	(2-4)		1228										1				X	X	
33	-Backfill-33	(6-8)		1231										1				X	X	
34	-Backfill-34	(4-6)		1234										1				X	X	
35	-Backfill-35	(2-4)		1236										1				X	X	
36	-Backfill-36	(6-8)		1239										1				X	X	

pH Check (Lab Use Only)

Turn Around Time (Business Days)

Approved By (SGS PM) / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [x] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria ____
- [ ] CT RCP Criteria ____
- [ ] State Forms
- [ ] EDD Format ____

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

See SSOW 12599404-2022-001

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 GHD	3-1-23 / 1600	1 [signature]	2 [signature]	3/02/23 10:30	2 [signature]
3		3	4		4
5		5	Custody Seal #		

Custody Seal #: ☐ Intact ☐ Not intact ☐ Absent
Therm ID: See Sample Receipt Summary ☐ On ice Cooler Temp. °C

EHSA-QAC-0023-05 Rev.Date:8/5/22

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JD61207: Chain of Custody
Page 3 of 8

SGS

EHSA-QAC-0023-04-FORM-Standard COC

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

FED-EX Tracking #	Bottle Order Control #
SGS Quote #	SGS Job # JD 61207

Client / Reporting Information

Company Name: GHD
Street Address: 5551 Corporate Blvd
City: Baton Rouge State: LA Zip: 70808
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com
Phone #:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016

Project Information

Project Name: San Jacinto Waste Pits-S Impoundment
Street: 18300 Market St
City: Channelview State: TX
Project #: 12599404
Client Purchase Order #:
Project Manager: Wells Richard

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

TAL Metals (SW-846 6020A/7471A)
Hex Chromium (SW-846 7196A)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	TAL Metals	Hex Chromium	LAB USE ONLY
37	12599404-050123 3-MTK-Backfill-37	(6-8)	05/01/23	1054	MTK	G	N	S	1					1				X	X	
38	-Backfill-38	(4-6)		1053					1					1				X	X	
39	-Backfill-39	(2-4)		1050					1					1				X	X	
40	-Backfill-40	(6-8)		1048					1					1				X	X	
41	-Backfill-41	(4-6)		1046					1					1				X	X	
42	-Backfill-42	(2-4)		1045					1					1				X	X	
43	-Backfill-43	(6-8)		1042					1					1				X	X	
44	-Backfill-44	(4-6)		1041					1					1				X	X	
45	-Backfill-45	(2-4)		1039					1					1				X	X	
46	-Backfill-46	(6-8)		1035					1					1				X	X	
47	-Backfill-47	(4-6)		1030					1					1				X	X	
48	-Backfill-48	(2-4)		1027					1					1				X	X	

pH Check (Lab Use Only)

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- ☐ 10 Business Days
- ☐ 5 Business Days
- ☐ 3 Business Days*
- ☒ 2 Business Days*
- ☐ 1 Business Day*
- ☐ Other

All data available via Lablink

* Approval needed for 1-3 Business Day TAT

Deliverable

- ☐ Commercial "A" (Level 1)
- ☒ Commercial "B" (Level 2)
- ☐ NJ Reduced (Level 3)
- ☐ Full Tier I (Level 4)
- ☐ Commercial "C"
- ☐ NJ DKQP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ MA MCP Criteria
- ☐ CT RCP Criteria
- ☐ State Forms
- ☐ EDD Format
- ☐ DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

SSOW 12599404-2022-001

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 GHD	3-1-23/1600	1 Fedex	2 Fedex	3/2/23 10:30	2
3		3	4		4
5		5	Custody Seal # ☐ Intact ☐ Not Intact ☐ Absent	Therm ID: On Ice ☐ See Sample Receipt Summary	Cooler Temp. °C

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JD61207: Chain of Custody
Page 4 of 8

JD61207 5/6

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto Waste Pits S. Impoundment
P.O. #:
QUOTE #:
SITE REF: 125994C4
TURN AROUND TIME: 2 Day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version: See SSOW
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
SSOW 125994C4-2022-0051

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS:
PHONE: 225-454-4563 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE	ANALYSIS & METHOD: TAL Metals	ANALYSIS & METHOD: Hex Chromium								MS MSD	MS/ DUP	REMARKS
125994C4-c5ci23-S-MTK-Backfill-49(2-4)	3/1/23	0945	1	S	1	X	X								49			TAL Metals (SW-846 6020A/7471A)
-Backfill-50(6-8)		0947				X	X								50			Hex Chromium (SW-846 7196A)
-Backfill-51(4-6)		0950				X	X								51			
-Backfill-52(2-4)		0953				X	X								52			
-Backfill-53(6-8)		0956				X	X								53			
-Backfill-54(4-6)		0959				X	X								54			
-Backfill-55(2-4)		1002				X	X								55			
-Backfill-56(6-8)		1011				X	X								56			
-Backfill-57(4-6)		1016				X	X								57			
-Backfill-58(2-4)		1020				X	X								58			

COLLECTED/RELINQUISHED BY (1): GHD	DATE: 3-1-23	TIME: 1600	RECEIVED BY: Feder
RELINQUISHED BY (2): Feder 3/2/23	DATE:	TIME: 0730	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:
COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: TEMP: °C
TRACKING #:

SGS NORTH AMERICA INC ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment
Member of the SGS Group (SGS SA)

JD61207 6/6

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Juanito Waste Pits-S Impoundment
P.O. #:
QUOTE #:
SITE REF: 12599404
TURN AROUND TIME: 2 day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version: See SSOW
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
SSOW: 12599404-2022-001

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS: 5551 Corp. Blvd St 200, Baton Rouge LA
PHONE: 225-454-4363 EMAIL: WellsRichard@ghd.com

INVOICE TO ☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE	ANALYSIS & METHOD: TAL Metals	ANALYSIS & METHOD: Hex Chromium								MS MSD	MS/ DUP	REMARKS
12599404-1 GSC123-S-MW-Backfill-59(6-8)	3/1/23	1022	1	S		X	X							59			TAL Metals (SW-846 6020A/7471A)
12599404 GSC123-S-MW-Backfill-60(4-6)	3/1/23	1025	1	S		X	X							60			Hex Chromium (SW-846 7196A)
Temp Blank	—	—	3	W										~~61~~			

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE:	TIME:
GHD	3-1-23	1600	Felix			
RELINQUISHED BY (2): Felix 3/2/23	DATE:	TIME: 10:30	RECEIVED BY:	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT		
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT		
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER:	TEMP: °C	
				TRACKING #:		

SGS NORTH AMERICA INC ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment
Member of the SGS Group (SGS SA)

SGS Sample Receipt Summary

Job Number: JD61207 **Client:** GHD SERVICES INC. **Project:** SJRWP - PCFSE, HARRIS COUNTY, TX

Date / Time Received: 3/2/2023 10:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.7); Cooler 2: (2.6); Cooler 3: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (2.7); Cooler 2: (2.6); Cooler 3: (3.8);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	3		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Job Change Order: JD61207

Requested Date: 3/3/2023 **Received Date:** 3/2/2023

Account Name: GHD Services Inc. **Due Date:** 3/3/2023

Project Description: SJRWP - PCFSE, Harris County, TX **Deliverable:** COMMBN

C/O Initiated By: KELLY.RAM **PM:** KR **TAT (Days):** 4

==========

Sample #: JD61207-ALL **Dept:**

Client ID: **TAT:** 4

Change: Please revise TAT to 4 days, due 3/8

Above Changes Per: Kathy Shaw **Date/Time:** 3/3/2023

To Client: This Change Order is confirmation of the revisions, previously discussed with the Client Service Representative.

Page 1 of 1

JD61207: Chain of Custody
Page 8 of 8

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.92	8.1	4.4	<50
Antimony	2.0	.28	.41	-0.13	<2.0
Arsenic	2.0	.26	.28	0.15	<2.0
Barium	20	.02	1.9	0.090	<20
Beryllium	0.20	.02	.08	0.020	<0.20
Bismuth	2.0	.25	.52		
Boron	10	.18	3.7		
Cadmium	0.50	.04	.07	0.0	<0.50
Calcium	500	1.3	21	23.4	<500
Chromium	1.0	.07	.37	0.080	<1.0
Cobalt	5.0	.06	.28	0.040	<5.0
Copper	2.5	.07	.84	0.22	<2.5
Iron	50	.33	19	6.4	<50
Lead	2.0	.2	.41	-0.080	<2.0
Lithium	5.0	.15	.92		
Magnesium	500	2.5	14	1.2	<500
Manganese	1.5	.01	.41	0.12	<1.5
Molybdenum	2.0	.06	.32		
Nickel	4.0	.08	.35	0.080	<4.0
Phosphorus	20	.7	3.3		
Potassium	1000	3.5	32	13.8	<1000
Selenium	2.0	.36	.65	-0.14	<2.0
Silicon	20	.22	11		
Silver	0.50	.06	.17	0.060	<0.50
Sodium	1000	1.4	78	6.8	<1000
Strontium	5.0	.01	.18		
Sulfur	10	.37	3.9		
Thallium	1.0	.52	.58	0.30	<1.0
Tin	20	.14	3.8		
Titanium	1.0	.08	.34		
Tungsten	5.0	.13	1.8		
Vanadium	5.0	.05	.19	0.0	<5.0
Zinc	5.0	.03	2.3	0.99	<5.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.05	.54		

Associated samples MP38190: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-20 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	11800	30300	3060	603.8N(a	75-125
Antimony	0.0	98.4	245	40.1N(a)	75-125
Arsenic	6.8	220	245	87.0	75-125
Barium	54.9	339	245	115.9	75-125
Beryllium	1.1	214	245	86.9	75-125
Bismuth					
Boron					
Cadmium	0.11	215	245	87.7	75-125
Calcium	4390	7530	3060	102.5	75-125
Chromium	12.5	253	245	98.1	75-125
Cobalt	4.8	217	245	86.6	75-125
Copper	7.3	231	245	91.3	75-125
Iron	16000	22600	3060	215.4(b)	75-125
Lead	7.4	229	245	90.4	75-125
Lithium					
Magnesium	1470	5560	3060	133.5N(a	75-125
Manganese	132	527	245	161.2N(a	75-125
Molybdenum					
Nickel	16.8	236	245	89.4	75-125
Phosphorus					
Potassium	813	4580	3060	123.0	75-125
Selenium	0.0	205	245	83.6	75-125
Silicon					
Silver	0.40	28.2	30.6	90.7	75-125
Sodium	426	3360	3060	95.8	75-125
Strontium					
Sulfur					
Thallium	0.0	215	245	87.7	75-125
Tin					
Titanium					
Tungsten					
Vanadium	24.4	257	245	94.9	75-125
Zinc	22.9	244	245	90.2	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-20 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP38190: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-20 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	11800	29400	3060	574.5N(a	3.0	20
Antimony	0.0	104	245	42.4N(a)	5.5	20
Arsenic	6.8	218	245	86.2	0.9	20
Barium	54.9	357	245	123.3	5.2	20
Beryllium	1.1	214	245	86.9	0.0	20
Bismuth						
Boron						
Cadmium	0.11	213	245	86.9	0.9	20
Calcium	4390	7580	3060	104.1	0.7	20
Chromium	12.5	251	245	97.3	0.8	20
Cobalt	4.8	222	245	88.6	2.3	20
Copper	7.3	228	245	90.0	1.3	20
Iron	16000	22000	3060	195.8(b)	2.7	20
Lead	7.4	231	245	91.2	0.9	20
Lithium						
Magnesium	1470	5340	3060	126.3N(a	4.0	20
Manganese	132	776	245	262.8N(a	38.2 (c)	20
Molybdenum						
Nickel	16.8	235	245	89.0	0.4	20
Phosphorus						
Potassium	813	4460	3060	119.0	2.7	20
Selenium	0.0	203	245	82.8	1.0	20
Silicon						
Silver	0.40	28.0	30.6	90.1	0.7	20
Sodium	426	3320	3060	94.5	1.2	20
Strontium						
Sulfur						
Thallium	0.0	215	245	87.7	0.0	20
Tin						
Titanium						
Tungsten						
Vanadium	24.4	255	245	94.1	0.8	20
Zinc	22.9	239	245	88.2	2.1	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-20 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP38190: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(c) High rpd due to possible sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2390	2500	95.6	80-120
Antimony	178	200	89.0	80-120
Arsenic	185	200	92.5	80-120
Barium	186	200	93.0	80-120
Beryllium	184	200	92.0	80-120
Bismuth				
Boron				
Cadmium	183	200	91.5	80-120
Calcium	2480	2500	99.2	80-120
Chromium	190	200	95.0	80-120
Cobalt	177	200	88.5	80-120
Copper	181	200	90.5	80-120
Iron	2380	2500	95.2	80-120
Lead	185	200	92.5	80-120
Lithium				
Magnesium	2410	2500	96.4	80-120
Manganese	184	200	92.0	80-120
Molybdenum				
Nickel	182	200	91.0	80-120
Phosphorus				
Potassium	2450	2500	98.0	80-120
Selenium	182	200	91.0	80-120
Silicon				
Silver	22.7	25	90.8	80-120
Sodium	2430	2500	97.2	80-120
Strontium				
Sulfur				
Thallium	186	200	93.0	80-120
Tin				
Titanium				
Tungsten				
Vanadium	182	200	91.0	80-120
Zinc	183	200	91.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP38190: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/07/23

Metal	JD61207-20 Original	SDL 1:5	%DIF	QC Limits
Aluminum	96400	96800	0.4	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	55.4	50.5	8.8	0-10
Barium	448	459	2.6	0-10
Beryllium	8.60	8.60	0.0	0-10
Bismuth				
Boron				
Cadmium	0.900	0.00	100.0(a)	0-10
Calcium	35800	36700	2.6	0-10
Chromium	102	101	1.1	0-10
Cobalt	39.5	39.1	1.0	0-10
Copper	59.6	64.1	7.6	0-10
Iron	131000	134000	2.1	0-10
Lead	60.1	60.2	0.2	0-10
Lithium				
Magnesium	12000	12300	2.5	0-10
Manganese	1080	1090	1.0	0-10
Molybdenum				
Nickel	137	135	1.4	0-10
Phosphorus				
Potassium	6630	7170	8.0	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	3.30	9.00	172.7(a)	0-10
Sodium	3480	3510	1.1	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	199	200	0.3	0-10
Zinc	187	199	6.6	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

	JD61207-20		QC
Metal	Original SDL 1:5	%DIF	Limits

Zirconium

Associated samples MP38190: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/07/23

Metal	Sample ml	Final ml	JD61207-20 Raw	JD61207-20 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20			1965	0.2	200	2000	98.3	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium	19.25	20	12020	11569.25	35530	0.1	5000	25000	95.8	80-120
Manganese	19.25	20	1079	1038.538	2954	0.2	200	2000	95.8	80-120
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38190 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

Metal	Sample ml	Final ml	JD61207-20 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP38190: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.92	8.1	5.4	<50
Antimony	2.0	.28	.41	-0.12	<2.0
Arsenic	2.0	.26	.28	0.23	<2.0
Barium	20	.02	1.9	0.10	<20
Beryllium	0.20	.02	.08	0.030	<0.20
Bismuth	2.0	.25	.52		
Boron	10	.18	3.7		
Cadmium	0.50	.04	.07	0.0	<0.50
Calcium	500	1.3	21	30.5	<500
Chromium	1.0	.07	.37	0.050	<1.0
Cobalt	5.0	.06	.28	0.030	<5.0
Copper	2.5	.07	.84	0.29	<2.5
Iron	50	.33	19	6.9	<50
Lead	2.0	.2	.41	-0.080	<2.0
Lithium	5.0	.15	.92		
Magnesium	500	2.5	14	2.1	<500
Manganese	1.5	.01	.41	0.090	<1.5
Molybdenum	2.0	.06	.32		
Nickel	4.0	.08	.35	0.090	<4.0
Phosphorus	20	.7	3.3		
Potassium	1000	3.5	32	9.6	<1000
Selenium	2.0	.36	.65	-0.060	<2.0
Silicon	20	.22	11		
Silver	0.50	.06	.17	0.090	<0.50
Sodium	1000	1.4	78	6.1	<1000
Strontium	5.0	.01	.18		
Sulfur	10	.37	3.9		
Thallium	1.0	.52	.58	0.21	<1.0
Tin	20	.14	3.8		
Titanium	1.0	.08	.34		
Tungsten	5.0	.13	1.8		
Vanadium	5.0	.05	.19	0.030	<5.0
Zinc	5.0	.03	2.3	1.4	<5.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.05	.54		

Associated samples MP38191: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-21 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	11400	29800	2950	622.9N(a	75-125
Antimony	0.0	80.1	236	33.9N(a)	75-125
Arsenic	4.4	202	236	83.6	75-125
Barium	58.2	314	236	108.2	75-125
Beryllium	1.2	193	236	81.2	75-125
Bismuth					
Boron					
Cadmium	0.15	196	236	82.9	75-125
Calcium	7250	13100	2950	198.0N(a	75-125
Chromium	11.5	233	236	93.7	75-125
Cobalt	2.1	202	236	84.6	75-125
Copper	5.9	208	236	85.5	75-125
Iron	13000	21300	2950	281.0(b)	75-125
Lead	7.4	217	236	88.7	75-125
Lithium					
Magnesium	1290	5020	2950	126.3N(a	75-125
Manganese	36.3	424	236	164.1N(a	75-125
Molybdenum					
Nickel	14.2	219	236	86.7	75-125
Phosphorus					
Potassium	662	4160	2950	118.4	75-125
Selenium	0.0	185	236	78.3	75-125
Silicon					
Silver	0.37	25.4	29.5	84.7	75-125
Sodium	363	3000	2950	89.3	75-125
Strontium					
Sulfur					
Thallium	0.69	195	236	82.2	75-125
Tin					
Titanium					
Tungsten					
Vanadium	17.5	238	236	93.3	75-125
Zinc	18.4	218	236	84.5	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-21 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP38191: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-21 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	11400	31100	3040	647.8N(a	4.3	20
Antimony	0.0	78.2	243	32.1N(a)	2.4	20
Arsenic	4.4	197	243	79.2	2.5	20
Barium	58.2	390	243	136.4N(a	21.6 (b)	20
Beryllium	1.2	184	243	75.1	4.8	20
Bismuth						
Boron						
Cadmium	0.15	186	243	76.4	5.2	20
Calcium	7250	11400	3040	136.5N(a	13.9	20
Chromium	11.5	223	243	86.9	4.4	20
Cobalt	2.1	212	243	86.3	4.8	20
Copper	5.9	198	243	79.0	4.9	20
Iron	13000	22100	3040	299.3(c)	3.7	20
Lead	7.4	213	243	84.5	1.9	20
Lithium						
Magnesium	1290	4920	3040	119.4	2.0	20
Manganese	36.3	1510	243	605.8N(a	112.3 (b)	20
Molybdenum						
Nickel	14.2	225	243	86.7	2.7	20
Phosphorus						
Potassium	662	4140	3040	114.4	0.5	20
Selenium	0.0	177	243	72.8N(a)	4.4	20
Silicon						
Silver	0.37	24.4	30.4	79.0	4.0	20
Sodium	363	2860	3040	82.1	4.8	20
Strontium						
Sulfur						
Thallium	0.69	186	243	76.2	4.7	20
Tin						
Titanium						
Tungsten						
Vanadium	17.5	236	243	89.8	0.8	20
Zinc	18.4	209	243	78.3	4.2	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-21 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP38191: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
(b) High rpd due to possible sample nonhomogeneity.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2550	2500	102.0	80-120
Antimony	178	200	89.0	80-120
Arsenic	188	200	94.0	80-120
Barium	192	200	96.0	80-120
Beryllium	189	200	94.5	80-120
Bismuth				
Boron				
Cadmium	184	200	92.0	80-120
Calcium	2590	2500	103.6	80-120
Chromium	194	200	97.0	80-120
Cobalt	175	200	87.5	80-120
Copper	179	200	89.5	80-120
Iron	2490	2500	99.6	80-120
Lead	187	200	93.5	80-120
Lithium				
Magnesium	2490	2500	99.6	80-120
Manganese	184	200	92.0	80-120
Molybdenum				
Nickel	181	200	90.5	80-120
Phosphorus				
Potassium	2520	2500	100.8	80-120
Selenium	181	200	90.5	80-120
Silicon				
Silver	22.9	25	91.6	80-120
Sodium	2530	2500	101.2	80-120
Strontium				
Sulfur				
Thallium	184	200	92.0	80-120
Tin				
Titanium				
Tungsten				
Vanadium	181	200	90.5	80-120
Zinc	183	200	91.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP38191: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/07/23

Metal	JD61207-21 Original	SDL 1:5	%DIF	QC Limits
Aluminum	89400	90300	1.0	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	34.1	33.9	0.6	0-10
Barium	455	467	2.7	0-10
Beryllium	9.00	9.10	1.1	0-10
Bismuth				
Boron				
Cadmium	1.20	0.00	100.0(a)	0-10
Calcium	56700	58300	2.8	0-10
Chromium	89.6	88.9	0.8	0-10
Cobalt	16.8	18.1	7.7	0-10
Copper	46.1	51.4	11.5*(b)	0-10
Iron	102000	105000	3.0	0-10
Lead	57.5	52.0	9.6	0-10
Lithium				
Magnesium	10100	10300	2.5	0-10
Manganese	284	290	2.0	0-10
Molybdenum				
Nickel	111	112	0.6	0-10
Phosphorus				
Potassium	5170	5610	8.4	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	2.90	3.20	10.3 (a)	0-10
Sodium	2840	2920	2.9	0-10
Strontium				
Sulfur				
Thallium	5.40	0.00	100.0(a)	0-10
Tin				
Titanium				
Tungsten				
Vanadium	137	139	1.4	0-10
Zinc	144	164	14.0*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

Metal	JD61207-21 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP38191: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/07/23

Metal	Sample ml	Final ml	JD61207-21 Raw	JD61207-21 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20			1874	0.2	200	2000	93.7	80-120
Arsenic										
Barium	19.25	20	455.2	438.13	2387	0.2	200	2000	97.4	80-120
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium	19.25	20	10050	9673.125	33350	0.1	5000	25000	94.7	80-120
Manganese	19.25	20	284.1	273.4463	2177	0.2	200	2000	95.2	80-120
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium	19.25	20			1973	0.2	200	2000	98.7	80-120
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38191 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

Metal	Sample ml	Final ml	JD61207-21 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP38191: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.92	8.1	1.7	<50
Antimony	2.0	.28	.41	-0.090	<2.0
Arsenic	2.0	.26	.28	0.030	<2.0
Barium	20	.02	1.9	0.010	<20
Beryllium	0.20	.02	.08	0.010	<0.20
Bismuth	2.0	.25	.52		
Boron	10	.18	3.7		
Cadmium	0.50	.04	.07	-0.010	<0.50
Calcium	500	1.3	21	13.3	<500
Chromium	1.0	.07	.37	0.080	<1.0
Cobalt	5.0	.06	.28	0.030	<5.0
Copper	2.5	.07	.84	0.18	<2.5
Iron	50	.33	19	3.3	<50
Lead	2.0	.2	.41	-0.050	<2.0
Lithium	5.0	.15	.92		
Magnesium	500	2.5	14	1.7	<500
Manganese	1.5	.01	.41	0.060	<1.5
Molybdenum	2.0	.06	.32		
Nickel	4.0	.08	.35	0.13	<4.0
Phosphorus	20	.7	3.3		
Potassium	1000	3.5	32	9.0	<1000
Selenium	2.0	.36	.65	0.030	<2.0
Silicon	20	.22	11		
Silver	0.50	.06	.17	0.060	<0.50
Sodium	1000	1.4	78	6.1	<1000
Strontium	5.0	.01	.18		
Sulfur	10	.37	3.9		
Thallium	1.0	.52	.58	0.42	<1.0
Tin	20	.14	3.8		
Titanium	1.0	.08	.34		
Tungsten	5.0	.13	1.8		
Vanadium	5.0	.05	.19	-0.020	<5.0
Zinc	5.0	.03	2.3	0.25	<5.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.05	.54		

Associated samples MP38192: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-60 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	14300	32300	2900	620.8(a)	75-125
Antimony	0.0	122	232	52.6N(b)	75-125
Arsenic	3.0	206	232	87.5	75-125
Barium	77.7	321	232	104.9	75-125
Beryllium	0.66	199	232	85.5	75-125
Bismuth					
Boron					
Cadmium	0.060	203	232	87.5	75-125
Calcium	9150	14500	2900	184.5N(b	75-125
Chromium	13.9	244	232	99.2	75-125
Cobalt	1.8	194	232	82.9	75-125
Copper	4.5	213	232	89.9	75-125
Iron	11700	18600	2900	238.0(a)	75-125
Lead	7.1	212	232	88.3	75-125
Lithium					
Magnesium	1580	5140	2900	122.8	75-125
Manganese	34.3	253	232	94.3	75-125
Molybdenum					
Nickel	5.9	207	232	86.7	75-125
Phosphorus					
Potassium	592	4110	2900	121.3	75-125
Selenium	0.0	191	232	82.3	75-125
Silicon					
Silver	0.35	26.4	29	89.8	75-125
Sodium	499	3230	2900	94.2	75-125
Strontium					
Sulfur					
Thallium	0.0	199	232	85.8	75-125
Tin					
Titanium					
Tungsten					
Vanadium	21.8	243	232	95.4	75-125
Zinc	23.0	227	232	87.9	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-60 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP38192: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-60 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	14300	29200	2960	504.0(a)	10.1	20
Antimony	0.0	120	237	50.7N(b)	1.7	20
Arsenic	3.0	193	237	80.3	6.5	20
Barium	77.7	307	237	96.9	4.5	20
Beryllium	0.66	185	237	77.9	7.3	20
Bismuth						
Boron						
Cadmium	0.060	191	237	80.7	6.1	20
Calcium	9150	17600	2960	285.8N(b	19.3	20
Chromium	13.9	224	237	88.8	8.5	20
Cobalt	1.8	182	237	76.2	6.4	20
Copper	4.5	197	237	81.4	7.8	20
Iron	11700	15600	2960	131.9N(b	17.5	20
Lead	7.1	198	237	80.7	6.8	20
Lithium						
Magnesium	1580	4730	2960	106.5	8.3	20
Manganese	34.3	234	237	84.4	7.8	20
Molybdenum						
Nickel	5.9	194	237	79.5	6.5	20
Phosphorus						
Potassium	592	3750	2960	106.8	9.2	20
Selenium	0.0	181	237	76.5	5.4	20
Silicon						
Silver	0.35	24.6	29.6	82.0	7.1	20
Sodium	499	3010	2960	84.9	7.1	20
Strontium						
Sulfur						
Thallium	0.0	187	237	79.1	6.2	20
Tin						
Titanium						
Tungsten						
Vanadium	21.8	220	237	83.8	9.9	20
Zinc	23.0	210	237	79.1	7.8	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	JD61207-60 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP38192: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 03/07/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2400	2500	96.0	80-120
Antimony	177	200	88.5	80-120
Arsenic	186	200	93.0	80-120
Barium	186	200	93.0	80-120
Beryllium	181	200	90.5	80-120
Bismuth				
Boron				
Cadmium	182	200	91.0	80-120
Calcium	2470	2500	98.8	80-120
Chromium	195	200	97.5	80-120
Cobalt	174	200	87.0	80-120
Copper	179	200	89.5	80-120
Iron	2350	2500	94.0	80-120
Lead	185	200	92.5	80-120
Lithium				
Magnesium	2400	2500	96.0	80-120
Manganese	183	200	91.5	80-120
Molybdenum				
Nickel	180	200	90.0	80-120
Phosphorus				
Potassium	2450	2500	98.0	80-120
Selenium	177	200	88.5	80-120
Silicon				
Silver	22.5	25	90.0	80-120
Sodium	2440	2500	97.6	80-120
Strontium				
Sulfur				
Thallium	183	200	91.5	80-120
Tin				
Titanium				
Tungsten				
Vanadium	181	200	90.5	80-120
Zinc	181	200	90.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/07/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP38192: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 03/07/23

Metal	JD61207-60 Original	SDL 1:5	%DIF	QC Limits
Aluminum	119000	119000	0.3	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	24.5	24.6	0.4	0-10
Barium	644	656	1.9	0-10
Beryllium	5.50	5.50	0.0	0-10
Bismuth				
Boron				
Cadmium	0.500	0.00	100.0(a)	0-10
Calcium	75800	77400	2.1	0-10
Chromium	115	116	0.4	0-10
Cobalt	14.7	13.4	8.8	0-10
Copper	37.1	41.6	12.1*(b)	0-10
Iron	97200	99600	2.5	0-10
Lead	58.9	55.9	5.1	0-10
Lithium				
Magnesium	13100	13500	3.2	0-10
Manganese	284	288	1.4	0-10
Molybdenum				
Nickel	49.3	48.2	2.2	0-10
Phosphorus				
Potassium	4910	5520	12.3*(b)	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	2.90	7.10	144.8(a)	0-10
Sodium	4140	4190	1.4	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	180	181	0.1	0-10
Zinc	191	212	11.0*(b)	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

Metal	JD61207-60 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP38192: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

Metal	Sample ml	Final ml	JD61207-60 Raw	JD61207-60 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony	19.25	20			1896	0.2	200	2000	94.8	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38192 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 03/07/23

Metal	Sample ml	Final ml	JD61207-60 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP38192: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38204 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0057	.015	0.014	<0.033

Associated samples MP38204: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38204 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61212-1 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.094	0.47	0.365	103.1	80-120

Associated samples MP38204: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38204 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61212-1 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.094	0.43	0.373	90.1	8.9	20

Associated samples MP38204: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38204 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.31	0.333	93.0	80-120

Associated samples MP38204: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38205 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.066	.0057	.015	0.020	<0.066

Associated samples MP38205: JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20, JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38205 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61207-12 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.028	0.34	0.339	92.0	80-120

Associated samples MP38205: JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20, JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38205 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61207-12 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.028	0.30	0.319	85.3	12.5	20

Associated samples MP38205: JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20, JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38205 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.32	0.333	96.0	80-120

Associated samples MP38205: JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20, JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38206 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.066	.0057	.015	0.023	<0.066

Associated samples MP38206: JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40, JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38206 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61207-32 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.035	0.33	0.341	86.6	80-120

Associated samples MP38206: JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40, JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38206 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61207-32 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.035	0.29	0.307	83.2	12.9	20

Associated samples MP38206: JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40, JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38206 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.33	0.333	99.0	80-120

Associated samples MP38206: JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40, JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38208 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.066	.0057	.015	0.021	<0.066

Associated samples MP38208: JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38208 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61207-52 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.043	0.24	0.345	57.1N(a)	80-120

Associated samples MP38208: JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38208 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 03/05/23

Metal	JD61207-52 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.043	0.25	0.322	64.2N(a)	4.1	20

Associated samples MP38208: JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP38208
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 03/05/23

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.30	0.333	90.0	80-120

Associated samples MP38208: JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP45439/GN38925	0.40	0.0	mg/kg	40	37.2	93.0	80-120%
Chromium, Hexavalent	GP45439/GN38925			mg/kg	733.663	694	94.6	80-120%
Chromium, Hexavalent	GP45440/GN38926	0.40	0.0	mg/kg	40	37.8	94.5	80-120%
Chromium, Hexavalent	GP45440/GN38926			mg/kg	1023.267	1000	97.7	80-120%
Chromium, Hexavalent	GP45441/GN39006	0.40	0.0	mg/kg	40	36.7	91.8	80-120%
Chromium, Hexavalent	GP45441/GN39006			mg/kg	1029.703	1030	100.0	80-120%

Associated Samples:
Batch GP45439: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20
Batch GP45440: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40
Batch GP45441: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP45439/GN38925	JD61207-1	mg/kg	0.0	0.0	0.0	0-20%
Chromium, Hexavalent	GP45440/GN38926	JD61207-21	mg/kg	0.0	0.0	0.0	0-20%
Chromium, Hexavalent	GP45441/GN39006	JD61207-41	mg/kg	0.44	0.0	200.0(a)	0-20%
Solids, Percent	GN38952	JD61207-1	%	83.5	80.8	3.3	0-10%
Solids, Percent	GN38953	JD61207-21	%	80.6	80.2	0.5	0-10%
Solids, Percent	GN38954	JD61207-41	%	82.9	82.5	0.5	0-10%

Associated Samples:
Batch GN38952: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20
Batch GN38953: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40
Batch GN38954: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60
Batch GP45439: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20
Batch GP45440: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40
Batch GP45441: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD61207
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP45439/GN38925	JD61207-1	mg/kg	0.0	47.9	43.4	90.6(a)	75-125%
Chromium, Hexavalent	GP45439/GN38925	JD61207-1	mg/kg	0.0	919	901	98.0(b)	75-125%
Chromium, Hexavalent	GP45440/GN38926	JD61207-21	mg/kg	0.0	49.6	38.8	78.2(c)	75-125%
Chromium, Hexavalent	GP45440/GN38926	JD61207-21	mg/kg	0.0	843	843	100.0(b)	75-125%
Chromium, Hexavalent	GP45441/GN39006	JD61207-41	mg/kg	0.44	46.9	45.0	94.9(d)	75-125%
Chromium, Hexavalent	GP45441/GN39006	JD61207-41	mg/kg	0.44	1360	1360	100.3(b)	75-125%

Associated Samples:
Batch GP45439: JD61207-1, JD61207-2, JD61207-3, JD61207-4, JD61207-5, JD61207-6, JD61207-7, JD61207-8, JD61207-9, JD61207-10, JD61207-11, JD61207-12, JD61207-13, JD61207-14, JD61207-15, JD61207-16, JD61207-17, JD61207-18, JD61207-19, JD61207-20
Batch GP45440: JD61207-21, JD61207-22, JD61207-23, JD61207-24, JD61207-25, JD61207-26, JD61207-27, JD61207-28, JD61207-29, JD61207-30, JD61207-31, JD61207-32, JD61207-33, JD61207-34, JD61207-35, JD61207-36, JD61207-37, JD61207-38, JD61207-39, JD61207-40
Batch GP45441: JD61207-41, JD61207-42, JD61207-43, JD61207-44, JD61207-45, JD61207-46, JD61207-47, JD61207-48, JD61207-49, JD61207-50, JD61207-51, JD61207-52, JD61207-53, JD61207-54, JD61207-55, JD61207-56, JD61207-57, JD61207-58, JD61207-59, JD61207-60
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Good recovery on soluble XCR matrix spike. Good recovery (92.1%) on the post-spike.
(b) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.
(c) Good recovery on soluble XCR matrix spike. Good recovery (86.9%) on the post-spike.
(d) Good recovery on soluble XCR matrix spike. Good recovery (106 %) on the post-spike.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-001; PO#: 340-009816

SGS Job Number: JD68986

Sampling Date: 07/07/23

Report to:

GHD Services Inc.
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Houston, TX 77079
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Kathleen.Shaw@ghd.com; mary.cameron@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: **82**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200
Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Sample Summary

GHD Services Inc.

Job No: JD68986

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-001; PO#: 340-009816

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD68986-1	07/07/23	10:00		07/08/23	SO	Soil	12599404-070723-S-MTK-SOURCE TOPSOIL-1

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: GHD Services Inc. **Job No:** JD68986

Site: SJRWP - PCFSE, Harris County, TX **Report Date** 7/14/2023 6:46:09 PM

On 07/08/2023, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 3.5 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD68986 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260D

Matrix: SO **Batch ID:** V1C8454

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD68950-2MS, JD68950-4DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The duplicate RPD(s) for Toluene are outside control limits for sample JD68950-4DUP. RPD acceptable due to low DUP and sample concentrations.

MS Semi-volatiles By Method SW846 8270E

Matrix: SO **Batch ID:** OP47687

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) JD68967-6MS, JD68967-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The matrix spike (MS) recovery(s) of Benzo(a)pyrene, 2,4-Dinitrophenol, 4,6-Dinitro-o-cresol, Acenaphthylene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Carbazole, Hexachlorocyclopentadiene, Indeno(1,2,3-cd)pyrene are outside control limits. Dilution required due to viscosity of the extract matrix.
- The matrix spike duplicate (MSD) recovery(s) of 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Methylnaphthalene, 2-Nitrophenol, 3,3'-Dichlorobenzidine, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Acenaphthene, Acetophenone, Benzaldehyde, Caprolactam, Carbazole, Dibenzofuran, Fluorene, Hexachlorocyclopentadiene, Hexachloroethane are outside control limits. Dilution required due to viscosity of the extract matrix.
- The matrix spike (MS) recovery(s) of 2-Methylnaphthalene, Acenaphthene, Anthracene, Benzo(a)anthracene, Benzo(b)fluoranthene, bis(2-Ethylhexyl)phthalate, Chrysene, Dibenzofuran, Fluoranthene, Fluorene, Phenanthrene, Pyrene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- The RPD(s) for the MS and MSD recoveries of 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Methylnaphthalene, 2-Nitrophenol, 3,3'-Dichlorobenzidine, 4-Nitroaniline, 4-Nitrophenol, Acenaphthene, Acetophenone, Anthracene, Benzaldehyde, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, bis(2-Ethylhexyl)phthalate, Caprolactam, Chrysene, Dibenzofuran, Fluoranthene, Fluorene, Hexachloroethane, Phenanthrene, Pyrene are outside control limits for sample OP47687-MSD. Probable cause due to sample homogeneity.
- JD68986-1 for Caprolactam: Associated CCV outside of control limits high, sample was ND.
- JD68986-1 for Hexachlorocyclopentadiene: Associated CCV outside of control limits low. Low-level verification was analyzed to demonstrate system suitability to detect affected analytes. Sample was ND.
- JD68986-1 for 4-Nitrophenol: Associated CCV outside of control limits low. Low-level verification was analyzed to demonstrate system suitability to detect affected analytes. Sample was ND.

GC/LC Semi-volatiles By Method SW846 8081B

Matrix: SO **Batch ID:** OP47683

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68931-1MS, JD68931-1MSD, OP47683-MSMSD were used as the QC samples indicated.
- The blank spike (BS) recovery(s) of delta-BHC, Endosulfan sulfate are outside control limits.
- The matrix spike duplicate (MSD) recovery(s) of 4,4'-DDD are outside control limits. Probable cause due to matrix interference.
- OP47683-MB1 for Tetrachloro-m-xylene: Outside of in house control limits.
- OP47683-BS1 for delta-BHC: Outside of in house control limits.
- OP47683-BS1 for Endosulfan sulfate: Outside of in house control limits.
- OP47683-BS1 for Heptachlor: Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO **Batch ID:** OP47684

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) JD68935-1MS, JD68935-1MSD, OP47684-MSMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- OP47684-BS1 for Aroclor 1260: Reported from the 1st signal. The %D of the CCV on the 2nd signal exceeds the method criteria of 20%, so it being used for confirmation only.

GC/LC Semi-volatiles By Method SW846 8151A

Matrix: SO **Batch ID:** OP47688

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68935-1MS, JD68935-1MSD were used as the QC samples indicated.
- The matrix spike (MS) recovery(s) of 2,4,5-T, 2,4,5-TP (Silvex), 2,4-D are outside control limits. Probable cause due to matrix interference.
- The matrix spike duplicate (MSD) recovery(s) of 2,4,5-T, 2,4,5-TP (Silvex), 2,4-D are outside control limits. Probable cause due to matrix interference.
- Sample(s) JD68986-1 have surrogates outside control limits. Probable cause due to matrix interference.
- JD68986-1 for 2,4,5-TP (Silvex): More than 40 % RPD for detected concentrations between the two GC columns.
- JD68986-1 for 2,4-DCAA: Outside control limits due to matrix interference.

Metals Analysis By Method SW846 6010D

Matrix: SO **Batch ID:** MP40633

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68967-4MS, JD68967-4MSD, JD68967-4PS, JD68967-4SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Aluminum, Antimony are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The matrix spike duplicate (MSD) recovery(s) of Aluminum, Antimony, Iron are outside control limits. Probable cause due to matrix interference.
- The serial dilution RPD(s) for Cadmium, Silver, Chromium, Manganese, Sodium are outside control limits for sample MP40633-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP40633-SD1 for Chromium: Serial dilution indicates possible matrix interference.
- MP40633-SD1 for Manganese: Serial dilution indicates possible matrix interference.
- MP40633-SD1 for Sodium: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 7471B

Matrix: SO **Batch ID:** MP40639

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68944-1MS, JD68944-1MSD were used as the QC samples for the metals analysis.

General Chemistry By Method EPA 365.3 M

Matrix: SO **Batch ID:** GP48036

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68986-1DUP, JD68986-1MS were used as the QC samples for the Phosphorus, Total analysis.

General Chemistry By Method SM2540 G 18TH ED MOD

Matrix: SO **Batch ID:** GN43537

- Sample(s) JD68986-1DUP were used as the QC samples for the Solids, Percent analysis.

General Chemistry By Method SW846 3060A/7196A

Matrix: SO **Batch ID:** GP47973

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68636-3RDUP, JD68636-3RMS were used as the QC samples for the Chromium, Hexavalent analysis.
- GP47973-S1 for Chromium, Hexavalent: Good recovery on soluble XCR matrix spike. Good recovery (110 %) on the post-spike.

General Chemistry By Method SW846 9012B/LACHAT

Matrix:	SO	Batch ID:	GP47977

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD68950-3DUP, JD68950-3MS were used as the QC samples for the Cyanide analysis.

General Chemistry By Method SW846 9045D

Matrix:	SO	Batch ID:	GN43532

- JD68986-1 for pH: Temp of pH Reading: 21.8 Deg. C

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JD68986
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 07/07/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD68986-1	**12599404-070723-S-MTK-SOURCE TOPSOIL-1**					
Phenanthrene		0.0159 J	0.036	0.012	mg/kg	SW846 8270E
2,4,5-TP (Silvex) [a]		0.0020 J	0.0036	0.0020	mg/kg	SW846 8151A
Aluminum		11200	56		mg/kg	SW846 6010D
Arsenic		2.9	2.2		mg/kg	SW846 6010D
Barium		102	22		mg/kg	SW846 6010D
Beryllium		0.62	0.22		mg/kg	SW846 6010D
Calcium		4700	560		mg/kg	SW846 6010D
Chromium		11.1	1.1		mg/kg	SW846 6010D
Copper		4.5	2.8		mg/kg	SW846 6010D
Iron		8740	56		mg/kg	SW846 6010D
Lead		12.0	2.2		mg/kg	SW846 6010D
Magnesium		1180	560		mg/kg	SW846 6010D
Manganese		147	1.7		mg/kg	SW846 6010D
Nickel		6.1	4.4		mg/kg	SW846 6010D
Vanadium		24.3	5.6		mg/kg	SW846 6010D
Zinc		18.9	5.6		mg/kg	SW846 6010D
Phosphorus, Total		47.2	14		mg/kg	EPA 365.3 M
pH [b]		7.98			su	SW846 9045D

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Temp of pH Reading: 21.8 Deg. C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8260D	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1C195017.D	1	07/10/23 18:34	JN	n/a	n/a	V1C8454
Run #2							

	Initial Weight
Run #1	3.6 g
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.015	0.0064	mg/kg	
71-43-2	Benzene	ND	0.00077	0.00070	mg/kg	
74-97-5	Bromochloromethane	ND	0.0077	0.00087	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0031	0.00066	mg/kg	
75-25-2	Bromoform	ND	0.0077	0.0021	mg/kg	
74-83-9	Bromomethane	ND	0.0077	0.0012	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.015	0.0038	mg/kg	
75-15-0	Carbon disulfide	ND	0.0031	0.00083	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0031	0.00095	mg/kg	
108-90-7	Chlorobenzene	ND	0.0031	0.00071	mg/kg	
75-00-3	Chloroethane	ND	0.0077	0.00091	mg/kg	
67-66-3	Chloroform	ND	0.0031	0.00080	mg/kg	
74-87-3	Chloromethane	ND	0.0077	0.0030	mg/kg	
110-82-7	Cyclohexane	ND	0.0031	0.0010	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0031	0.0011	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0031	0.00087	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0015	0.00065	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0015	0.00084	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0015	0.00077	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0015	0.00076	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0077	0.0011	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0015	0.00076	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0015	0.00073	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0015	0.0010	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0015	0.0013	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0015	0.00094	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0031	0.00073	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0031	0.00073	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0031	0.00071	mg/kg	
100-41-4	Ethylbenzene	ND	0.0015	0.00070	mg/kg	
76-13-1	Freon 113	ND	0.0077	0.0041	mg/kg	
591-78-6	2-Hexanone	ND	0.0077	0.0033	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8260D	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	0.0031	0.0022	mg/kg	
79-20-9	Methyl Acetate	ND	0.0077	0.0021	mg/kg	
108-87-2	Methylcyclohexane	ND	0.0031	0.0014	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0015	0.00072	mg/kg	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	0.0077	0.0035	mg/kg	
75-09-2	Methylene chloride	ND	0.0077	0.0040	mg/kg	
100-42-5	Styrene	ND	0.0031	0.00062	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0031	0.00093	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0031	0.00090	mg/kg	
108-88-3	Toluene	ND	0.0015	0.00081	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.0039	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0077	0.0039	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0031	0.00075	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0031	0.00086	mg/kg	
79-01-6	Trichloroethene	ND	0.0015	0.0012	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0077	0.0011	mg/kg	
75-01-4	Vinyl chloride	ND	0.0031	0.00074	mg/kg	
	m,p-Xylene	ND	0.0015	0.0014	mg/kg	
95-47-6	o-Xylene	ND	0.0015	0.00071	mg/kg	
1330-20-7	Xylene (total)	ND	0.0015	0.00071	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-124%
17060-07-0	1,2-Dichloroethane-D4	97%		75-133%
2037-26-5	Toluene-D8	106%		79-125%
460-00-4	4-Bromofluorobenzene	100%		58-148%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8270E SW846 3546	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M189905.D	1	07/11/23 05:32	RS	07/10/23 14:40	OP47687	EM8224
Run #2							

	Initial Weight	Final Volume
Run #1	31.1 g	1.0 ml
Run #2		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	0.072	0.018	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.18	0.022	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.18	0.031	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.18	0.064	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	0.18	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.18	0.038	mg/kg	
95-48-7	2-Methylphenol	ND	0.072	0.023	mg/kg	
	3&4-Methylphenol	ND	0.072	0.029	mg/kg	
88-75-5	2-Nitrophenol	ND	0.18	0.024	mg/kg	
100-02-7	4-Nitrophenol [a]	ND	0.36	0.095	mg/kg	
87-86-5	Pentachlorophenol	ND	0.14	0.034	mg/kg	
108-95-2	Phenol	ND	0.072	0.019	mg/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.18	0.024	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.18	0.027	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.18	0.021	mg/kg	
83-32-9	Acenaphthene	ND	0.036	0.012	mg/kg	
208-96-8	Acenaphthylene	ND	0.036	0.018	mg/kg	
98-86-2	Acetophenone	ND	0.18	0.0077	mg/kg	
120-12-7	Anthracene	ND	0.036	0.022	mg/kg	
1912-24-9	Atrazine	ND	0.072	0.015	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.036	0.010	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.036	0.016	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.036	0.016	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.036	0.018	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.036	0.017	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.072	0.014	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.072	0.0087	mg/kg	
92-52-4	1,1'-Biphenyl	ND	0.072	0.0049	mg/kg	
100-52-7	Benzaldehyde	ND	0.18	0.0089	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.072	0.0085	mg/kg	
106-47-8	4-Chloroaniline	ND	0.18	0.013	mg/kg	
86-74-8	Carbazole	ND	0.072	0.0052	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8270E SW846 3546	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

ABN TCL List (SOM0 2.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam [b]	ND	0.072	0.014	mg/kg	
218-01-9	Chrysene	ND	0.036	0.011	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.072	0.0077	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.072	0.015	mg/kg	
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	0.072	0.013	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.072	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.036	0.011	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.036	0.018	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.072	0.030	mg/kg	
123-91-1	1,4-Dioxane	ND	0.036	0.024	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.036	0.016	mg/kg	
132-64-9	Dibenzofuran	ND	0.072	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.072	0.0058	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.072	0.0089	mg/kg	
84-66-2	Diethyl phthalate	ND	0.072	0.0076	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.072	0.0064	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.072	0.0084	mg/kg	
206-44-0	Fluoranthene	ND	0.036	0.016	mg/kg	
86-73-7	Fluorene	ND	0.036	0.016	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.072	0.0090	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.036	0.014	mg/kg	
77-47-4	Hexachlorocyclopentadiene [a]	ND	0.36	0.014	mg/kg	
67-72-1	Hexachloroethane	ND	0.18	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.036	0.017	mg/kg	
78-59-1	Isophorone	ND	0.072	0.0077	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.036	0.0081	mg/kg	
88-74-4	2-Nitroaniline	ND	0.18	0.0084	mg/kg	
99-09-2	3-Nitroaniline	ND	0.18	0.0089	mg/kg	
100-01-6	4-Nitroaniline	ND	0.18	0.0093	mg/kg	
91-20-3	Naphthalene	ND	0.036	0.010	mg/kg	
98-95-3	Nitrobenzene	ND	0.072	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.072	0.010	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.18	0.013	mg/kg	
85-01-8	Phenanthrene	0.0159	0.036	0.012	mg/kg	J
129-00-0	Pyrene	ND	0.036	0.011	mg/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.18	0.0091	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		10-99%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8270E SW846 3546	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

ABN TCL List (SOM0 2.0)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-62-2	Phenol-d5	51%		10-96%
118-79-6	2,4,6-Tribromophenol	80%		10-123%
4165-60-0	Nitrobenzene-d5	45%		10-109%
321-60-8	2-Fluorobiphenyl	58%		11-109%
1718-51-0	Terphenyl-d14	60%		10-120%

(a) Associated CCV outside of control limits low. Low-level verification was analyzed to demonstrate system suitability to detect affected analytes. Sample was ND.
(b) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8151A SW846 3546	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OA167706.D	1	07/11/23 02:54	RK	07/10/23 10:15	OP47688	GOA5945
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	5.0 ml
Run #2		

Herbicide List

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.018	0.0097	mg/kg	
93-72-1	2,4,5-TP (Silvex) [a]	0.0020	0.0036	0.0020	mg/kg	J
93-76-5	2,4,5-T	ND	0.0036	0.0018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	164% [b]		10-138%
19719-28-9	2,4-DCAA	32%		10-138%

(a) More than 40 % RPD for detected concentrations between the two GC columns.
(b) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-070723-S-MTK-SOURCE TOPSOIL-1
Lab Sample ID: JD68986-1
Matrix: SO - Soil
Method: SW846 8081B SW846 3546
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 07/07/23
Date Received: 07/08/23
Percent Solids: 89.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G187453.D	1	07/10/23 18:22	TP	07/10/23 10:22	OP47683	G1G6605
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.00072	0.00059	mg/kg	
319-84-6	alpha-BHC	ND	0.00072	0.00058	mg/kg	
319-85-7	beta-BHC	ND	0.00072	0.00065	mg/kg	
319-86-8	delta-BHC	ND	0.00072	0.00069	mg/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.00072	0.00053	mg/kg	
5103-71-9	alpha-Chlordane	ND	0.00072	0.00058	mg/kg	
5103-74-2	gamma-Chlordane	ND	0.00072	0.00033	mg/kg	
60-57-1	Dieldrin	ND	0.00072	0.00049	mg/kg	
72-54-8	4,4'-DDD	ND	0.00072	0.00066	mg/kg	
72-55-9	4,4'-DDE	ND	0.00072	0.00063	mg/kg	
50-29-3	4,4'-DDT	ND	0.00072	0.00064	mg/kg	
72-20-8	Endrin	ND	0.00072	0.00056	mg/kg	
1031-07-8	Endosulfan sulfate	ND	0.00072	0.00056	mg/kg	
7421-93-4	Endrin aldehyde	ND	0.00072	0.00041	mg/kg	
959-98-8	Endosulfan-I	ND	0.00072	0.00041	mg/kg	
33213-65-9	Endosulfan-II	ND	0.00072	0.00045	mg/kg	
76-44-8	Heptachlor	ND	0.00072	0.00062	mg/kg	
1024-57-3	Heptachlor epoxide	ND	0.00072	0.00050	mg/kg	
72-43-5	Methoxychlor	ND	0.0014	0.00057	mg/kg	
53494-70-5	Endrin ketone	ND	0.00072	0.00052	mg/kg	
8001-35-2	Toxaphene	ND	0.018	0.017	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	127%		13-162%
877-09-8	Tetrachloro-m-xylene	154%		13-162%
2051-24-3	Decachlorobiphenyl	126%		10-180%
2051-24-3	Decachlorobiphenyl	111%		10-180%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	SW846 8082A SW846 3546	**Percent Solids:**	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	XX2503886.D	1	07/11/23 04:59	RK	07/10/23 10:22	OP47684	GXX8239
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.036	0.017	mg/kg	
11104-28-2	Aroclor 1221	ND	0.036	0.022	mg/kg	
11141-16-5	Aroclor 1232	ND	0.036	0.023	mg/kg	
53469-21-9	Aroclor 1242	ND	0.036	0.015	mg/kg	
12672-29-6	Aroclor 1248	ND	0.036	0.032	mg/kg	
11097-69-1	Aroclor 1254	ND	0.036	0.019	mg/kg	
11096-82-5	Aroclor 1260	ND	0.036	0.015	mg/kg	
11100-14-4	Aroclor 1268	ND	0.036	0.015	mg/kg	
37324-23-5	Aroclor 1262	ND	0.036	0.023	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	147%		10-174%
877-09-8	Tetrachloro-m-xylene	115%		10-174%
2051-24-3	Decachlorobiphenyl	91%		10-195%
2051-24-3	Decachlorobiphenyl	94%		10-195%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 12599404-070723-S-MTK-SOURCE TOPSOIL-1
Lab Sample ID: JD68986-1
Matrix: SO - Soil
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 07/07/23
Date Received: 07/08/23
Percent Solids: 89.9

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	11200	56	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Antimony	< 2.2	2.2	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Arsenic	2.9	2.2	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Barium	102	22	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Beryllium	0.62	0.22	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cadmium	< 0.56	0.56	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Calcium	4700	560	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Chromium	11.1	1.1	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Cobalt	< 5.6	5.6	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Copper	4.5	2.8	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Iron	8740	56	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Lead	12.0	2.2	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Magnesium	1180	560	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Manganese	147	1.7	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Mercury	< 0.033	0.033	mg/kg	1	07/10/23	07/11/23	LM	SW846 7471B [1]	SW846 7471B [4]
Nickel	6.1	4.4	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Potassium	< 1100	1100	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Selenium	< 2.2	2.2	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Silver	< 0.56	0.56	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Sodium	< 1100	1100	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Thallium	< 1.1	1.1	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Vanadium	24.3	5.6	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]
Zinc	18.9	5.6	mg/kg	1	07/10/23	07/10/23	ND	SW846 6010D [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA54419
(2) Instrument QC Batch: MA54425
(3) Prep QC Batch: MP40633
(4) Prep QC Batch: MP40639

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	JD68986-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
		Percent Solids:	89.9
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.44	0.44	mg/kg	1	07/11/23 16:07	RI	SW846 3060A/7196A
Cyanide	< 0.24	0.24	mg/kg	1	07/12/23 13:22	JD	SW846 9012B/LACHAT
Phosphorus, Total	47.2	14	mg/kg	5	07/14/23 12:01	MP	EPA 365.3 M
Solids, Percent	89.9		%	1	07/10/23 16:44	MP	SM2540 G 18TH ED MOD
pH [a]	7.98		su	1	07/10/23 17:15	MM	SW846 9045D

(a) Temp of pH Reading: 21.8 Deg. C

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody

Parameter Certification Exceptions

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Phosphorus, Total		**EPA 365.3 M**	SO	SGS is not certified for this parameter.[a]

(a) Lab cert for analyte not supported by NJDEP, OQA. Only methods/analytes required for reporting by the State of NJ can be certified in NJ. Use of this analyte for compliance must be verified through the appropriate regulatory office.

Certification exceptions shown are based on the New Jersey DEP certifications. Applicability in other states may vary. Please contact your laboratory representative if additional information is required for a specific regulatory program.

So
SLL

KR-114822-198

Dayton

JD68986

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto Waste Pits - S. Impoundment
P.O. #:
QUOTE #:
SITE REF:
TURN AROUND TIME: 5 day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version
☐ State of Origin

SPECIAL INSTRUCTIONS / COMMENTS
SSOW: 12599404-2022-001

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD Services Inc
CONTACT: Wells Richard
ADDRESS: 2237 S. Acadian Thruway, Suite 701
PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

PRESERVATIVE: (8260B/8270D)

ANALYSIS & METHOD

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Herbicides (SW 846 8151A)	PCBs (8082A)	TCL Pest (8081B)	TCL Vol/Sm-Vol	Cyanide (9010/9012)	Hex Chromium (7196A)	Metals (6020B/7471B)	MS MSD	MS/DUP	REMARKS
12599404-070723-S-MTX-Source Topsoil-1	7/7/23	1000	1	S	X	X	X	X	X	X	X			Add Phosphorus to Metals analysis ***
Temp Blank	–	–	1	W										
														- Do 6010D for metals if lab does not have equipment for 6020D
														-

D58
P59
M22 T3
14R1
4040

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY: DATE: TIME:
[signature]	7/7/23		FedEx	
RELINQUISHED BY (2): FedEx	DATE:	TIME: 7/8 11:15	RECEIVED BY: James Kerr	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER: TEMP: °C 3.7
				TRACKING #: IR-40

Initial Assessment: CAEA
Label Verification:

Page 1 of 1

SGS NORTH AMERICA INC ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment
Member of the SGS Group (SGS SA)

5.2
5

JD68986: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD68986 **Client:** GHD SERVICES INC. **Project:** SJRWP - PCFSE, HARRIS COUNTY, TX

Date / Time Received: 7/8/2023 11:15:00 AM **Delivery Method:** FED EX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.7);

Cooler Temps (Corrected) °C: Cooler 1: (3.5);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun 40		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C8454-MB	1C195005.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	4.1	ug/kg	
71-43-2	Benzene	ND	0.50	0.46	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.56	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.43	ug/kg	
75-25-2	Bromoform	ND	5.0	1.4	ug/kg	
74-83-9	Bromomethane	ND	5.0	0.76	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	2.4	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.54	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.62	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.46	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.59	ug/kg	
67-66-3	Chloroform	ND	2.0	0.52	ug/kg	
74-87-3	Chloromethane	ND	5.0	2.0	ug/kg	
110-82-7	Cyclohexane	ND	2.0	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.69	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.56	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1.0	0.42	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.55	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.50	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.49	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	0.73	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.47	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.66	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.84	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.61	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.47	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.46	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.45	ug/kg	
76-13-1	Freon 113	ND	5.0	2.7	ug/kg	
591-78-6	2-Hexanone	ND	5.0	2.1	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	1.4	ug/kg	
79-20-9	Methyl Acetate	ND	5.0	1.4	ug/kg	
108-87-2	Methylcyclohexane	ND	2.0	0.88	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.47	ug/kg	

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C8454-MB	1C195005.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	2.3	ug/kg	
75-09-2	Methylene chloride	ND	5.0	2.6	ug/kg	
100-42-5	Styrene	ND	2.0	0.40	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.60	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.58	ug/kg	
108-88-3	Toluene	ND	1.0	0.53	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	2.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	2.5	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.48	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.55	ug/kg	
79-01-6	Trichloroethene	ND	1.0	0.76	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.68	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.48	ug/kg	
	m,p-Xylene	ND	1.0	0.90	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.46	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.46	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-124%
17060-07-0	1,2-Dichloroethane-D4	93%	75-133%
2037-26-5	Toluene-D8	101%	79-125%
460-00-4	4-Bromofluorobenzene	106%	58-148%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C8454-BS	1C195003.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	200	213	107	52-156
71-43-2	Benzene	50	53.8	108	82-119
74-97-5	Bromochloromethane	50	56.7	113	82-123
75-27-4	Bromodichloromethane	50	51.4	103	83-121
75-25-2	Bromoform	50	54.9	110	74-138
74-83-9	Bromomethane	50	50.2	100	56-150
78-93-3	2-Butanone (MEK)	200	231	116	72-138
75-15-0	Carbon disulfide	50	51.6	103	67-131
56-23-5	Carbon tetrachloride	50	54.4	109	72-130
108-90-7	Chlorobenzene	50	53.0	106	83-114
75-00-3	Chloroethane	50	56.5	113	67-141
67-66-3	Chloroform	50	53.7	107	76-115
74-87-3	Chloromethane	50	52.0	104	57-141
110-82-7	Cyclohexane	50	57.9	116	69-130
96-12-8	1,2-Dibromo-3-chloropropane	50	40.9	82	72-131
124-48-1	Dibromochloromethane	50	51.0	102	80-128
106-93-4	1,2-Dibromoethane	50	53.7	107	58-145
95-50-1	1,2-Dichlorobenzene	50	54.2	108	83-117
541-73-1	1,3-Dichlorobenzene	50	51.9	104	82-114
106-46-7	1,4-Dichlorobenzene	50	51.6	103	79-114
75-71-8	Dichlorodifluoromethane	50	38.9	78	49-146
75-34-3	1,1-Dichloroethane	50	55.7	111	76-126
107-06-2	1,2-Dichloroethane	50	49.3	99	76-118
75-35-4	1,1-Dichloroethene	50	52.6	105	72-125
156-59-2	cis-1,2-Dichloroethene	50	52.9	106	80-118
156-60-5	trans-1,2-Dichloroethene	50	51.7	103	76-122
78-87-5	1,2-Dichloropropane	50	53.2	106	82-123
10061-01-5	cis-1,3-Dichloropropene	50	52.7	105	83-123
10061-02-6	trans-1,3-Dichloropropene	50	56.1	112	83-123
100-41-4	Ethylbenzene	50	52.6	105	83-115
76-13-1	Freon 113	50	55.8	112	65-132
591-78-6	2-Hexanone	200	229	115	73-138
98-82-8	Isopropylbenzene	50	51.0	102	81-122
79-20-9	Methyl Acetate	50	57.0	114	63-142
108-87-2	Methylcyclohexane	50	53.4	107	73-126
1634-04-4	Methyl Tert Butyl Ether	50	54.0	108	75-126

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1C8454-BS	1C195003.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	200	220	110	71-138
75-09-2	Methylene chloride	50	55.5	111	73-122
100-42-5	Styrene	50	54.5	109	84-122
79-34-5	1,1,2,2-Tetrachloroethane	50	51.6	103	75-127
127-18-4	Tetrachloroethene	50	52.7	105	73-125
108-88-3	Toluene	50	53.5	107	82-118
87-61-6	1,2,3-Trichlorobenzene	50	51.8	104	68-132
120-82-1	1,2,4-Trichlorobenzene	50	53.2	106	72-133
71-55-6	1,1,1-Trichloroethane	50	54.5	109	77-124
79-00-5	1,1,2-Trichloroethane	50	54.4	109	83-122
79-01-6	Trichloroethene	50	53.1	106	80-122
75-69-4	Trichlorofluoromethane	50	54.1	108	69-132
75-01-4	Vinyl chloride	50	53.0	106	60-144
	m,p-Xylene	100	104	104	82-119
95-47-6	o-Xylene	50	54.2	108	84-120
1330-20-7	Xylene (total)	150	158	105	83-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-124%
17060-07-0	1,2-Dichloroethane-D4	94%	75-133%
2037-26-5	Toluene-D8	106%	79-125%
460-00-4	4-Bromofluorobenzene	99%	58-148%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD68950-2MS	1C195019.D	1	07/10/23	JN	n/a	n/a	V1C8454
JD68950-2	1C195012.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	JD68950-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
67-64-1	Acetone	22.4		218	177	71	10-170
71-43-2	Benzene	ND		54.4	44.3	81	61-132
74-97-5	Bromochloromethane	ND		54.4	43.8	81	68-126
75-27-4	Bromodichloromethane	ND		54.4	40.8	75	65-129
75-25-2	Bromoform	ND		54.4	39.9	73	52-136
74-83-9	Bromomethane	ND		54.4	47.0	86	23-158
78-93-3	2-Butanone (MEK)	ND		218	170	78	45-142
75-15-0	Carbon disulfide	ND		54.4	45.4	83	50-140
56-23-5	Carbon tetrachloride	ND		54.4	44.8	82	54-139
108-90-7	Chlorobenzene	ND		54.4	43.4	80	57-127
75-00-3	Chloroethane	ND		54.4	53.5	98	30-157
67-66-3	Chloroform	ND		54.4	43.3	80	59-127
74-87-3	Chloromethane	ND		54.4	55.1	101	49-145
110-82-7	Cyclohexane	ND		54.4	54.6	100	39-147
96-12-8	1,2-Dibromo-3-chloropropane	ND		54.4	30.3	56	35-140
124-48-1	Dibromochloromethane	ND		54.4	38.9	72	63-129
106-93-4	1,2-Dibromoethane	ND		54.4	42.0	77	45-141
95-50-1	1,2-Dichlorobenzene	ND		54.4	40.4	74	38-136
541-73-1	1,3-Dichlorobenzene	ND		54.4	41.1	76	37-135
106-46-7	1,4-Dichlorobenzene	ND		54.4	42.0	77	36-134
75-71-8	Dichlorodifluoromethane	ND		54.4	49.7	91	33-152
75-34-3	1,1-Dichloroethane	ND		54.4	46.0	85	68-131
107-06-2	1,2-Dichloroethane	ND		54.4	38.3	70	64-119
75-35-4	1,1-Dichloroethene	ND		54.4	45.2	83	60-133
156-59-2	cis-1,2-Dichloroethene	ND		54.4	42.8	79	58-133
156-60-5	trans-1,2-Dichloroethene	ND		54.4	43.8	81	62-130
78-87-5	1,2-Dichloropropane	ND		54.4	44.4	82	70-127
10061-01-5	cis-1,3-Dichloropropene	ND		54.4	40.8	75	64-126
10061-02-6	trans-1,3-Dichloropropene	ND		54.4	43.2	79	61-127
100-41-4	Ethylbenzene	ND		54.4	45.2	83	51-133
76-13-1	Freon 113	ND		54.4	47.8	88	46-138
591-78-6	2-Hexanone	ND		218	172	79	45-144
98-82-8	Isopropylbenzene	ND		54.4	43.7	80	44-142
79-20-9	Methyl Acetate	ND		54.4	43.2	79	14-192
108-87-2	Methylcyclohexane	ND		54.4	46.9	86	27-149
1634-04-4	Methyl Tert Butyl Ether	ND		54.4	40.8	75	62-125

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD68950-2MS	1C195019.D	1	07/10/23	JN	n/a	n/a	V1C8454
JD68950-2	1C195012.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	JD68950-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		218	155	71	50-138
75-09-2	Methylene chloride	ND		54.4	45.6	84	63-127
100-42-5	Styrene	ND		54.4	44.0	81	48-143
79-34-5	1,1,2,2-Tetrachloroethane	ND		54.4	37.8	70	44-135
127-18-4	Tetrachloroethene	ND		54.4	44.0	81	38-146
108-88-3	Toluene	ND		54.4	44.4	82	56-135
87-61-6	1,2,3-Trichlorobenzene	ND		54.4	37.1	68	10-153
120-82-1	1,2,4-Trichlorobenzene	ND		54.4	41.8	77	10-158
71-55-6	1,1,1-Trichloroethane	ND		54.4	44.0	81	61-134
79-00-5	1,1,2-Trichloroethane	ND		54.4	41.7	77	62-133
79-01-6	Trichloroethene	ND		54.4	44.3	81	52-144
75-69-4	Trichlorofluoromethane	ND		54.4	51.3	94	50-141
75-01-4	Vinyl chloride	ND		54.4	54.8	101	48-151
	m,p-Xylene	ND		109	86.8	80	51-135
95-47-6	o-Xylene	ND		54.4	44.1	81	52-137
1330-20-7	Xylene (total)	ND		163	131	80	50-138

CAS No.	Surrogate Recoveries	MS	JD68950-2	Limits
1868-53-7	Dibromofluoromethane	100%	102%	80-124%
17060-07-0	1,2-Dichloroethane-D4	93%	95%	75-133%
2037-26-5	Toluene-D8	98%	101%	79-125%
460-00-4	4-Bromofluorobenzene	96%	100%	58-148%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD68950-4DUP	1C195021.D	1	07/10/23	JN	n/a	n/a	V1C8454
JD68950-4	1C195013.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	JD68950-4 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
67-64-1	Acetone	24.4		17.8		31	50
71-43-2	Benzene	ND		ND		nc	44
74-97-5	Bromochloromethane	ND		ND		nc	30
75-27-4	Bromodichloromethane	ND		ND		nc	22
75-25-2	Bromoform	ND		ND		nc	30
74-83-9	Bromomethane	ND		ND		nc	10
78-93-3	2-Butanone (MEK)	ND		ND		nc	15
75-15-0	Carbon disulfide	ND		ND		nc	43
56-23-5	Carbon tetrachloride	ND		ND		nc	38
108-90-7	Chlorobenzene	ND		ND		nc	11
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	ND		ND		nc	14
74-87-3	Chloromethane	ND		ND		nc	30
110-82-7	Cyclohexane	ND		ND		nc	44
96-12-8	1,2-Dibromo-3-chloropropane	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	10
106-93-4	1,2-Dibromoethane	ND		ND		nc	30
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	10
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	30
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	10
75-71-8	Dichlorodifluoromethane	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethene	ND		ND		nc	10
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	36
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	14
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	ND		ND		nc	35
76-13-1	Freon 113	ND		ND		nc	10
591-78-6	2-Hexanone	ND		ND		nc	10
98-82-8	Isopropylbenzene	ND		ND		nc	28
79-20-9	Methyl Acetate	ND		ND		nc	37
108-87-2	Methylcyclohexane	ND		ND		nc	43
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	21

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD68950-4DUP	1C195021.D	1	07/10/23	JN	n/a	n/a	V1C8454
JD68950-4	1C195013.D	1	07/10/23	JN	n/a	n/a	V1C8454

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD68986-1

CAS No.	Compound	JD68950-4 ug/kg	Q	DUP ug/kg	Q	RPD	Limits
108-10-1	4-Methyl-2-pentanone(MIBK)	ND		ND		nc	10
75-09-2	Methylene chloride	ND		ND		nc	10
100-42-5	Styrene	ND		ND		nc	10
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethene	ND		ND		nc	43
108-88-3	Toluene	ND		0.93	J	200* [a]	37
87-61-6	1,2,3-Trichlorobenzene	ND		ND		nc	30
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	10
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	21
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
79-01-6	Trichloroethene	ND		ND		nc	44
75-69-4	Trichlorofluoromethane	ND		ND		nc	30
75-01-4	Vinyl chloride	ND		ND		nc	22
	m,p-Xylene	ND		ND		nc	44
95-47-6	o-Xylene	ND		ND		nc	45
1330-20-7	Xylene (total)	ND		ND		nc	60

CAS No.	Surrogate Recoveries	DUP	JD68950-4	Limits
1868-53-7	Dibromofluoromethane	102%	101%	80-124%
17060-07-0	1,2-Dichloroethane-D4	101%	98%	75-133%
2037-26-5	Toluene-D8	101%	107%	79-125%
460-00-4	4-Bromofluorobenzene	104%	102%	58-148%

(a) RPD acceptable due to low DUP and sample concentrations.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: V1C8418-BFB
Lab File ID: 1C194058.D
Instrument ID: GCMS1C
Injection Date: 06/09/23
Injection Time: 11:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	14.99 - 40.0% of mass 95	25615	19.0		Pass
75	30.0 - 60.0% of mass 95	62416	46.3		Pass
95	Base peak, 100% relative abundance	134829	100.0		Pass
96	5.0 - 9.0% of mass 95	8999	6.67		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	130971	97.1		Pass
175	5.0 - 9.0% of mass 174	11030	8.18	(8.42) [a]	Pass
176	95.0 - 101.0% of mass 174	131400	97.5	(100.3) [a]	Pass
177	5.0 - 9.0% of mass 176	8879	6.59	(6.76) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V1C8418-IC8418	1C194059.D	06/09/23	11:45	00:33	Initial cal 0.2
V1C8418-IC8418	1C194060.D	06/09/23	12:12	01:00	Initial cal 0.5
V1C8418-IC8418	1C194061.D	06/09/23	12:38	01:26	Initial cal 1
V1C8418-IC8418	1C194062.D	06/09/23	13:04	01:52	Initial cal 2
V1C8418-IC8418	1C194063.D	06/09/23	13:30	02:18	Initial cal 4
V1C8418-IC8418	1C194064.D	06/09/23	13:57	02:45	Initial cal 8
V1C8418-IC8418	1C194065.D	06/09/23	14:23	03:11	Initial cal 20
V1C8418-ICC8418	1C194066.D	06/09/23	14:49	03:37	Initial cal 50
V1C8418-IC8418	1C194067.D	06/09/23	15:15	04:03	Initial cal 100
V1C8418-IC8418	1C194068.D	06/09/23	15:42	04:30	Initial cal 200
V1C8418-ICV8418	1C194071.D	06/09/23	17:01	05:49	Initial cal verification 50
V1C8418-ICV8418	1C194072.D	06/09/23	17:27	06:15	Initial cal verification 50
V1C8419-CC8418	1C194077.D	06/10/23	12:04	24:52	Continuing cal 50

Surrogate Recovery Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8260D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD68986-1	1C195017.D	107	97	106	100
JD68950-2MS	1C195019.D	100	93	98	96
JD68950-4DUP	1C195021.D	102	101	101	104
V1C8454-BS	1C195003.D	102	94	106	99
V1C8454-MB	1C195005.D	100	93	101	106

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-124%
S2 = 1,2-Dichloroethane-D4	75-133%
S3 = Toluene-D8	79-125%
S4 = 4-Bromofluorobenzene	58-148%

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-MB1	M189899.D	1	07/11/23	RS	07/10/23	OP47687	EM8224

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	67	16	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	28	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	59	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	170	130	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	170	36	ug/kg	
95-48-7	2-Methylphenol	ND	67	21	ug/kg	
	3&4-Methylphenol	ND	67	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	22	ug/kg	
100-02-7	4-Nitrophenol	ND	330	89	ug/kg	
87-86-5	Pentachlorophenol	ND	130	31	ug/kg	
108-95-2	Phenol	ND	67	17	ug/kg	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	170	22	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	25	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	20	ug/kg	
83-32-9	Acenaphthene	ND	33	11	ug/kg	
208-96-8	Acenaphthylene	ND	33	17	ug/kg	
98-86-2	Acetophenone	ND	170	7.2	ug/kg	
120-12-7	Anthracene	ND	33	20	ug/kg	
1912-24-9	Atrazine	ND	67	14	ug/kg	
56-55-3	Benzo(a)anthracene	ND	33	9.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	33	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	33	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	33	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	33	16	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	67	13	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	67	8.1	ug/kg	
92-52-4	1,1'-Biphenyl	ND	67	4.6	ug/kg	
100-52-7	Benzaldehyde	ND	170	8.3	ug/kg	
91-58-7	2-Chloronaphthalene	ND	67	7.9	ug/kg	
106-47-8	4-Chloroaniline	ND	170	12	ug/kg	
86-74-8	Carbazole	ND	67	4.8	ug/kg	
105-60-2	Caprolactam	ND	67	13	ug/kg	
218-01-9	Chrysene	ND	33	10	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	67	7.1	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	67	14	ug/kg	

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-MB1	M189899.D	1	07/11/23	RS	07/10/23	OP47687	EM8224

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	2,2'-Oxybis(1-chloropropane)	ND	67	12	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	67	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	33	10	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	33	17	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	67	28	ug/kg	
123-91-1	1,4-Dioxane	ND	33	22	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	33	15	ug/kg	
132-64-9	Dibenzofuran	ND	67	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	67	5.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	67	8.3	ug/kg	
84-66-2	Diethyl phthalate	ND	67	7.1	ug/kg	
131-11-3	Dimethyl phthalate	ND	67	5.9	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	67	7.8	ug/kg	
206-44-0	Fluoranthene	ND	33	15	ug/kg	
86-73-7	Fluorene	ND	33	15	ug/kg	
118-74-1	Hexachlorobenzene	ND	67	8.4	ug/kg	
87-68-3	Hexachlorobutadiene	ND	33	13	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	330	13	ug/kg	
67-72-1	Hexachloroethane	ND	170	16	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	33	16	ug/kg	
78-59-1	Isophorone	ND	67	7.1	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	7.5	ug/kg	
88-74-4	2-Nitroaniline	ND	170	7.9	ug/kg	
99-09-2	3-Nitroaniline	ND	170	8.3	ug/kg	
100-01-6	4-Nitroaniline	ND	170	8.6	ug/kg	
91-20-3	Naphthalene	ND	33	9.4	ug/kg	
98-95-3	Nitrobenzene	ND	67	13	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	67	9.6	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	12	ug/kg	
85-01-8	Phenanthrene	ND	33	11	ug/kg	
129-00-0	Pyrene	ND	33	11	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	170	8.5	ug/kg	

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-MB1	M189899.D	1	07/11/23	RS	07/10/23	OP47687	EM8224

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	56%	10-99%
4165-62-2	Phenol-d5	59%	10-96%
118-79-6	2,4,6-Tribromophenol	83%	10-123%
4165-60-0	Nitrobenzene-d5	53%	10-109%
321-60-8	2-Fluorobiphenyl	62%	11-109%
1718-51-0	Terphenyl-d14	67%	10-120%

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-BS1	M189900.D	1	07/11/23	RS	07/10/23	OP47687	EM8224

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
95-57-8	2-Chlorophenol	1670	1140	68	10-135
59-50-7	4-Chloro-3-methyl phenol	1670	1210	73	10-141
120-83-2	2,4-Dichlorophenol	1670	1300	78	10-139
105-67-9	2,4-Dimethylphenol	1670	1170	70	10-141
51-28-5	2,4-Dinitrophenol	3330	1910	57	10-138
534-52-1	4,6-Dinitro-o-cresol	1670	1310	79	10-156
95-48-7	2-Methylphenol	1670	1130	68	10-139
	3&4-Methylphenol	3330	2260	68	10-174
88-75-5	2-Nitrophenol	1670	1190	71	10-142
100-02-7	4-Nitrophenol	1670	953	57	10-144
87-86-5	Pentachlorophenol	3330	2520	76	10-165
108-95-2	Phenol	1670	1270	76	23-115
58-90-2	2,3,4,6-Tetrachlorophenol	1670	1300	78	10-146
95-95-4	2,4,5-Trichlorophenol	1670	1340	80	13-136
88-06-2	2,4,6-Trichlorophenol	1670	1290	77	10-142
83-32-9	Acenaphthene	1670	1180	71	10-141
208-96-8	Acenaphthylene	1670	1170	70	10-133
98-86-2	Acetophenone	1670	1040	62	23-115
120-12-7	Anthracene	1670	1260	76	10-144
1912-24-9	Atrazine	1670	1270	76	17-149
56-55-3	Benzo(a)anthracene	1670	1230	74	11-139
50-32-8	Benzo(a)pyrene	1670	1140	68	13-141
205-99-2	Benzo(b)fluoranthene	1670	1170	70	14-140
191-24-2	Benzo(g,h,i)perylene	1670	1190	71	13-138
207-08-9	Benzo(k)fluoranthene	1670	1100	66	12-140
101-55-3	4-Bromophenyl phenyl ether	1670	1420	85	10-146
85-68-7	Butyl benzyl phthalate	1670	1110	67	10-150
92-52-4	1,1'-Biphenyl	1670	1130	68	10-141
100-52-7	Benzaldehyde	1670	1160	70	10-146
91-58-7	2-Chloronaphthalene	1670	1160	70	10-142
106-47-8	4-Chloroaniline	1670	839	50	10-108
86-74-8	Carbazole	1670	1260	76	10-145
105-60-2	Caprolactam	1670	2020	121	10-187
218-01-9	Chrysene	1670	1230	74	11-139
111-91-1	bis(2-Chloroethoxy)methane	1670	1150	69	10-144
111-44-4	bis(2-Chloroethyl)ether	1670	1210	73	10-145

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-BS1	M189900.D	1	07/11/23	RS	07/10/23	OP47687	EM8224

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-60-1	2,2'-Oxybis(1-chloropropane)	1670	1070	64	10-145
7005-72-3	4-Chlorophenyl phenyl ether	1670	1270	76	10-145
121-14-2	2,4-Dinitrotoluene	1670	1260	76	10-148
606-20-2	2,6-Dinitrotoluene	1670	1230	74	12-145
91-94-1	3,3'-Dichlorobenzidine	1670	977	59	10-100
123-91-1	1,4-Dioxane	1670	609	37	10-97
53-70-3	Dibenzo(a,h)anthracene	1670	1190	71	14-142
132-64-9	Dibenzofuran	1670	1190	71	10-140
84-74-2	Di-n-butyl phthalate	1670	1240	74	11-147
117-84-0	Di-n-octyl phthalate	1670	1030	62	15-145
84-66-2	Diethyl phthalate	1670	1160	70	10-145
131-11-3	Dimethyl phthalate	1670	1220	73	10-144
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1060	64	26-132
206-44-0	Fluoranthene	1670	1350	81	10-147
86-73-7	Fluorene	1670	1210	73	12-139
118-74-1	Hexachlorobenzene	1670	1490	89	10-144
87-68-3	Hexachlorobutadiene	1670	1280	77	10-142
77-47-4	Hexachlorocyclopentadiene	3330	717	22	10-120
67-72-1	Hexachloroethane	1670	1090	65	10-141
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1200	72	13-144
78-59-1	Isophorone	1670	1130	68	10-139
91-57-6	2-Methylnaphthalene	1670	1090	65	10-140
88-74-4	2-Nitroaniline	1670	1380	83	10-148
99-09-2	3-Nitroaniline	1670	1190	71	10-127
100-01-6	4-Nitroaniline	1670	1220	73	10-143
91-20-3	Naphthalene	1670	1080	65	10-141
98-95-3	Nitrobenzene	1670	1120	67	10-139
621-64-7	N-Nitroso-di-n-propylamine	1670	1130	68	10-143
86-30-6	N-Nitrosodiphenylamine	1670	1310	79	10-145
85-01-8	Phenanthrene	1670	1250	75	10-142
129-00-0	Pyrene	1670	1250	75	13-141
95-94-3	1,2,4,5-Tetrachlorobenzene	1670	1250	75	10-143

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-BS1	M189900.D	1	07/11/23	RS	07/10/23	OP47687	EM8224

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	77%	10-99%
4165-62-2	Phenol-d5	77%	10-96%
118-79-6	2,4,6-Tribromophenol	106%	10-123%
4165-60-0	Nitrobenzene-d5	64%	10-109%
321-60-8	2-Fluorobiphenyl	72%	11-109%
1718-51-0	Terphenyl-d14	78%	10-120%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-MS [a]	M189919.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
OP47687-MSD [a]	M189920.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
JD68967-6 [a]	M189921.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
JD68967-6	CT3539A.D	50	07/12/23	GA	07/10/23	OP47687	ECT162

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Compound	JD68967-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		7890	3960	50	8100	1840	23	73	10-137/86
59-50-7	4-Chloro-3-methyl phenol	ND		7890	5150	65	8100	2740	34	61	10-146/84
120-83-2	2,4-Dichlorophenol	ND		7890	4660	59	8100	3680	45	24	10-145/86
105-67-9	2,4-Dimethylphenol	ND		7890	4790	61	8100	3080	38	43	10-148/87
51-28-5	2,4-Dinitrophenol	ND		15800	ND	0* [b]	16200	ND	0* [b]	nc	10-118/90
534-52-1	4,6-Dinitro-o-cresol	ND		7890	ND	0* [b]	8100	ND	0* [b]	nc	10-131/97
95-48-7	2-Methylphenol	ND		7890	4000	51	8100	2500	31	46	10-143/86
	3&4-Methylphenol	ND		15800	8280	52	16200	4670	29	56	10-162/87
88-75-5	2-Nitrophenol	ND		7890	2620	33	8100	ND	0* [b]	200*	10-147/93
100-02-7	4-Nitrophenol	ND		7890	3610	46	8100	ND	0* [b]	200*	10-152/85
87-86-5	Pentachlorophenol	ND		15800	5900	37	16200	3070	19	63	10-146/89
108-95-2	Phenol	ND		7890	4720	60	8100	2850	35	49	10-118/84
58-90-2	2,3,4,6-Tetrachlorophenol	ND		7890	4150	53	8100	1910	24	74	10-139/87
95-95-4	2,4,5-Trichlorophenol	ND		7890	4330	55	8100	2130	26	68	10-140/86
88-06-2	2,4,6-Trichlorophenol	ND		7890	4570	58	8100	2090	26	74	10-141/86
83-32-9	Acenaphthene	66100		7890	19000	-597* [c]	8100	63500	-32* [c]	108*	10-156/87
208-96-8	Acenaphthylene	6870		7890	6000	-11* [b]	8100	9890	37	49	10-143/84
98-86-2	Acetophenone	ND		7890	3350	42	8100	11100	137* [b]	107*	10-130/90
120-12-7	Anthracene	34700		7890	13000	-275* [c]	8100	41200	80	104*	10-166/88
1912-24-9	Atrazine	ND		7890	4390	56	8100	2280	28	63	10-148/86
56-55-3	Benzo(a)anthracene	40500		7890	14000	-336* [c]	8100	52200	144	115*	10-163/88
50-32-8	Benzo(a)pyrene	19400		7890	8990	-132* [c]	8100	24100	58	91*	10-163/89
205-99-2	Benzo(b)fluoranthene	34800		7890	12400	-284* [c]	8100	41500	83	108*	10-156/91
191-24-2	Benzo(g,h,i)perylene	9300		7890	6390	-37* [b]	8100	12600	41	65	10-158/89
207-08-9	Benzo(k)fluoranthene	12900		7890	6830	-77* [b]	8100	18400	68	92*	10-157/86
101-55-3	4-Bromophenyl phenyl ether	ND		7890	5140	65	8100	2680	33	63	10-143/87
85-68-7	Butyl benzyl phthalate	1660		7890	4290	33	8100	3080	18	33	10-161/89
92-52-4	1,1'-Biphenyl	507	J	7890	4170	46	8100	2090	20	66	10-143/86
100-52-7	Benzaldehyde	ND		7890	8590	109	8100	29800	368* [b]	110*	10-148/88
91-58-7	2-Chloronaphthalene	ND		7890	4230	54	8100	2180	27	64	10-145/86
106-47-8	4-Chloroaniline	ND		7890	2950	37	8100	1500	19	65	10-109/87
86-74-8	Carbazole	11400		7890	6530	-62* [b]	8100	10600	-10* [b]	48	10-158/87
105-60-2	Caprolactam	ND		7890	10100	128	8100	ND	0* [b]	200*	10-150/82
218-01-9	Chrysene	49200		7890	16000	-421* [c]	8100	59000	121	115*	10-164/87
111-91-1	bis(2-Chloroethoxy)methane	ND		7890	4150	53	8100	2250	28	59	10-152/86
111-44-4	bis(2-Chloroethyl)ether	ND		7890	4700	60	8100	3880	48	19	10-147/86

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-MS [a]	M189919.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
OP47687-MSD [a]	M189920.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
JD68967-6 [a]	M189921.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
JD68967-6	CT3539A.D	50	07/12/23	GA	07/10/23	OP47687	ECT162

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Compound	JD68967-6 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-60-1	2,2'-Oxybis(1-chloropropane)	ND		7890	4110	52	8100	3990	49	3	10-134/88
7005-72-3	4-Chlorophenyl phenyl ether	ND		7890	4180	53	8100	2180	27	63	10-142/87
121-14-2	2,4-Dinitrotoluene	ND		7890	2950	37	8100	ND	0* [b]	200*	10-147/86
606-20-2	2,6-Dinitrotoluene	ND		7890	3210	41	8100	ND	0* [b]	200*	10-147/88
91-94-1	3,3'-Dichlorobenzidine	ND		7890	2860	36	8100	ND	0* [b]	200*	10-106/93
123-91-1	1,4-Dioxane	ND		7890	2020	26	8100	1140	14	56	10-102/85
53-70-3	Dibenzo(a,h)anthracene	3520		7890	4700	15	8100	5750	28	20	10-149/89
132-64-9	Dibenzofuran	38300		7890	12600	-326* [c]	8100	36000	-28* [c]	96*	10-155/86
84-74-2	Di-n-butyl phthalate	ND		7890	4080	52	8100	2200	27	60	10-158/86
117-84-0	Di-n-octyl phthalate	3770		7890	4740	12	8100	6090	29	25	10-154/84
84-66-2	Diethyl phthalate	ND		7890	3830	49	8100	1790	22	73	10-148/84
131-11-3	Dimethyl phthalate	ND		7890	3980	50	8100	1980	24	67	10-144/85
117-81-7	bis(2-Ethylhexyl)phthalate	364000 [d]		7890	65300	-1998* [c]	8100	270000	580* [c]	122*	10-153/84
206-44-0	Fluoranthene	212000 [d]		7890	43500	-1349* [c]	8100	168000	222* [c]	118*	10-165/93
86-73-7	Fluorene	52100		7890	15700	-461* [c]	8100	51800	-4* [c]	107*	10-158/87
118-74-1	Hexachlorobenzene	ND		7890	5360	68	8100	2950	36	58	10-139/85
87-68-3	Hexachlorobutadiene	ND		7890	5100	65	8100	2490	31	69	10-139/88
77-47-4	Hexachlorocyclopentadiene	ND		15800	ND	0* [b]	16200	ND	0* [b]	nc	10-116/30
67-72-1	Hexachloroethane	ND		7890	1630	21	8100	ND	0* [b]	200*	10-141/93
193-39-5	Indeno(1,2,3-cd)pyrene	9040		7890	6150	-37* [b]	8100	12300	40	67	10-160/91
78-59-1	Isophorone	ND		7890	4300	54	8100	2400	30	57	10-150/86
91-57-6	2-Methylnaphthalene	46600		7890	12700	-429* [c]	8100	36300	-127* [c]	96*	10-145/86
88-74-4	2-Nitroaniline	ND		7890	5140	65	8100	3040	38	51	10-152/77
99-09-2	3-Nitroaniline	ND		7890	4290	54	8100	2310	29	60	10-136/83
100-01-6	4-Nitroaniline	ND		7890	4390	56	8100	974	12	127*	10-140/81
91-20-3	Naphthalene	2040		7890	5260	41	8100	3490	18	40	10-146/87
98-95-3	Nitrobenzene	ND		7890	4350	55	8100	2620	32	50	10-146/88
621-64-7	N-Nitroso-di-n-propylamine	ND		7890	5170	65	8100	3860	48	29	10-147/77
86-30-6	N-Nitrosodiphenylamine	ND		7890	7120	90	8100	9980	123	33	10-159/78
85-01-8	Phenanthrene	121000 [d]		7890	30200	-986* [c]	8100	114000	74	116*	10-158/95
129-00-0	Pyrene	164000 [d]		7890	40800	-1320* [c]	8100	167000	272* [c]	121*	10-176/90
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		7890	4490	57	8100	2070	26	74	10-137/87

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47687-MS [a]	M189919.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
OP47687-MSD [a]	M189920.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
JD68967-6 [a]	M189921.D	5	07/11/23	RS	07/10/23	OP47687	EM8224
JD68967-6	CT3539A.D	50	07/12/23	GA	07/10/23	OP47687	ECT162

The QC reported here applies to the following samples: **Method:** SW846 8270E

JD68986-1

CAS No.	Surrogate Recoveries	MS	MSD	JD68967-6	JD68967-6	Limits
367-12-4	2-Fluorophenol	58%	31%	48%	36%	10-99%
4165-62-2	Phenol-d5	62%	36%	52%	52%	10-96%
118-79-6	2,4,6-Tribromophenol	92%	46%	65%	41%	10-123%
4165-60-0	Nitrobenzene-d5	60%	24%	35%	38%	10-109%
321-60-8	2-Fluorobiphenyl	66%	32%	49%	45%	11-109%
1718-51-0	Terphenyl-d14	76%	43%	59%	48%	10-120%

(a) Dilution required due to viscosity of the extract matrix.
(b) Outside control limits possible due to matrix interference.
(c) Outside control limits due to high level in sample relative to spike amount.
(d) Result is from Run #2.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: EM8173-DFTPP
Lab File ID: M188660.D
Instrument ID: GCMSM
Injection Date: 05/23/23
Injection Time: 11:58

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	12582	39.7		Pass
68	Less than 2.0% of mass 69	230	0.73	(1.66) [a]	Pass
69	Mass 69 relative abundance	13854	43.7		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	16642	52.5		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	31688	100.0		Pass
199	5.0 - 9.0% of mass 198	2035	6.42		Pass
275	10.0 - 30.0% of mass 198	7815	24.7		Pass
365	1.0 - 100.0% of mass 198	1010	3.19		Pass
441	Present, but less than mass 443	4257	13.4	(76.7) [b]	Pass
442	40.0 - 100.0% of mass 198	27397	86.5		Pass
443	17.0 - 23.0% of mass 442	5552	17.5	(20.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM8173-IC8173	M188661.D	05/23/23	12:44	00:46	Initial cal 100
EM8173-IC8173	M188662.D	05/23/23	13:10	01:12	Initial cal 2
EM8173-ICC8173	M188663.D	05/23/23	13:35	01:37	Initial cal 50
EM8173-IC8173	M188664.D	05/23/23	14:33	02:35	Initial cal 80
EM8173-IC8173	M188665.D	05/23/23	14:57	02:59	Initial cal 25
EM8173-IC8173	M188666.D	05/23/23	15:20	03:22	Initial cal 10
EM8173-IC8173	M188667.D	05/23/23	15:44	03:46	Initial cal 5
EM8173-IC8173	M188668.D	05/23/23	16:08	04:10	Initial cal 1
EM8173-ICV8173	M188671.D	05/23/23	17:19	05:21	Initial cal verification 50
EM8173-ICV8173	M188672.D	05/23/23	17:43	05:45	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample: EM8174-DFTPP
Lab File ID: M188673.D
Instrument ID: GCMSM
Injection Date: 05/24/23
Injection Time: 08:38

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	17662	40.0		Pass
68	Less than 2.0% of mass 69	163	0.37	(0.82) [a]	Pass
69	Mass 69 relative abundance	19980	45.2		Pass
70	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
127	40.0 - 60.0% of mass 198	22558	51.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	44176	100.0		Pass
199	5.0 - 9.0% of mass 198	2856	6.47		Pass
275	10.0 - 30.0% of mass 198	10037	22.7		Pass
365	1.0 - 100.0% of mass 198	1458	3.30		Pass
441	Present, but less than mass 443	5685	12.9	(82.5) [b]	Pass
442	40.0 - 100.0% of mass 198	36626	82.9		Pass
443	17.0 - 23.0% of mass 442	6889	15.6	(18.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
EM8174-IC8174	M188674.D	05/24/23	09:02	00:24	Initial cal 100
EM8174-IC8174	M188675.D	05/24/23	09:25	00:47	Initial cal 80
EM8174-ICC8174	M188676.D	05/24/23	09:47	01:09	Initial cal 50
EM8174-IC8174	M188677.D	05/24/23	10:09	01:31	Initial cal 25
EM8174-IC8174	M188678.D	05/24/23	10:32	01:54	Initial cal 10
EM8174-IC8174	M188679.D	05/24/23	10:54	02:16	Initial cal 5
EM8174-IC8174	M188680.D	05/24/23	11:17	02:39	Initial cal 2
EM8174-IC8174	M188681.D	05/24/23	11:40	03:02	Initial cal 1
EM8174-ICV8174	M188682.D	05/24/23	12:03	03:25	Initial cal verification 50
EM8174-ICV8173	M188683.D	05/24/23	12:26	03:48	Initial cal verification 50
EM8174-ICV8173	M188684.D	05/24/23	12:49	04:11	Initial cal verification 50
EM8175-CC8173	M188685.D	05/24/23	13:46	05:08	Continuing cal 50
EM8175-CC8174	M188686.D	05/24/23	14:08	05:30	Continuing cal 50
OP46691-MB1	M188688.D	05/24/23	15:09	06:31	Method Blank
OP46733-MB1	M188689.D	05/24/23	15:32	06:54	Method Blank
OP46733-BS1	M188690.D	05/24/23	15:55	07:17	Blank Spike
OP46691-BS1	M188691.D	05/24/23	16:19	07:41	Blank Spike
OP46647-BS1	M188692.D	05/24/23	16:42	08:04	Blank Spike
ZZZZZZ	M188693.D	05/24/23	17:05	08:27	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample:	EM8174-DFTPP	**Injection Date:**	05/24/23
Lab File ID:	M188673.D	**Injection Time:**	08:38
Instrument ID:	GCMSM		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	M188694.D	05/24/23	17:28	08:50	(unrelated sample)
ZZZZZZ	M188695.D	05/24/23	17:52	09:14	(unrelated sample)
ZZZZZZ	M188696.D	05/24/23	18:15	09:37	(unrelated sample)
ZZZZZZ	M188697.D	05/24/23	18:38	10:00	(unrelated sample)
ZZZZZZ	M188698.D	05/24/23	19:01	10:23	(unrelated sample)
JD65981-4	M188699.D	05/24/23	19:25	10:47	(used for QC only; not part of job JD68986)
OP46691-MS	M188700.D	05/24/23	19:48	11:10	Matrix Spike
OP46691-MSD	M188701.D	05/24/23	20:11	11:33	Matrix Spike Duplicate
ZZZZZZ	M188702.D	05/24/23	20:35	11:57	(unrelated sample)
ZZZZZZ	M188703.D	05/24/23	20:58	12:20	(unrelated sample)
ZZZZZZ	M188704.D	05/24/23	21:21	12:43	(unrelated sample)
ZZZZZZ	M188707.D	05/24/23	22:31	13:53	(unrelated sample)
JD66089-1	M188708.D	05/24/23	22:54	14:16	(used for QC only; not part of job JD68986)
OP46733-MS	M188709.D	05/24/23	23:16	14:38	Matrix Spike
OP46733-MSD	M188710.D	05/24/23	23:39	15:01	Matrix Spike Duplicate
ZZZZZZ	M188711.D	05/25/23	00:02	15:24	(unrelated sample)
ZZZZZZ	M188712.D	05/25/23	00:25	15:47	(unrelated sample)
ZZZZZZ	M188713.D	05/25/23	00:48	16:10	(unrelated sample)
ZZZZZZ	M188714.D	05/25/23	01:11	16:33	(unrelated sample)
ZZZZZZ	M188715.D	05/25/23	01:34	16:56	(unrelated sample)

Surrogate Recovery Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8270E **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
JD68986-1	M189905.D	48	51	80	45	58	60
OP47687-BS1	M189900.D	77	77	106	64	72	78
OP47687-MB1	M189899.D	56	59	83	53	62	67
OP47687-MS	M189919.D	58	62	92	60	66	76
OP47687-MSD	M189920.D	31	36	46	24	32	43

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-99%
S2 = Phenol-d5	10-96%
S3 = 2,4,6-Tribromophenol	10-123%
S4 = Nitrobenzene-d5	10-109%
S5 = 2-Fluorobiphenyl	11-109%
S6 = Terphenyl-d14	10-120%

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47688-MB1	OA167697.D	1	07/10/23	RK	07/10/23	OP47688	GOA5945

The QC reported here applies to the following samples: **Method:** SW846 8151A

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	17	9.1	ug/kg	
93-72-1	2,4,5-TP (Silvex)	ND	3.3	1.9	ug/kg	
93-76-5	2,4,5-T	ND	3.3	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
19719-28-9	2,4-DCAA	82%	10-138%
19719-28-9	2,4-DCAA	74%	10-138%

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47683-MB1	1G187446.D	1	07/10/23	TP	07/10/23	OP47683	G1G6605

The QC reported here applies to the following samples: **Method:** SW846 8081B

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	0.67	0.55	ug/kg	
319-84-6	alpha-BHC	ND	0.67	0.54	ug/kg	
319-85-7	beta-BHC	ND	0.67	0.60	ug/kg	
319-86-8	delta-BHC	ND	0.67	0.64	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	0.67	0.49	ug/kg	
5103-71-9	alpha-Chlordane	ND	0.67	0.54	ug/kg	
5103-74-2	gamma-Chlordane	ND	0.67	0.30	ug/kg	
60-57-1	Dieldrin	ND	0.67	0.46	ug/kg	
72-54-8	4,4'-DDD	ND	0.67	0.61	ug/kg	
72-55-9	4,4'-DDE	ND	0.67	0.58	ug/kg	
50-29-3	4,4'-DDT	ND	0.67	0.59	ug/kg	
72-20-8	Endrin	ND	0.67	0.52	ug/kg	
1031-07-8	Endosulfan sulfate	ND	0.67	0.52	ug/kg	
7421-93-4	Endrin aldehyde	ND	0.67	0.38	ug/kg	
959-98-8	Endosulfan-I	ND	0.67	0.38	ug/kg	
33213-65-9	Endosulfan-II	ND	0.67	0.42	ug/kg	
76-44-8	Heptachlor	ND	0.67	0.57	ug/kg	
1024-57-3	Heptachlor epoxide	ND	0.67	0.47	ug/kg	
72-43-5	Methoxychlor	ND	1.3	0.53	ug/kg	
53494-70-5	Endrin ketone	ND	0.67	0.48	ug/kg	
8001-35-2	Toxaphene	ND	17	16	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	147%	13-162%
877-09-8	Tetrachloro-m-xylene	177%* [a]	13-162%
2051-24-3	Decachlorobiphenyl	165%	10-180%
2051-24-3	Decachlorobiphenyl	143%	10-180%

(a) Outside of in house control limits.

Method Blank Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47684-MB1	XX2503871.D	1	07/11/23	RK	07/10/23	OP47684	GXX8239

The QC reported here applies to the following samples: **Method:** SW846 8082A

JD68986-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	16	ug/kg	
11104-28-2	Aroclor 1221	ND	33	21	ug/kg	
11141-16-5	Aroclor 1232	ND	33	21	ug/kg	
53469-21-9	Aroclor 1242	ND	33	14	ug/kg	
12672-29-6	Aroclor 1248	ND	33	30	ug/kg	
11097-69-1	Aroclor 1254	ND	33	18	ug/kg	
11096-82-5	Aroclor 1260	ND	33	14	ug/kg	
11100-14-4	Aroclor 1268	ND	33	14	ug/kg	
37324-23-5	Aroclor 1262	ND	33	22	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	153%	10-174%
877-09-8	Tetrachloro-m-xylene	123%	10-174%
2051-24-3	Decachlorobiphenyl	138%	10-195%
2051-24-3	Decachlorobiphenyl	119%	10-195%

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47688-BS1	OA167698.D	1	07/10/23	RK	07/10/23	OP47688	GOA5945

The QC reported here applies to the following samples: **Method:** SW846 8151A

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
94-75-7	2,4-D	133	79.4	60	20-118
93-72-1	2,4,5-TP (Silvex)	26.7	19.4	73	22-125
93-76-5	2,4,5-T	26.7	18.7	70	10-116

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	86%	10-138%
19719-28-9	2,4-DCAA	76%	10-138%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47683-BS1	1G187447.D	1	07/10/23	TP	07/10/23	OP47683	G1G6605

The QC reported here applies to the following samples: **Method:** SW846 8081B

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
309-00-2	Aldrin	16.7	22.3	134	40-165
319-84-6	alpha-BHC	16.7	25.3	152	40-156
319-85-7	beta-BHC	16.7	23.6	142	40-156
319-86-8	delta-BHC	16.7	26.9	161* [a]	40-153
58-89-9	gamma-BHC (Lindane)	16.7	24.5	147	40-155
5103-71-9	alpha-Chlordane	16.7	22.4	134	40-158
5103-74-2	gamma-Chlordane	16.7	22.7	136	40-167
60-57-1	Dieldrin	16.7	24.0	144	40-161
72-54-8	4,4'-DDD	16.7	23.9	143	40-161
72-55-9	4,4'-DDE	16.7	21.7	130	40-166
50-29-3	4,4'-DDT	16.7	24.2	145	40-189
72-20-8	Endrin	16.7	25.1	151	40-169
1031-07-8	Endosulfan sulfate	16.7	30.7	184* [a]	40-159
7421-93-4	Endrin aldehyde	16.7	22.7	136	40-170
959-98-8	Endosulfan-I	16.7	23.6	142	40-155
33213-65-9	Endosulfan-II	16.7	25.0	150	40-165
76-44-8	Heptachlor	16.7	26.1	157 [b]	40-161
1024-57-3	Heptachlor epoxide	16.7	22.8	137	40-158
72-43-5	Methoxychlor	16.7	24.4	146	40-166
53494-70-5	Endrin ketone	16.7	28.0	168	40-171

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	132%	13-162%
877-09-8	Tetrachloro-m-xylene	159%	13-162%
2051-24-3	Decachlorobiphenyl	155%	10-180%
2051-24-3	Decachlorobiphenyl	131%	10-180%

(a) Outside of in house control limits.
(b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47684-BS1	XX2503872.D	1	07/11/23	RK	07/10/23	OP47684	GXX8239

The QC reported here applies to the following samples: **Method:** SW846 8082A

JD68986-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	205	154	41-186
11104-28-2	Aroclor 1221		ND		50-150
11141-16-5	Aroclor 1232		ND		50-150
53469-21-9	Aroclor 1242		ND		50-150
12672-29-6	Aroclor 1248		ND		50-150
11097-69-1	Aroclor 1254		ND		50-150
11096-82-5	Aroclor 1260	133	199	149 [a]	37-185
11100-14-4	Aroclor 1268		ND		50-150
37324-23-5	Aroclor 1262		ND		50-150

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	143%	10-174%
877-09-8	Tetrachloro-m-xylene	117%	10-174%
2051-24-3	Decachlorobiphenyl	131%	10-195%
2051-24-3	Decachlorobiphenyl	118%	10-195%

(a) Reported from the 1st signal. The %D of the CCV on the 2nd signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47688-MS	OA167699.D	10	07/11/23	RK	07/10/23	OP47688	GOA5945
OP47688-MSD	OA167700.D	10	07/11/23	RK	07/10/23	OP47688	GOA5945
JD68935-1	OA167701.D	10	07/11/23	RK	07/10/23	OP47688	GOA5945

The QC reported here applies to the following samples: **Method:** SW846 8151A

JD68986-1

CAS No.	Compound	JD68935-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND		130	ND	0* [a]	137	ND	0* [a]	nc	10-130/63
93-72-1	2,4,5-TP (Silvex)	ND		26	ND	0* [a]	27.5	ND	0* [a]	nc	10-149/61
93-76-5	2,4,5-T	ND		26	ND	0* [a]	27.5	ND	0* [a]	nc	10-129/59

CAS No.	Surrogate Recoveries	MS	MSD	JD68935-1	Limits
19719-28-9	2,4-DCAA	58%	69%	59%	10-138%
19719-28-9	2,4-DCAA	52%	66%	55%	10-138%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47683-MS	1G187457.D	1	07/10/23	TP	07/10/23	OP47683	G1G6605
OP47683-MSD	1G187458.D	1	07/10/23	TP	07/10/23	OP47683	G1G6605
JD68931-1	1G187459.D	1	07/10/23	TP	07/10/23	OP47683	G1G6605

The QC reported here applies to the following samples: **Method:** SW846 8081B

JD68986-1

CAS No.	Compound	JD68931-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	2.0		19.4	28.8	138	18.6	21.9	107	27	13-187/53
319-84-6	alpha-BHC	ND		19.4	25.5	131	18.6	21.4	115	17	17-182/54
319-85-7	beta-BHC	ND		19.4	11.8	61	18.6	11.8	64	0	10-191/54
319-86-8	delta-BHC	ND		19.4	24.4	126	18.6	20.4	110	18	10-173/53
58-89-9	gamma-BHC (Lindane)	ND		19.4	24.1	124	18.6	18.3	99	27	15-181/54
5103-71-9	alpha-Chlordane	ND		19.4	17.9	92	18.6	20.0	84	28	17-182/55
5103-74-2	gamma-Chlordane	ND		19.4	12.8	66	18.6	12.8	69	0	10-186/57
60-57-1	Dieldrin	5.8		19.4	21.7	82	18.6	17.4	62	22	14-181/55
72-54-8	4,4'-DDD	1.8		19.4	24.6	117	18.6	36.8	188* [a]	40	10-173/57
72-55-9	4,4'-DDE	0.73	J	19.4	13.7	67	18.6	13.8	69	1	13-181/57
50-29-3	4,4'-DDT	1.9		19.4	13.4	59	18.6	11.4	51	16	10-218/53
72-20-8	Endrin	ND		19.4	21.6	111	18.6	15.2	82	35	10-192/55
1031-07-8	Endosulfan sulfate	ND		19.4	20.8	107	18.6	17.9	96	15	10-185/57
7421-93-4	Endrin aldehyde	ND		19.4	21.6	111	18.6	19.2	103	12	10-205/52
959-98-8	Endosulfan-I	ND		19.4	21.6	111	18.6	17.2	93	23	12-178/55
33213-65-9	Endosulfan-II	ND		19.4	20.6	106	18.6	16.0	86	25	10-171/53
76-44-8	Heptachlor	ND		19.4	17.4	90	18.6	17.4	94 [b]	0	20-184/54
1024-57-3	Heptachlor epoxide	0.71	J	19.4	19.6	97	18.6	15.8	85	21	17-185/53
72-43-5	Methoxychlor	ND		19.4	13.8	71	18.6	12.5	67	10	10-199/59
53494-70-5	Endrin ketone	5.3		19.4	21.4	83	18.6	18.7	72	13	10-206/50
8001-35-2	Toxaphene	ND			ND			ND		nc	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	JD68931-1	Limits
877-09-8	Tetrachloro-m-xylene	102%	94%	131%	13-162%
877-09-8	Tetrachloro-m-xylene	111%	113%	153%	13-162%
2051-24-3	Decachlorobiphenyl	92%	81%	108%	10-180%
2051-24-3	Decachlorobiphenyl	166%	115%	167%	10-180%

(a) Outside of in house control limits.
(b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47684-MS	XX2503893.D	1	07/11/23	RK	07/10/23	OP47684	GXX8239
OP47684-MSD	XX2503894.D	1	07/11/23	RK	07/10/23	OP47684	GXX8239
JD68935-1	XX2503888.D	1	07/11/23	RK	07/10/23	OP47684	GXX8239

The QC reported here applies to the following samples: **Method:** SW846 8082A

JD68986-1

CAS No.	Compound	JD68935-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		145	120	83	141	125	89	4	19-218/53
11104-28-2	Aroclor 1221	ND			ND			ND		nc	50-150/30
11141-16-5	Aroclor 1232	ND			ND			ND		nc	50-150/30
53469-21-9	Aroclor 1242	ND			ND			ND		nc	50-150/30
12672-29-6	Aroclor 1248	ND			ND			ND		nc	50-150/30
11097-69-1	Aroclor 1254	ND			ND			ND		nc	50-150/30
11096-82-5	Aroclor 1260	ND		145	108	75	141	102	72	6	10-211/55
11100-14-4	Aroclor 1268	ND			ND			ND		nc	50-150/30
37324-23-5	Aroclor 1262	ND			ND			ND		nc	50-150/30

CAS No.	Surrogate Recoveries	MS	MSD	JD68935-1	Limits
877-09-8	Tetrachloro-m-xylene	86%	89%	75%	10-174%
877-09-8	Tetrachloro-m-xylene	59%	57%	52%	10-174%
2051-24-3	Decachlorobiphenyl	64%	67%	56%	10-195%
2051-24-3	Decachlorobiphenyl	67%	72%	60%	10-195%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8151A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
JD68986-1	OA167706.D	164* [c]	32
OP47688-BS1	OA167698.D	86	76
OP47688-MB1	OA167697.D	82	74
OP47688-MS	OA167699.D	58	52
OP47688-MSD	OA167700.D	69	66

Surrogate Compounds	Recovery Limits
S1 = 2,4-DCAA	10-138%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1
(c) Outside control limits due to matrix interference.

Surrogate Recovery Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8081B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JD68986-1	1G187453.D	127	154	126	111
OP47683-BS1	1G187447.D	132	159	155	131
OP47683-MB1	1G187446.D	147	177* [c]	165	143
OP47683-MS	1G187457.D	102	111	92	166
OP47683-MSD	1G187458.D	94	113	81	115

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	13-162%
S2 = Decachlorobiphenyl	10-180%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside of in house control limits.

Surrogate Recovery Summary

Job Number: JD68986
Account: CRATXH GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
JD68986-1	XX2503886.D	147	115	91	94
OP47684-BS1	XX2503872.D	143	117	131	118
OP47684-MB1	XX2503871.D	153	123	138	119
OP47684-MS	XX2503893.D	86	59	64	67
OP47684-MSD	XX2503894.D	89	57	67	72

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	10-174%
S2 = Decachlorobiphenyl	10-195%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 07/10/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.92	8.1	5.5	<50
Antimony	2.0	.28	.41	0.15	<2.0
Arsenic	2.0	.26	.28	-0.070	<2.0
Barium	20	.02	1.9	0.21	<20
Beryllium	0.20	.02	.08	0.0	<0.20
Bismuth	2.0	.25	.52		
Boron	10	.18	3.7		
Cadmium	0.50	.04	.07	0.010	<0.50
Calcium	500	1.3	21	18.4	<500
Chromium	1.0	.07	.37	0.10	<1.0
Cobalt	5.0	.06	.28	-0.010	<5.0
Copper	2.5	.07	.84	0.16	<2.5
Iron	50	.33	19	4.6	<50
Lead	2.0	.2	.41	0.020	<2.0
Lithium	5.0	.15	.92		
Magnesium	500	2.5	14	3.7	<500
Manganese	1.5	.01	.41	0.090	<1.5
Molybdenum	2.0	.06	.32		
Nickel	4.0	.08	.35	0.10	<4.0
Phosphorus	20	.7	3.3		
Potassium	1000	3.5	32	-8.1	<1000
Selenium	2.0	.36	.65	0.010	<2.0
Silicon	20	.22	11		
Silver	0.50	.06	.17	-0.050	<0.50
Sodium	1000	1.4	78	2.8	<1000
Strontium	5.0	.01	.18		
Sulfur	10	.37	3.9		
Thallium	1.0	.52	.58	-0.050	<1.0
Tin	20	.14	3.8		
Titanium	1.0	.08	.34		
Tungsten	5.0	.13	1.8		
Vanadium	5.0	.05	.19	0.020	<5.0
Zinc	5.0	.03	2.3	1.5	<5.0

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/10/23

Metal	RL	IDL	MDL	MB raw	final
Zirconium	2.0	.05	.54		

Associated samples MP40633: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 07/10/23

Metal	JD68967-4 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	3000	7380	2700	162.4N(a	75-125
Antimony	0.0	155	216	71.8N(a)	75-125
Arsenic	1.5	192	216	88.3	75-125
Barium	15.1	217	216	93.6	75-125
Beryllium	0.25	191	216	88.4	75-125
Bismuth					
Boron					
Cadmium	0.39	192	216	88.8	75-125
Calcium	497	3220	2700	101.0	75-125
Chromium	9.6	202	216	89.2	75-125
Cobalt	3.0	206	216	94.1	75-125
Copper	14.5	208	216	89.7	75-125
Iron	7900	10300	2700	89.0	75-125
Lead	11.4	216	216	94.8	75-125
Lithium					
Magnesium	1270	3860	2700	96.0	75-125
Manganese	70.9	270	216	92.3	75-125
Molybdenum					
Nickel	11.0	214	216	94.1	75-125
Phosphorus					
Potassium	607	3750	2700	116.6	75-125
Selenium	0.0	184	216	85.3	75-125
Silicon					
Silver	0.19	25.0	27	92.0	75-125
Sodium	217	2640	2700	89.9	75-125
Strontium					
Sulfur					
Thallium	0.0	205	216	95.0	75-125
Tin					
Titanium					
Tungsten					
Vanadium	10.7	205	216	90.1	75-125
Zinc	31.7	226	216	90.1	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/10/23

Metal	JD68967-4 Original MS	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP40633: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 07/10/23

Metal	JD68967-4 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	3000	6660	2700	135.7N(a	10.3	20
Antimony	0.0	141	216	65.4N(a)	9.5	20
Arsenic	1.5	174	216	80.0	9.8	20
Barium	15.1	195	216	83.4	10.7	20
Beryllium	0.25	171	216	79.1	11.0	20
Bismuth						
Boron						
Cadmium	0.39	173	216	80.0	10.4	20
Calcium	497	2880	2700	88.4	11.1	20
Chromium	9.6	182	216	79.9	10.4	20
Cobalt	3.0	186	216	84.8	10.2	20
Copper	14.5	187	216	80.0	10.6	20
Iron	7900	9860	2700	72.7N(a)	4.4	20
Lead	11.4	197	216	86.0	9.2	20
Lithium						
Magnesium	1270	3500	2700	82.7	9.8	20
Manganese	70.9	246	216	81.2	9.3	20
Molybdenum						
Nickel	11.0	193	216	84.4	10.3	20
Phosphorus						
Potassium	607	3370	2700	102.5	10.7	20
Selenium	0.0	167	216	77.4	9.7	20
Silicon						
Silver	0.19	22.5	27	82.7	10.5	20
Sodium	217	2370	2700	79.8	10.8	20
Strontium						
Sulfur						
Thallium	0.0	186	216	86.2	9.7	20
Tin						
Titanium						
Tungsten						
Vanadium	10.7	184	216	80.3	10.8	20
Zinc	31.7	205	216	80.3	9.7	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633 Methods: SW846 6010D
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/10/23

Metal	JD68967-4 Original MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zirconium					

Associated samples MP40633: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 07/10/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	2450	2500	98.0	80-120
Antimony	189	200	94.5	80-120
Arsenic	188	200	94.0	80-120
Barium	190	200	95.0	80-120
Beryllium	188	200	94.0	80-120
Bismuth				
Boron				
Cadmium	186	200	93.0	80-120
Calcium	2470	2500	98.8	80-120
Chromium	188	200	94.0	80-120
Cobalt	193	200	96.5	80-120
Copper	186	200	93.0	80-120
Iron	2430	2500	97.2	80-120
Lead	196	200	98.0	80-120
Lithium				
Magnesium	2410	2500	96.4	80-120
Manganese	191	200	95.5	80-120
Molybdenum				
Nickel	193	200	96.5	80-120
Phosphorus				
Potassium	2420	2500	96.8	80-120
Selenium	181	200	90.5	80-120
Silicon				
Silver	23.9	25	95.6	80-120
Sodium	2460	2500	98.4	80-120
Strontium				
Sulfur				
Thallium	198	200	99.0	80-120
Tin				
Titanium				
Tungsten				
Vanadium	189	200	94.5	80-120
Zinc	192	200	96.0	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: mg/kg

Prep Date: 07/10/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP40633: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/10/23

Metal	JD68967-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum	27300	29300	7.3	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	13.4	13.3	0.7	0-10
Barium	137	147	6.8	0-10
Beryllium	2.30	2.30	0.0	0-10
Bismuth				
Boron				
Cadmium	3.50	2.80	20.0 (a)	0-10
Calcium	4510	4850	7.4	0-10
Chromium	87.3	96.3	10.3*(b)	0-10
Cobalt	27.5	27.3	0.7	0-10
Copper	132	145	9.8	0-10
Iron	71800	77400	7.8	0-10
Lead	103	106	2.5	0-10
Lithium				
Magnesium	11500	12400	7.7	0-10
Manganese	644	718	11.4*(b)	0-10
Molybdenum				
Nickel	99.6	105	5.4	0-10
Phosphorus				
Potassium	5520	5670	2.8	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	1.70	0.00	100.0(a)	0-10
Sodium	1970	161	91.8*(b)	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	96.8	105	8.9	0-10
Zinc	288	315	9.4	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633 Methods: SW846 6010D
Matrix Type: SOLID Units: ug/l

Prep Date: 07/10/23

Metal	JD68967-4 Original SDL 1:5	%DIF	QC Limits
Zirconium			

Associated samples MP40633: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/10/23

Metal	Sample ml	Final ml	JD68967-4 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum	19.25	20	27260	26237.75	49840	0.1	5000	25000	94.4	80-120
Antimony	19.25	20			1861	0.2	200	2000	93.1	80-120
Arsenic										
Barium										
Beryllium										
Bismuth										
Boron										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Lithium										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Phosphorus										
Potassium										
Selenium										
Silicon										
Silver										
Sodium										
Strontium										
Sulfur										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc										

POST DIGESTATE SPIKE SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40633
Matrix Type: SOLID

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/10/23

Metal	Sample ml	Final ml	JD68967-4 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Zirconium										

Associated samples MP40633: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40639 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/10/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0057	.015	-0.0023	<0.033

Associated samples MP40639: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40639
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/10/23

Metal	JD68944-1 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.087	0.41	0.342	94.3	80-120

Associated samples MP40639: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40639 Methods: SW846 7471B
Matrix Type: SOLID Units: mg/kg

Prep Date: 07/10/23

Metal	JD68944-1 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.087	0.43	0.349	98.3	4.8	20

Associated samples MP40639: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40639
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 07/10/23

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.30	0.333	90.0	80-120

Associated samples MP40639: JD68986-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP47973/GN43567	0.40	0.0	mg/kg	40	39.1	97.8	80-120%
Chromium, Hexavalent	GP47973/GN43567			mg/kg	810.891	784	96.7	80-120%
Cyanide	GP47977/GN43607	0.24	0.0	mg/kg	4.8	5.21	108.5	90-110%
Phosphorus, Total	GP48036/GN43675	2.5	0.0	mg/kg	20	19.7	98.5	80-120%

Associated Samples:
Batch GP47973: JD68986-1
Batch GP47977: JD68986-1
Batch GP48036: JD68986-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP47973/GN43567	JD68636-3R	mg/kg	0.0	0.0	0.0	0-20%
Cyanide	GP47977/GN43607	JD68950-3	mg/kg	0.0	0.0	0.0	0-49%
Phosphorus, Total	GP48036/GN43675	JD68986-1	mg/kg	47.2	48.6	2.9	0-16%
Solids, Percent	GN43537	JD68986-1	%	89.9	91.1	1.3	0-10%

Associated Samples:
Batch GN43532: JD68986-1
Batch GN43537: JD68986-1
Batch GP47973: JD68986-1
Batch GP47977: JD68986-1
Batch GP48036: JD68986-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD68986
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP47973/GN43567	JD68636-3R	mg/kg	0.0	43.8	42.3	96.6(a)	75-125%
Chromium, Hexavalent	GP47973/GN43567	JD68636-3R	mg/kg	0.0	891	902	101.2(b)	75-125%
Cyanide	GP47977/GN43607	JD68950-3	mg/kg	0.0	4.54	4.7	103.5	75-125%
Phosphorus, Total	GP48036/GN43675	JD68986-1	mg/kg	47.2	22.2	68.6	96.2	75-125%

Associated Samples:
Batch GP47973: JD68986-1
Batch GP47977: JD68986-1
Batch GP48036: JD68986-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Good recovery on soluble XCR matrix spike. Good recovery (110 %) on the post-spike.
(b) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

12599404;San Jacinto Waste Pits

12599404 SSOW 12599404-2022-001

SGS Job Number: LA92088

Sampling Date: 07/07/23

Report to:

GHD Services Inc.
5551 Corporate Blvd. Ste. 200
Baton Rouge, LA 70808
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathy Shaw

Total number of pages in report: **13**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Kesavalu Bagawandoss
General Manager

Client Service contact: Rebecca Hebert 337-237-4775
Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-18-16), WV(257)

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EHS.US.CustomerCare@sgs.com

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Sample Summary

GHD Services Inc.

Job No: LA92088

12599404;San Jacinto Waste Pits
Project No: 12599404 SSOW 12599404-2022-001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
LA92088-1	07/07/23	10:00		07/08/23	SO	Soil	12599404-070723-S-MTK-SOURCE TOPSOIL-1

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the RL

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: LA92088
Account: GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits
Collected: 07/07/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA92088-1	**12599404-070723-S-MTK-SOURCE TOPSOIL-1**					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-070723-S-MTK-SOURCE TOPSOIL-1		
Lab Sample ID:	LA92088-1	**Date Sampled:**	07/07/23
Matrix:	SO - Soil	**Date Received:**	07/08/23
Method:	TNRCC 1005 TX1005	**Percent Solids:**	n/a [a]
Project:	12599404;San Jacinto Waste Pits		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JF127707.D	1	07/14/23 16:43	JT	07/14/23 10:00	OP23118	GJJ2559
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		70-130%
98-08-8	aaa-Trifluorotoluene	92%		70-130%

(a) All results with the exception of 29B parameters are reported on a wet weight basis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Lafayette

PAGE 1 OF 1

SGS

CHAIN OF CUSTODY

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 FAX. 337.237.7838
www.sgs.com/ehsusa

FED-EX Tracking #:
Bottle Order Control #:
SGS Quote #:
SGS Job #: LA92088

Client / Reporting Information		Project Information	
Company Name: GHD		Project Name: San Jacinto Waste Pits – South Impoundment	
Street Address: 2237 S. Acadian Thruway Suite 701		Street: 18300 Market St	Billing Information (if different from Report to)
City: Baton Rouge State: LA Zip: 70808		City: Channelview State: TX	Company Name:
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com		Project #: 12599404	Street Address:
Phone #: 225-296-6508		Client Purchase Order #: SSOW: 12599404-2022-001	City: State: Zip:
Sampler(s) Name(s): Marc Kemper Phone #: 772-233-3016		Project Manager: Wells Richard	Attention:

Requested Analysis (see TEST CODE sheet): TX 1005, TX 1006

SGS Sample #	Field ID / Point of Collection	Comp/Grab	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZnAc/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	TX 1005	TX 1006	LAB USE ONLY
	12599404-070723-S-MTK-Source Topsoil-1	G	7/7/23	10:00	MTK	S	2						2						X	X	2
	Temp Blank	—	—	—	—	W	1														

7/7/23

RUSH

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, SED - Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB - Field Blank, EB - Equipment Blank, RB - Rinse Blank, TB - Trip Blank

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [x] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other

Approved By (SGS PM) / Date:

Emergency & Rush T/A data available via Labfax. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+$)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [x] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

Note: Sample inventory is verified upon receipt in the Laboratory

*Hold TX 1006 (01)
RS-171 (9)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date / Time:		Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature] GHD	7/7/23	1500	1 FE	2 FE	7/8/23 0930	2 [signature]
Relinquished by Sampler: 3	Date / Time:		Received By: 3	Relinquished By: 4	Date / Time:	Received By: 4
Relinquished by: 5	Date / Time:		Received By: 5	Custody Seal # 250	Preserved where applicable	Cooler Temp. 2.0

IR002

LA92088: Chain of Custody
Page 1 of 3

ORIGIN ID:HBYA (772) 233-3016
GHD SERVICES INC.
11004 E 51ST ST
TULSA, OK 74146
UNITED STATES US

SHIP DATE: 07JUL23
ACTWGT: 12.85 LB
CAD: 6755022/SSF02422
DIMS: 13x10x9 IN
BILL THIRD PARTY

TO ATTN: SAMPLE RECEIVING
SGS – NORTH AMERICA INC. – SCOTT
500 AMBASSADOR CAFFERY PKWY

SCOTT LA 70583
(772) 233-3016
INV:
PO:
REF:
DEPT:

FedEx Express

TRK# 0201 7808 4222 2895

SATURDAY 12:00P
PRIORITY OVERNIGHT
AHS
70583
LA-US LFT

XO LFTA

LA92088: Chain of Custody
Page 2 of 3

SGS Sample Receipt Summary

Job Number: la92088 **Client:** GHD **Project:** SAN JACINTO WASTE

Date / Time Received: 7/8/2023 8:30:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 7808 4222 2895

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: pH 12+: Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

LA92088: Chain of Custody
Page 3 of 3

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA92088
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23118-MB	JF127703.D	1	07/14/23	JT	07/14/23	OP23118	GJJ2559

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA92088-1

CAS No.	Compound	Result	RL	Units	Q
	TPH (C6-C12)	ND	25	mg/kg	
	TPH (> C12-C28)	ND	25	mg/kg	
	TPH (> C28-C35)	ND	25	mg/kg	
	TPH (C6-C35)	ND	25	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	105%	70-130%
98-08-8	aaa-Trifluorotoluene	104%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA92088
Account: CRALABR GHD Services Inc.
Project: 12599404;San Jacinto Waste Pits

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23118-BS1	JF127704.D	1	07/14/23	JT	07/14/23	OP23118	GJJ2559
OP23118-BSD1	JF127705.D	1	07/14/23	JT	07/14/23	OP23118	GJJ2559

The QC reported here applies to the following samples: **Method:** TNRCC 1005

LA92088-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	250	241	96	229	92	5	75-125/20
	TPH (> C12-C28)	250	234	94	224	90	4	75-125/20
	TPH (C6-C35)	500	476	95	455	91	5	75-125/20

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	97%	91%	70-130%
98-08-8	aaa-Trifluorotoluene	94%	90%	70-130%

* = Outside of Control Limits.

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ANALYTICAL REPORT

PREPARED FOR

Attn: Wells Richard
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, Louisiana 70808

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JOB DESCRIPTION

San Jacinto Waste Pits S. Impoundment

JOB NUMBER

410-126458-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

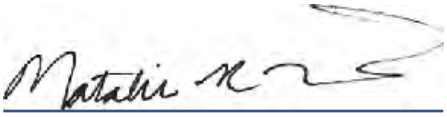
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Natalie Luciano, Principal Project Manager
Natalie.Luciano@et.eurofinsus.com
(717)556-7258

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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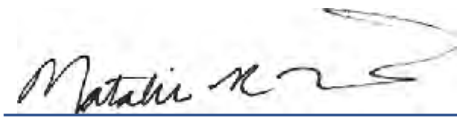
WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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Definitions/Glossary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-126458-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-126458-1

Receipt
The samples were received on 5/12/2023 10:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions
USDA Compliance agreement documentation to be submitted was either missing or incomplete for the following samples: 12599404-042423-S-NE-Release-1 (410-126458-1), 12599404-042423-S-NE-Release-2 (410-126458-2) and 12599404-042423-S-NE-Release-3 (410-126458-3).

Dioxin
Method 1613B: The Isotope Dilution Analyte (IDA) recovery associated with the following Quality Control sample is below the method recommended limit: (LCS 410-379265/2-A). The associated native analyte recoveries are within the method recommended limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1 — Lab Sample ID: 410-126458-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	76		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	12		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	2.3		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	10		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	19		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	270		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	25	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	32		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	12		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	6.9	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDF	9.6	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	3.3	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	21	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	6900	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	87	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	7000	E I B	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	6700		51	10	ng/Kg	5	☼	1613B	Total/NA

Client Sample ID: 12599404-042423-S-NE-Release-2 — Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	80		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	6.1		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	2.8		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	11		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	19		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	290		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	16		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	29		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	85	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	5.0	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDF	5.7	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	4.1	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	28	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	8100	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	150	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	8300	E I B	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	7500		51	10	ng/Kg	5	☼	1613B	Total/NA

Client Sample ID: 12599404-042423-S-NE-Release-3 — Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	64		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	5.2		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	1.8		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	8.5		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	16		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	250		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	14	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	27	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	8.9	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	4.8	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3 (Continued)

Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDF	3.7	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	2.4	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	17	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	4600	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	60	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	4700	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	4600		51	10	ng/Kg	5	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 12599404-042423-S-NE-Release-1 **Lab Sample ID: 410-126458-1**
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.2**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	76		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,6,7,8-HpCDF	12		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,7,8-TCDD	2.3		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,7,8-TCDF	10		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
OCDF	19		10	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HpCDD	270		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HpCDF	25	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HxCDD	32		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HxCDF	12		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PeCDD	6.9	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PeCDF	9.6	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total TCDD	3.3	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total TCDF	21	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDD	6900	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDF	87	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDD/PCDF	7000	E I B	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8-HxCDD	*62*		*32 - 141*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*66*		*28 - 130*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,6,7,8-HxCDF	*71*		*26 - 123*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8,9-HxCDD	*66*		*28 - 130*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8,9-HxCDF	*72*		*29 - 147*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,4,7,8-PeCDF	*70*		*21 - 178*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,7,8-TCDD	*78*		*25 - 164*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,7,8-TCDF	*77*		*24 - 169*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-OCDD	*46*		*17 - 157*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-OCDF	*51*		*17 - 157*	*05/23/23 22:49*	*05/25/23 23:19*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	6700		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 11:10	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1
Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 98.2

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,6,7,8-HpCDF	44		28 - 143	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8,9-HpCDF	56		26 - 138	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,6,7,8-HxCDD	69		28 - 130	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,6,7,8-HxCDF	73		26 - 123	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8-PeCDD	57		25 - 181	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8-PeCDF	65		24 - 185	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8,9-HxCDD	69		28 - 130	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8,9-HxCDF	68		29 - 147	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,4,6,7,8-HxCDF	62		28 - 136	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,4,7,8-PeCDF	63		21 - 178	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,7,8-TCDD	76		25 - 164	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,7,8-TCDF	69		24 - 169	05/23/23 22:49	05/26/23 11:10	5
13C-OCDD	43		17 - 157	05/23/23 22:49	05/26/23 11:10	5
13C-OCDF	48		17 - 157	05/23/23 22:49	05/26/23 11:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.8		1.0	1.0	%			05/22/23 10:50	1

Client Sample ID: 12599404-042423-S-NE-Release-2 **Lab Sample ID: 410-126458-2**
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 97.9**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	80		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,6,7,8-HpCDF	6.1		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,7,8-TCDD	2.8		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,7,8-TCDF	11		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
OCDF	19		10	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HpCDD	290		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HpCDF	16		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HxCDD	29		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HxCDF	85	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PeCDD	5.0	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PeCDF	5.7	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total TCDD	4.1	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total TCDF	28	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDD	8100	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDF	150	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDD/PCDF	8300	E I B	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*85*		*23 - 140*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*80*		*28 - 143*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8-HxCDD	*85*		*32 - 141*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*26 - 152*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*89*		*26 - 138*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,6,7,8-HxCDF	*98*		*26 - 123*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*25 - 181*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8-PeCDF	*81*		*24 - 185*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8,9-HxCDD	*91*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8,9-HxCDF	*91*		*29 - 147*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,4,6,7,8-HxCDF	*86*		*28 - 136*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,4,7,8-PeCDF	*82*		*21 - 178*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,7,8-TCDD	*90*		*25 - 164*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,7,8-TCDF	*90*		*24 - 169*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-OCDD	*92*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-OCDF	*90*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:07*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	7500		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 11:59	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-2
Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 97.9

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	84		23 - 140	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,6,7,8-HpCDF	81		28 - 143	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8-HxCDD	76		32 - 141	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8-HxCDF	80		26 - 152	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8,9-HpCDF	89		26 - 138	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,6,7,8-HxCDD	98		28 - 130	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,6,7,8-HxCDF	107		26 - 123	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8-PeCDD	77		25 - 181	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8-PeCDF	84		24 - 185	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8,9-HxCDD	103		28 - 130	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8,9-HxCDF	87		29 - 147	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,4,6,7,8-HxCDF	84		28 - 136	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,4,7,8-PeCDF	80		21 - 178	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,7,8-TCDD	86		25 - 164	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,7,8-TCDF	86		24 - 169	05/23/23 22:49	05/26/23 11:59	5
13C-OCDD	89		17 - 157	05/23/23 22:49	05/26/23 11:59	5
13C-OCDF	91		17 - 157	05/23/23 22:49	05/26/23 11:59	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.1		1.0	1.0	%			05/22/23 10:50	1

Client Sample ID: 12599404-042423-S-NE-Release-3 **Lab Sample ID: 410-126458-3**
Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.1**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	64		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,6,7,8-HpCDF	5.2		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,7,8-TCDD	1.8		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,7,8-TCDF	8.5		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
OCDF	16		10	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HpCDD	250		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HpCDF	14	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HxCDD	27	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HxCDF	8.9	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PeCDD	4.8	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PeCDF	3.7	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total TCDD	2.4	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total TCDF	17	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDD	4600	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDF	60	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDD/PCDF	4700	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*23 - 140*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*72*		*32 - 141*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*75*		*26 - 138*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*78*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*83*		*26 - 123*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*25 - 181*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*24 - 185*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8,9-HxCDD	*79*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*82*		*29 - 147*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*77*		*28 - 136*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,4,7,8-PeCDF	*76*		*21 - 178*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,7,8-TCDD	*84*		*25 - 164*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,7,8-TCDF	*82*		*24 - 169*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-OCDD	*60*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-OCDF	*65*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:56*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	4600		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 12:48	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3
Lab Sample ID: 410-126458-3
Date Collected: 04/24/23 16:50
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 98.1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	65		23 - 140	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8-HxCDD	64		32 - 141	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8-HxCDF	66		26 - 152	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8,9-HpCDF	70		26 - 138	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,6,7,8-HxCDD	80		28 - 130	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,6,7,8-HxCDF	91		26 - 123	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8-PeCDD	66		25 - 181	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8-PeCDF	73		24 - 185	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8,9-HxCDD	83		28 - 130	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8,9-HxCDF	74		29 - 147	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,4,6,7,8-HxCDF	73		28 - 136	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,4,7,8-PeCDF	76		21 - 178	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,7,8-TCDD	78		25 - 164	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,7,8-TCDF	68		24 - 169	05/23/23 22:49	05/26/23 12:48	5
13C-OCDD	59		17 - 157	05/23/23 22:49	05/26/23 12:48	5
13C-OCDF	67		17 - 157	05/23/23 22:49	05/26/23 12:48	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.9		1.0	1.0	%			05/22/23 10:50	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: San Jacinto Waste Pits S. Impoundment

Job ID: 410-126458-1

Client Sample ID: 12599404-042423-S-NE-Release-1 — Lab Sample ID: 410-126458-1

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**76**		5.1	2.0	ng/Kg	0.01	**0.76**	0.01	**0.76**
1,2,3,4,6,7,8-HpCDF	**12**		5.1	2.0	ng/Kg	0.01	**0.12**	0.01	**0.12**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**2.3**		1.0	0.20	ng/Kg	1	**2.3**	1	**2.3**
2,3,7,8-TCDF	**10**		1.0	0.20	ng/Kg	0.1	**1.0**	0.1	**1.0**
OCDF	**19**		10	2.0	ng/Kg	0.0003	**0.0057**	0.0003	**0.0057**
OCDD - DL	**6700**		51	10	ng/Kg	0.0003	**2.0**	0.0003	**2.0**

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		6.2		8.2

Client Sample ID: 12599404-042423-S-NE-Release-2 — Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**80**		5.1	2.0	ng/Kg	0.01	**0.80**	0.01	**0.80**
1,2,3,4,6,7,8-HpCDF	**6.1**		5.1	2.0	ng/Kg	0.01	**0.061**	0.01	**0.061**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**2.8**		1.0	0.20	ng/Kg	1	**2.8**	1	**2.8**
2,3,7,8-TCDF	**11**		1.0	0.20	ng/Kg	0.1	**1.1**	0.1	**1.1**
OCDF	**19**		10	2.0	ng/Kg	0.0003	**0.0057**	0.0003	**0.0057**
OCDD - DL	**7500**		51	10	ng/Kg	0.0003	**2.3**	0.0003	**2.3**

TEF Reference:

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

Toxicity Summary

Client: GHD Services Inc.
Project/Site: San Jacinto Waste Pits S. Impoundment

Job ID: 410-126458-1

Client Sample ID: 12599404-042423-S-NE-Release-2 (Continued)

Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		7.1		9.1

Client Sample ID: 12599404-042423-S-NE-Release-3

Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**64**		5.1	2.0	ng/Kg	0.01	**0.64**	0.01	**0.64**
1,2,3,4,6,7,8-HpCDF	**5.2**		5.1	2.0	ng/Kg	0.01	**0.052**	0.01	**0.052**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**1.8**		1.0	0.20	ng/Kg	1	**1.8**	1	**1.8**
2,3,7,8-TCDF	**8.5**		1.0	0.20	ng/Kg	0.1	**0.85**	0.1	**0.85**
OCDF	**16**		10	2.0	ng/Kg	0.0003	**0.0048**	0.0003	**0.0048**
OCDD - DL	**4600**		51	10	ng/Kg	0.0003	**1.4**	0.0003	**1.4**

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		4.7		6.8

TEF Reference:

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HpCDD (23-140)	HpCDF (28-143)	HxCDD (32-141)	HxCDF (26-152)	HpCDF2 (26-138)	HxDD (28-130)	HxDF (26-123)	PeCDD (25-181)
410-126458-1	12599404-042423-S-NE-Releas	54	46	62	64	64	66	71	60
410-126458-1 - DL	12599404-042423-S-NE-Release-1	49	44	53	57	56	69	73	57
410-126458-2	12599404-042423-S-NE-Release-2	85	80	85	85	89	90	98	76
410-126458-2 - DL	12599404-042423-S-NE-Release-2	84	81	76	80	89	98	107	77
410-126458-3	12599404-042423-S-NE-Release-3	67	60	72	74	75	78	83	68
410-126458-3 - DL	12599404-042423-S-NE-Release-3	65	59	64	66	70	80	91	66
MB 410-379265/1-A	Method Blank	80	79	79	79	83	85	97	73

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PeCDF (24-185)	13CHxCD (28-130)	HxCF (29-147)	13CHxCF (28-136)	PeCF (21-178)	TCDD (25-164)	TCDF (24-169)	OCDD (17-157)
410-126458-1	12599404-042423-S-NE-Releas	68	66	72	63	70	78	77	46
410-126458-1 - DL	12599404-042423-S-NE-Release-1	65	69	68	62	63	76	69	43
410-126458-2	12599404-042423-S-NE-Release-2	81	91	91	86	82	90	90	92
410-126458-2 - DL	12599404-042423-S-NE-Release-2	84	103	87	84	80	86	86	89
410-126458-3	12599404-042423-S-NE-Release-3	73	79	82	77	76	84	82	60
410-126458-3 - DL	12599404-042423-S-NE-Release-3	73	83	74	73	76	78	68	59
MB 410-379265/1-A	Method Blank	78	89	86	85	83	80	76	83

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDF (17-157)
410-126458-1	12599404-042423-S-NE-Releas	51
410-126458-1 - DL	12599404-042423-S-NE-Release-1	48
410-126458-2	12599404-042423-S-NE-Release-2	90
410-126458-2 - DL	12599404-042423-S-NE-Release-2	91
410-126458-3	12599404-042423-S-NE-Release-3	65
410-126458-3 - DL	12599404-042423-S-NE-Release-3	67
MB 410-379265/1-A	Method Blank	87

Surrogate Legend

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

13CHxCD = 13C-1,2,3,7,8,9-HxCDD
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
PeCF = 13C-2,3,4,7,8-PeCDF
TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HpCDD (26-166)	HpCDF (21-158)	HxCDD (21-193)	HxCDF (19-202)	HpCDF2 (20-186)	HxDD (25-163)	HxDF (21-159)	PeCDD (21-227)
LCS 410-379265/2-A	Lab Control Sample	10 *5- cn	9 *5- cn	6 *5- cn	6 *5- cn	9 *5- cn	7 *5- cn	7 *5- cn	4 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PeCDF (21-192)	13CHxCD (25-163)	HxCF (17-205)	13CHxCF (22-176)	PeCF (13-328)	TCDD (20-175)	TCDF (22-152)	OCDD (13-199)
LCS 410-379265/2-A	Lab Control Sample	4 *5- cn	8 *5- cn	7 *5- cn	8 *5- cn	5 *5- cn	3 *5- cn	3 *5- cn	12 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OCDF (13-199)							
LCS 410-379265/2-A	Lab Control Sample	12 *5- cn							

Surrogate Legend

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
13CHxCD = 13C-1,2,3,7,8,9-HxCDD
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
PeCF = 13C-2,3,4,7,8-PeCDF
TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-379265/1-A
Matrix: Solid
Analysis Batch: 379936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 379265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,6,7,8-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8-PeCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8-PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8,9-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8,9-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,4,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,4,7,8-PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,7,8-TCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,7,8-TCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
OCDD	ND		10	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
OCDF	ND		10	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HpCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PeCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total TCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total TCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDD/PCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*80*		*23 - 140*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*79*		*28 - 143*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*79*		*32 - 141*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*26 - 152*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*83*		*26 - 138*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*28 - 130*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*97*		*26 - 123*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*25 - 181*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*24 - 185*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8,9-HxCDD	*89*		*28 - 130*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*86*		*29 - 147*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*85*		*28 - 136*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,4,7,8-PeCDF	*83*		*21 - 178*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,7,8-TCDD	*80*		*25 - 164*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,7,8-TCDF	*76*		*24 - 169*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-OCDD	*83*		*17 - 157*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-OCDF	*87*		*17 - 157*	*05/23/23 22:49*	*05/25/23 13:56*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-379265/2-A
Matrix: Solid
Analysis Batch: 379936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 379265

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3,4,6,7,8-HpCDD			137	121	cn	ng/Kg		88	70 - 140		
1,2,3,4,6,7,8-HpCDF			137	121	cn	ng/Kg		88	82 - 122		
1,2,3,4,7,8-HxCDD			137	138	cn	ng/Kg		101	70 - 164		
1,2,3,4,7,8-HxCDF			137	121	cn	ng/Kg		88	72 - 134		
1,2,3,4,7,8,9-HpCDF			137	121	cn	ng/Kg		89	78 - 138		
1,2,3,6,7,8-HxCDD			137	131	cn	ng/Kg		96	76 - 134		
1,2,3,6,7,8-HxCDF			137	128	cn	ng/Kg		93	84 - 130		
1,2,3,7,8-PeCDD			137	138	cn	ng/Kg		101	70 - 142		
1,2,3,7,8-PeCDF			137	137	cn	ng/Kg		100	80 - 134		
1,2,3,7,8,9-HxCDD			137	125	cn	ng/Kg		91	64 - 162		
1,2,3,7,8,9-HxCDF			137	126	cn	ng/Kg		92	78 - 130		
2,3,4,6,7,8-HxCDF			137	119	cn	ng/Kg		87	70 - 156		
2,3,4,7,8-PeCDF			137	124	cn	ng/Kg		90	68 - 160		
2,3,7,8-TCDD			27.4	29.7	cn	ng/Kg		108	67 - 158		
2,3,7,8-TCDF			27.4	27.2	cn	ng/Kg		99	75 - 158		
OCDD			274	269	cn	ng/Kg		98	78 - 144		
OCDF			274	240	cn	ng/Kg		88	63 - 170		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-1,2,3,4,6,7,8-HpCDD	*10*	*5- cn*	*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*9*	*5- cn*	*21 - 158*
13C-1,2,3,4,7,8-HxCDD	*6*	*5- cn*	*21 - 193*
13C-1,2,3,4,7,8-HxCDF	*6*	*5- cn*	*19 - 202*
13C-1,2,3,4,7,8,9-HpCDF	*9*	*5- cn*	*20 - 186*
13C-1,2,3,6,7,8-HxCDD	*7*	*5- cn*	*25 - 163*
13C-1,2,3,6,7,8-HxCDF	*7*	*5- cn*	*21 - 159*
13C-1,2,3,7,8-PeCDD	*4*	*5- cn*	*21 - 227*
13C-1,2,3,7,8-PeCDF	*4*	*5- cn*	*21 - 192*
13C-1,2,3,7,8,9-HxCDD	*8*	*5- cn*	*25 - 163*
13C-1,2,3,7,8,9-HxCDF	*7*	*5- cn*	*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*8*	*5- cn*	*22 - 176*
13C-2,3,4,7,8-PeCDF	*5*	*5- cn*	*13 - 328*
13C-2,3,7,8-TCDD	*3*	*5- cn*	*20 - 175*
13C-2,3,7,8-TCDF	*3*	*5- cn*	*22 - 152*
13C-OCDD	*12*	*5- cn*	*13 - 199*
13C-OCDF	*12*	*5- cn*	*13 - 199*

QC Association Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Specialty Organics

ISM Prep Batch: 378513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	Increment, prep	
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	Increment, prep	
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	Increment, prep	
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	Increment, prep	
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	Increment, prep	
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	Increment, prep	

Prep Batch: 379265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	378513
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	378513
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	378513
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	378513
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	378513
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	378513
MB 410-379265/1-A	Method Blank	Total/NA	Solid	1613B	
LCS 410-379265/2-A	Lab Control Sample	Total/NA	Solid	1613B	

Analysis Batch: 379936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-379265/1-A	Method Blank	Total/NA	Solid	1613B	379265
LCS 410-379265/2-A	Lab Control Sample	Total/NA	Solid	1613B	379265

Analysis Batch: 380112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	379265
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	379265
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	379265

Analysis Batch: 380380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	379265
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	379265
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	379265

General Chemistry

Analysis Batch: 378522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	Moisture	
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	Moisture	
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	Moisture	

Lab Chronicle

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1 Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Client Sample ID: 12599404-042423-S-NE-Release-1 Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 10:45 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/25/23 23:19
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 10:45 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 11:10

Client Sample ID: 12599404-042423-S-NE-Release-2 Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Client Sample ID: 12599404-042423-S-NE-Release-2 Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 97.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 11:10 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/26/23 00:07
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 11:10 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 11:59

Client Sample ID: 12599404-042423-S-NE-Release-3 Lab Sample ID: 410-126458-3
Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Lab Chronicle

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3 Lab Sample ID: 410-126458-3

Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 11:25 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/26/23 00:56
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 11:25 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 12:48

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	1613B	Solid	1,2,3,4,6,7,8-HpCDD
1613B	1613B	Solid	1,2,3,4,6,7,8-HpCDF
1613B	1613B	Solid	1,2,3,4,7,8,9-HpCDF
1613B	1613B	Solid	1,2,3,4,7,8-HxCDD
1613B	1613B	Solid	1,2,3,4,7,8-HxCDF
1613B	1613B	Solid	1,2,3,6,7,8-HxCDD
1613B	1613B	Solid	1,2,3,6,7,8-HxCDF
1613B	1613B	Solid	1,2,3,7,8,9-HxCDD
1613B	1613B	Solid	1,2,3,7,8,9-HxCDF
1613B	1613B	Solid	1,2,3,7,8-PeCDD
1613B	1613B	Solid	1,2,3,7,8-PeCDF
1613B	1613B	Solid	2,3,4,6,7,8-HxCDF
1613B	1613B	Solid	2,3,4,7,8-PeCDF
1613B	1613B	Solid	2,3,7,8-TCDD
1613B	1613B	Solid	2,3,7,8-TCDF
1613B	1613B	Solid	OCDD
1613B	1613B	Solid	OCDF
1613B	1613B	Solid	Total HpCDD
1613B	1613B	Solid	Total HpCDF
1613B	1613B	Solid	Total HxCDD
1613B	1613B	Solid	Total HxCDF
1613B	1613B	Solid	Total PCDD
1613B	1613B	Solid	Total PCDD/PCDF
1613B	1613B	Solid	Total PCDF
1613B	1613B	Solid	Total PeCDD
1613B	1613B	Solid	Total PeCDF
1613B	1613B	Solid	Total TCDD
1613B	1613B	Solid	Total TCDF
Moisture		Solid	Percent Moisture
TEQ		Solid	Total Toxic Dioxins and Furans

Method Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	ELLE
TEQ	Total TEQ Calculation	Lab SOP	ELLE
Moisture	Percent Moisture	EPA	ELLE
1613B	Soxhlet Extraction	EPA	ELLE
Increment, prep	ISM - Dry, Disaggregate, Sieve, 2 D Slabcake Subsample	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-126458-1	12599404-042423-S-NE-Release-1	Solid	04/24/23 11:20	05/12/23 10:05
410-126458-2	12599404-042423-S-NE-Release-2	Solid	04/24/23 14:20	05/12/23 10:05
410-126458-3	12599404-042423-S-NE-Release-3	Solid	04/24/23 16:50	05/12/23 10:05

410-126458 Chain of Custody

SGS

CHAIN OF CUSTODY

SSOW: 12599404-2022-001

B7854

PROJECT INFO

PROJECT: San Jacinto Waste Pits S. Impoundment

P.O. #: —

QUOTE #: —

SITE REF: —

TURN AROUND TIME: Standard

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

See Remarks

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

PRESERVATIVE

1

ANALYSIS & METHOD

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Dioxin/Furan 1613B	MS MSD	MS/ DUP	REMARKS
12599401-042423-S-NE-Release-1	4/24/23	1120	1	SO	X			Homogenize each bulk sample separately.
↓ -↓ -↓-↓-Release-2	↓	1420	1	SO	X			Collect one aliquot from each homogenized
↓ -↓ -↓-↓-Release-3	↓	1650	1	SO	X			sample and process.
Temp Blank	—	—	1	W				
								Collect a second aliquot from each homogenized
								sample and send to Eurofins Houston. GHD will
								provide instructions. *Reach out to
								Wells Richard with any questions*
								Follow ISM sample prep guidelines.

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
[signature] GHD	4/24/23	1700	
RELINQUISHED BY (2): Ashley Owens	DATE: 5/10/23	TIME: 16:30	RECEIVED BY:
RELINQUISHED BY (3):	DATE: 5/12/23	TIME: 10:05	RECEIVED BY: [signature]

RECEIVED BY LABORATORY:	DATE:	TIME:
Ashley Owens	4/26/23	10:17

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 1.5°

TRACKING #:

Temp: RAW: 0.8 COR: 0.8

Page ____ of ____

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Member of the SGS Group (SGS SA)

Q1240

Laboratory Services / GHD Simplified Scope of Work (SSOW)

SSOW Ref. Code
12599404-2022-001

Please contact Project Chemist to implement document

Project summary

Project name	San Jacinto Southern Impoundment		
Project no.	12599404		
Task	DEL.001	Task Org Code	5032
Project location	Channelview, Harris County, Texas		
Client name	IP & MIMC		
QAPP title			

Database summary

Database maintained ☑ Yes ☐ No

Database facility code	11187072-GD-Channel	FOR INTERNAL USE ONLY - CODING
Is there more than one laboratory for this event?	No	SSOW 1 of 1

Events summary

Phase/study title	Southern Impoundment RA	Rush TAT	3 Day		
Event description	Soil Sampling	Final report and EDD TAT	3 Day	Sample batching	Sample Event
Start date	April 21, 2023	Bottle shipping address	1601 South Main Street Highlands, TX 77562	Date bottle required	April 20, 2023
Sampling duration		Phone number	432-413-5156	Attention	Jason Davis
Sampling frequency	one-time	Sample pick-up required	☐ Yes ☑ No		

Contacts

	Name	Address	Phone	Cell	Email
Client Project Manager					
Consulting Firm	GHD Services Inc.				
Project Manager	Wells Richard	5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	225-296-6508	225-454-4363	wells.richard@ghd.com
Project Coordinator	Alice Harpole				Alice.Harpole@ghd.com
Project Coordinator	Sarah Belanger				Sarah.Belanger@ghd.com
Field Leader	Jason Davis	11451 Katy Fwy #400, Houston, TX 77079		432-413-5156	jason.davis@ghd.com
Laboratory (Vendor)					
Lab Project Manager	Tamara Burkamper	5500 Business Drive, Wilmington, NC 28405	910-350-1903,x343	910-794-2527	tamara.burkamper@sgs.com
Lab Project Manager	Beth Stopen	2235 US-130, Dayton, NJ 08810	732-329-0200 ext 14555		Beth.Stopen@sgs.com
Chemistry/data mgt. firm	GHD Services Inc.				
Chemist	Shaw, Kathy	45 Farmington Valley Drive, Plainville, CT 06062	860-747-8298		Kathleen.Shaw@ghd.com
Database Analyst	Cameron, Mary	26850 Haggerty Road, Farmington Hills, Michigan, 48331	248-893-3400		mary.cameron@ghd.com

Lab deliverables

EDD format	☐ GHD EQuIS EZEDD	☐ GHD EQuIS 4-file	☐ Other (Please Specify)	
Report level requested	☑ Level II	☐ Level IV	☐ Other (Please Specify)	

Additional reporting requirements

Form 1s include	☑ MDLs	☑ PQLs	☑ J Values
TICs	☐ Yes	☑ No	
Soil reporting	☑ Dry	☐ Wet	

Lab deliverables distribution

Rush TAT data (email deliverable only)	Wells Richard, Kathy Shaw, Mary Cameron
Final EDD and result summary (PDF)	edds@ghd.com
Final lab report	Wells Richard, Kathy Shaw, Mary Cameron, Marisa Oriaku

GHD data review level

☐ Stage 1	☑ Stage 2a	☐ Stage 2b	
☐ Stage 4	☑ Stage 4/2b	☐ Other (Please Specify)	

Data management deliverables

☐ EQuIS Database ☐ Cross Tab Table ☐ Flat File ☑ Databox ☐ Other (please specify) EDAT

Data management deliverables distribution

Distribution list: Wells Richard, Kathy Shaw, Mary Cameron

Database exports - reporting down to MDL ☐ Yes ☐ No

Comments

Please see below for shipping information to the Eurofins Denver Lab
Eurofins Denver
4955 Yarrow St, Arvada, CO 80002

Attn:Anthony Grimaldi

* additional Final Lab Report copy (in PDF format) is available in the GHD Project File folder. Please contact Project Chemist.

SSOW email distribution list	wells.richard@ghd.com; jason.davis@ghd.com; Alice.Harpole@ghd.com; tamara.burkamper@sgs.com; Sarah.Belanger@ghd.com; Kathleen.Shaw@ghd.com; mary.cameron@ghd.com; Jennifer.Devonshire@ghd.com						
Prepared by	Kathy Shaw	Date		Revision number	2	Revision Date	May 10, 2023

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 410-126458-1

Login Number: 126458
List Number: 1
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.6, clean up per DC_365.10 and analyzed per DC_364.14.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as is” basis.

There was no client designated MS/MSD. OPR/OPRD analyzed for precision.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level in 12599404-042723-W-MTK-WTS-1 - Total and Method Blank.
12599404-042723-W-MTK-WTS-1- Dissolved (B7864_20065_DF_002): required additional cleanup due to elevated detection limit for 2378-TCDD

Prep chemists include Ricky Ballard, Jason Hall, and Kelsey Ellis.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements.

No re-extractions or dilutions were required.

12599404-042723-W-MTK-WTS-1 Dissolved (B7864_20065_DF_002-CU): the reported detection limit of 2,3,7,8-TCDD is above SOP criteria and Method criteria.

OPR1/OPR2_20065 meet accuracy and precision criteria.

Samples were extracted at ~1 L volume and final extract volume of 20uL.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-042723-W-MTK-WTS-1-Total — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	28-Apr-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.04 L	Lab Sample ID	B7864_20065_DF_001-RJ	Date Extracted:	28-Apr-2023
Date Collected:	27-Apr-2023	pH:	6	QC Batch No:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:26:51

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2			ES 2378-TCDD	91.3	
12378-PeCDD	ND	1.99			ES 12378-PeCDD	96.2	
123478-HxCDD	ND	1.87			ES 123478-HxCDD	96.2	
123678-HxCDD	ND	1.78			ES 123678-HxCDD	95.2	
123789-HxCDD	ND	1.84			ES 123789-HxCDD	94.8	
1234678-HpCDD	ND	1.96			ES 1234678-HpCDD	92.2	
OCDD	ND	6.09			ES OCDD	68.6	
2378-TCDF	ND	2.08			ES 2378-TCDF	91.6	
12378-PeCDF	ND	2.35			ES 12378-PeCDF	93.9	
23478-PeCDF	ND	2.4			ES 23478-PeCDF	94.7	
123478-HxCDF	ND	1.58			ES 123478-HxCDF	93.6	
123678-HxCDF	ND	1.48			ES 123678-HxCDF	93.5	
234678-HxCDF	ND	1.57			ES 234678-HxCDF	95.5	
123789-HxCDF	ND	1.84			ES 123789-HxCDF	95.5	
1234678-HpCDF	ND	1.43			ES 1234678-HpCDF	97	
1234789-HpCDF	ND	1.79			ES 1234789-HpCDF	89.2	
OCDF	ND	3.35			ES OCDF	71.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	99.8	
Total TCDD	ND	2	ND		CS 12347-PeCDD	110	
Total PeCDD	ND	1.99	ND		CS 12346-PeCDF	104	
Total HxCDD	ND	1.83	ND		CS 123469-HxCDF	104	
Total HpCDD	ND	1.96	ND		CS 1234689-HpCDF	108	
Total TCDF	194		194				
Total PeCDF	ND	2.37	ND				
Total HxCDF	ND	1.61	ND				
Total HpCDF	ND	1.59	ND				
Total PCDD/Fs	**194**		**194**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.12	3.12	3.12				
TEQ: ND=DL	6.24	6.24	6.24				

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Sample ID: 12599404-042723-W-MTK-WTS-1-Total — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	28-Apr-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.04 L	Lab Sample ID:	B7864_20065_DF_001-RJ	Date Extracted:	28-Apr-2023
Date Collected:	27-Apr-2023	pH:	6	QC Batch No.:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:26:51

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2)		12479/12468D	(1.99)		124679/124689D	(1.83)		1234679D	(1.96)	
1379D	(2)		12469D	(1.99)		123468D	(1.83)		1234678D	(1.96)	
1369D	(2)		12368D	(1.99)		123679/123689D	(1.83)				
1469D	(2)		12478D	(1.99)		123469D	(1.83)				
1247D...[4]	(2)		12379D	(1.99)		123478D	(1.87)				
1378D	(2)		12369D...[3]	(1.99)		123678D	(1.78)				
1268D	(2)		12346/12347D	(1.99)		123467D	(1.83)				
1478D	(2)		12378D	(1.99)		123789D	(1.84)		**Conc.**	0	
1279D	(2)		12367D	(1.99)					**EMPC**	0	
1234/1269D	(2)		12389D	(1.99)							
1236D	(2)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2)										
1239D	(2)								OCDD	(6.09)	
2378D	(2)										
1278D	(2)										
1267D	(2)										
1289D	(2)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.12	3.12
TEQ: ND=DL	6.24	6.24

	Conc.	EMPC
Total PCDD/Fs	194	194

Checkcode: 708-829-NWJ

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: 12599404-042723-W-MTK-WTS-1-Total — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	28-Apr-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.04 L	Lab Sample ID:	B7864_20065_DF_001-RJ	Date Extracted:	28-Apr-2023
Date Collected:	27-Apr-2023	pH:	6	QC Batch No.:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:26:51

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.08)		13468/12468F	(1.37)		123468F	(1.61)		1234678F	(1.43)	
1468F	(2.08)		13678F...[3]	(2.37)		124678/134678F	(1.61)		1234679F	(1.59)	
2468F	(2.08)		12368F...[3]	(2.37)		134679F	(1.61)		1234689F	(1.59)	
1346/1246F	(2.08)		14678F	(2.37)		124679F	(1.61)		1234789F	(1.79)	
1347F...[3]	194		13479F	(2.37)		124689F	(1.61)				
1348F	(2.08)		13469/12479F	(2.37)		123467F	(1.61)				
1248F...[3]	(2.08)		12346F	(2.37)		123478F	(1.58)				
1268F	(2.08)		23468/12469F	(2.37)		123678F	(1.48)				
1467F	(2.08)		12347F	(2.37)		123479F	(1.61)				
1478F	(2.08)		12348F	(2.37)		123469F	(1.61)				
1369/1237F	(2.08)		12378F	(2.35)		123679F	(1.61)				
2467F	(2.08)		12678/12367F	(2.37)		234678F	(1.57)		**Conc.**	0	
2368F	(2.08)		12379F	(2.37)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.08)		12679F	(2.37)		123689F	(1.61)				
1278F	(2.08)		23467/12369F	(2.37)		123789F	(1.84)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.08)		23478F	(2.4)		123789/123489F	0				
1267F	(2.08)		23478/12489F	0		123489F	(1.61)		OCDF	(3.35)	
2346/1249F	(2.08)		12489F	(2.37)							
2347/1279F	(2.08)		12349F	(2.37)							
2348F	(2.08)		12389F	(2.37)							
2378F	(2.08)										
2367/3467F	(2.08)										
1269F	(2.08)										
1239F	(2.08)										
1289F	(2.08)										
Conc.	194		**Conc.**	0		**Conc.**	0				
EMPC	194		**EMPC**	0		**EMPC**	0				

Checkcode: 708-829-NWJ

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: 12599404-042723-W-MTK-WTS-1-Tot; TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7864_20065_DF_001-RJ
Cliend Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.04 L	QC Batch No.:	20065
Date Collected:	27-Apr-2023	Split:	-	Date Extracted:	28-Apr-2023
Date Received:	28-Apr-2023	Dilution:	-	Date Analyzed:	03-May-2023 14:26
Lab Project No:	B7864	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2)		2	(2)	(2)	(2)
12378-PeCDD	(1.99)		1.99	(0.997)	(1.99)	(1.99)
123478-HxCDD	(1.87)		1.87	(0.187)	(0.187)	(0.187)
123678-HxCDD	(1.78)		1.78	(0.178)	(0.178)	(0.178)
123789-HxCDD	(1.84)		1.84	(0.184)	(0.184)	(0.184)
1234678-HpCDD	(1.96)		1.96	(0.0196)	(0.0196)	(0.0196)
OCDD	(6.09)		6.09	(0.00609)	(0.000609)	(0.00183)
2378-TCDF	(2.08)		2.08	(0.208)	(0.208)	(0.208)
12378-PeCDF	(2.35)		2.35	(0.117)	(0.117)	(0.0704)
23478-PeCDF	(2.4)		2.4	(1.2)	(1.2)	(0.72)
123478-HxCDF	(1.58)		1.58	(0.158)	(0.158)	(0.158)
123678-HxCDF	(1.48)		1.48	(0.148)	(0.148)	(0.148)
234678-HxCDF	(1.57)		1.57	(0.157)	(0.157)	(0.157)
123789-HxCDF	(1.84)		1.84	(0.184)	(0.184)	(0.184)
1234678-HpCDF	(1.43)		1.43	(0.0143)	(0.0143)	(0.0143)
1234789-HpCDF	(1.79)		1.79	(0.0179)	(0.0179)	(0.0179)
OCDF	(3.35)		3.35	(0.00335)	(0.000335)	(0.00101)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	2.89	3.38	3.12
EMPC = 0, ND = DL	5.78	6.77	6.24
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	2.89	3.38	3.12
EMPC = EMPC, ND = DL	5.78	6.77	6.24
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 708-829-NWJ

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Sample ID: 12599404-042723-W-MTK-WTS-1-Dissolved — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	28-Apr-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.03 L	Lab Sample ID	B7864_20065_DF_002-CU	Date Extracted:	28-Apr-2023
Date Collected:	27-Apr-2023	pH:	7	QC Batch No:	20065	Date Analyzed:	04-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:24:07

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10.5			ES 2378-TCDD	89.7	
12378-PeCDD	ND	9.36			ES 12378-PeCDD	91.5	
123478-HxCDD	ND	2.77			ES 123478-HxCDD	88.8	
123678-HxCDD	ND	2.98			ES 123678-HxCDD	90.3	
123789-HxCDD	ND	3.16			ES 123789-HxCDD	86.2	
1234678-HpCDD	ND	1.82			ES 1234678-HpCDD	85.7	
OCDD	ND	6.26			ES OCDD	62.1	
2378-TCDF	ND	2.39			ES 2378-TCDF	91.7	
12378-PeCDF	ND	2.22			ES 12378-PeCDF	91.3	
23478-PeCDF	ND	2.22			ES 23478-PeCDF	91.4	
123478-HxCDF	ND	1.29			ES 123478-HxCDF	88.6	
123678-HxCDF	ND	1.41			ES 123678-HxCDF	87.3	
234678-HxCDF	ND	1.43			ES 234678-HxCDF	87.2	
123789-HxCDF	ND	1.9			ES 123789-HxCDF	87.2	
1234678-HpCDF	EMPC		1.88	J	ES 1234678-HpCDF	90.6	
1234789-HpCDF	ND	1.43			ES 1234789-HpCDF	82	
OCDF	ND	2.82			ES OCDF	63.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	92.7	
Total TCDD	ND	10.5	ND		CS 12347-PeCDD	98	
Total PeCDD	ND	9.36	ND		CS 12346-PeCDF	103	
Total HxCDD	ND	2.97	ND		CS 123469-HxCDF	93.9	
Total HpCDD	ND	1.82	ND		CS 1234689-HpCDF	97.9	
Total TCDF	ND		14.1				
Total PeCDF	ND	2.22	ND				
Total HxCDF	ND	1.5	ND				
Total HpCDF	ND		1.88				
Total PCDD/Fs	**ND**		**16**				
WHO-2005 TEQs							
TEQ: ND=0	0		0.0188				
TEQ: ND=DL/2	11.2	11.2	11.2				
TEQ: ND=DL	22.4	22.4	22.4				

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Sample ID: 12599404-042723-W-MTK-WTS-1-Dissolved Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	28-Apr-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.03 L	Lab Sample ID:	B7864_20065_DF_002-CU	Date Extracted:	28-Apr-2023
Date Collected:	27-Apr-2023	pH:	7	QC Batch No.:	20065	Date Analyzed:	04-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:24:07

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(10.5)		12479/12468D	(9.36)		124679/124689D	(2.97)		1234679D	(1.82)	
1379D	(10.5)		12469D	(9.36)		123468D	(2.97)		1234678D	(1.82)	
1369D	(10.5)		12368D	(9.36)		123679/123689D	(2.97)				
1469D	(10.5)		12478D	(9.36)		123469D	(2.97)				
1247D...[4]	(10.5)		12379D	(9.36)		123478D	(2.77)				
1378D	(10.5)		12369D...[3]	(9.36)		123678D	(2.98)				
1268D	(10.5)		12346/12347D	(9.36)		123467D	(2.97)				
1478D	(10.5)		12378D	(9.36)		123789D	(3.16)		**Conc.**	0	
1279D	(10.5)		12367D	(9.36)					**EMPC**	0	
1234/1269D	(10.5)		12389D	(9.36)							
1236D	(10.5)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(10.5)										
1239D	(10.5)								OCDD	(6.26)	
2378D	(10.5)										
1278D	(10.5)										
1267D	(10.5)										
1289D	(10.5)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0.0188
TEQ: ND=DL/2	11.2	11.2
TEQ: ND=DL	22.4	22.4

	Conc.	EMPC
Total PCDD/Fs	0	16

Checkcode: 010-612-VWP

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: 12599404-042723-W-MTK-WTS-1-Dissolved Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	28-Apr-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.03 L	Lab Sample ID:	B7864_20065_DF_002-CU	Date Extracted:	28-Apr-2023
Date Collected:	27-Apr-2023	pH:	7	QC Batch No.:	20065	Date Analyzed:	04-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:24:07

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.39)		13468/12468F	(2.13)		123468F	(1.5)		1234678F	[1.88]	J
1468F	(2.39)		13678F...[3]	(2.22)		124678/134678F	(1.5)		1234679F	(1.33)	
2468F	(2.39)		12368F...[3]	(2.22)		134679F	(1.5)		1234689F	(1.33)	
1346/1246F	(2.39)		14678F	(2.22)		124679F	(1.5)		1234789F	(1.43)	
1347F...[3]	[14.1]		13479F	(2.22)		124689F	(1.5)				
1348F	(2.39)		13469/12479F	(2.22)		123467F	(1.5)				
1248F...[3]	(2.39)		12346F	(2.22)		123478F	(1.29)				
1268F	(2.39)		23468/12469F	(2.22)		123678F	(1.41)				
1467F	(2.39)		12347F	(2.22)		123479F	(1.5)				
1478F	(2.39)		12348F	(2.22)		123469F	(1.5)				
1369/1237F	(2.39)		12378F	(2.22)		123679F	(1.5)				
2467F	(2.39)		12678/12367F	(2.22)		234678F	(1.43)		**Conc.**	0	
2368F	(2.39)		12379F	(2.22)		234678/123689F	0		**EMPC**	1.88	
1238F...[5]	(2.39)		12679F	(2.22)		123689F	(1.5)				
1278F	(2.39)		23467/12369F	(2.22)		123789F	(1.9)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(2.39)		23478F	(2.22)		123789/123489F	0			(pg/L)	
1267F	(2.39)		23478/12489F	0		123489F	(1.5)		OCDF	(2.82)	
2346/1249F	(2.39)		12489F	(2.22)							
2347/1279F	(2.39)		12349F	(2.22)							
2348F	(2.39)		12389F	(2.22)							
2378F	(2.39)										
2367/3467F	(2.39)										
1269F	(2.39)										
1239F	(2.39)										
1289F	(2.39)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	14.1		**EMPC**	0		**EMPC**	0				

Checkcode: 010-612-VWP

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: 12599404-042723-W-MTK-WTS-1-Dis TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	B7864_20065_DF_002-CU
Cliend Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.03 L	QC Batch No.:	20065
Date Collected:	27-Apr-2023	Split:	-	Date Extracted:	28-Apr-2023
Date Received:	28-Apr-2023	Dilution:	-	Date Analyzed:	04-May-2023 16:24
Lab Project No:	B7864	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(10.5)		10.5	(10.5)	(10.5)	(10.5)
12378-PeCDD	(9.36)		9.36	(4.68)	(9.36)	(9.36)
123478-HxCDD	(2.77)		2.77	(0.277)	(0.277)	(0.277)
123678-HxCDD	(2.98)		2.98	(0.298)	(0.298)	(0.298)
123789-HxCDD	(3.16)		3.16	(0.316)	(0.316)	(0.316)
1234678-HpCDD	(1.82)		1.82	(0.0182)	(0.0182)	(0.0182)
OCDD	(6.26)		6.26	(0.00626)	(0.000626)	(0.00188)
2378-TCDF	(2.39)		2.39	(0.239)	(0.239)	(0.239)
12378-PeCDF	(2.22)		2.22	(0.111)	(0.111)	(0.0666)
23478-PeCDF	(2.22)		2.22	(1.11)	(1.11)	(0.667)
123478-HxCDF	(1.29)		1.29	(0.129)	(0.129)	(0.129)
123678-HxCDF	(1.41)		1.41	(0.141)	(0.141)	(0.141)
234678-HxCDF	(1.43)		1.43	(0.143)	(0.143)	(0.143)
123789-HxCDF	(1.9)		1.9	(0.19)	(0.19)	(0.19)
1234678-HpCDF	[1.88]	J	1.25	[0.0188]	[0.0188]	[0.0188]
1234789-HpCDF	(1.43)		1.43	(0.0143)	(0.0143)	(0.0143)
OCDF	(2.82)		2.82	(0.00282)	(0.000282)	(0.000847)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	9.09	11.4	11.2
EMPC = 0, ND = DL	18.2	22.8	22.4
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0.0188	0.0188	0.0188
EMPC = EMPC, ND = DL / 2	9.11	11.4	11.2
EMPC = EMPC, ND = DL	18.2	22.9	22.4
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 010-612-VWP

SGS North America - DF v0.99

Sample ID: Method Blank B7864_20065 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20065_DF_TLX-CU	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20065	Date Analyzed:	04-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:49:47

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.16			ES 2378-TCDD	83.8	
12378-PeCDD	ND	2.66			ES 12378-PeCDD	78.9	
123478-HxCDD	ND	2.4			ES 123478-HxCDD	85.3	
123678-HxCDD	ND	2.41			ES 123678-HxCDD	84.8	
123789-HxCDD	ND	2.31			ES 123789-HxCDD	84.1	
1234678-HpCDD	ND	1.85			ES 1234678-HpCDD	82.8	
OCDD	ND	4.51			ES OCDD	68.4	
2378-TCDF	ND	2.71			ES 2378-TCDF	79	
12378-PeCDF	ND	2.23			ES 12378-PeCDF	78	
23478-PeCDF	ND	2.17			ES 23478-PeCDF	77.5	
123478-HxCDF	ND	1.7			ES 123478-HxCDF	86	
123678-HxCDF	ND	1.8			ES 123678-HxCDF	83.2	
234678-HxCDF	ND	1.48			ES 234678-HxCDF	89	
123789-HxCDF	ND	1.99			ES 123789-HxCDF	85	
1234678-HpCDF	ND	1.25			ES 1234678-HpCDF	91.4	
1234789-HpCDF	ND	1.58			ES 1234789-HpCDF	83.5	
OCDF	ND	4.19			ES OCDF	72.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.4	
Total TCDD	ND	2.16	ND		CS 12347-PeCDD	91.4	
Total PeCDD	ND	2.66	ND		CS 12346-PeCDF	93.6	
Total HxCDD	ND	2.37	ND		CS 123469-HxCDF	101	
Total HpCDD	ND	1.85	ND		CS 1234689-HpCDF	103	
Total TCDF	ND	2.71	ND				
Total PeCDF	ND	2.2	ND				
Total HxCDF	ND	1.74	ND				
Total HpCDF	ND	1.4	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.64	3.64	3.64				
TEQ: ND=DL	7.28	7.28	7.28				

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Sample ID: Method Blank B7864_20065 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_20065_DF_TLX-CU	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	20065	Date Analyzed:	04-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:49:47

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.16)		12479/12468D	(2.66)		124679/124689D	(2.37)		1234679D	(1.85)	
1379D	(2.16)		12469D	(2.66)		123468D	(2.37)		1234678D	(1.85)	
1369D	(2.16)		12368D	(2.66)		123679/123689D	(2.37)				
1469D	(2.16)		12478D	(2.66)		123469D	(2.37)				
1247D...[4]	(2.16)		12379D	(2.66)		123478D	(2.4)				
1378D	(2.16)		12369D...[3]	(2.66)		123678D	(2.41)				
1268D	(2.16)		12346/12347D	(2.66)		123467D	(2.37)				
1478D	(2.16)		12378D	(2.66)		123789D	(2.31)		**Conc.**	0	
1279D	(2.16)		12367D	(2.66)					**EMPC**	0	
1234/1269D	(2.16)		12389D	(2.66)							
1236D	(2.16)								**Octa-Dioxin**	**Conc (pg/L)**	**Qualifiers**
1237/1238D	(2.16)										
1239D	(2.16)								OCDD	(4.51)	
2378D	(2.16)										
1278D	(2.16)										
1267D	(2.16)										
1289D	(2.16)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.64	3.64
TEQ: ND=DL	7.28	7.28

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 240-822-DCS

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: Method Blank B7864_20065 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_20065_DF_TLX-CU	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	20065	Date Analyzed:	04-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:49:47

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.71)		13468/12468F	(2.11)		123468F	(1.74)		1234678F	(1.25)	
1468F	(2.71)		13678F...[3]	(2.2)		124678/134678F	(1.74)		1234679F	(1.4)	
2468F	(2.71)		12368F...[3]	(2.2)		134679F	(1.74)		1234689F	(1.4)	
1346/1246F	(2.71)		14678F	(2.2)		124679F	(1.74)		1234789F	(1.58)	
1347F...[3]	(2.71)		13479F	(2.2)		124689F	(1.74)				
1348F	(2.71)		13469/12479F	(2.2)		123467F	(1.74)				
1248F...[3]	(2.71)		12346F	(2.2)		123478F	(1.7)				
1268F	(2.71)		23468/12469F	(2.2)		123678F	(1.8)				
1467F	(2.71)		12347F	(2.2)		123479F	(1.74)				
1478F	(2.71)		12348F	(2.2)		123469F	(1.74)				
1369/1237F	(2.71)		12378F	(2.23)		123679F	(1.74)				
2467F	(2.71)		12678/12367F	(2.2)		234678F	(1.48)		**Conc.**	0	
2368F	(2.71)		12379F	(2.2)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.71)		12679F	(2.2)		123689F	(1.74)				
1278F	(2.71)		23467/12369F	(2.2)		123789F	(1.99)		**Octa-Furan**	**Conc (pg/L)**	**Qualifiers**
1349F	(2.71)		23478F	(2.17)		123789/123489F	0				
1267F	(2.71)		23478/12489F	0		123489F	(1.74)		OCDF	(4.19)	
2346/1249F	(2.71)		12489F	(2.2)							
2347/1279F	(2.71)		12349F	(2.2)							
2348F	(2.71)		12389F	(2.2)							
2378F	(2.71)										
2367/3467F	(2.71)										
1269F	(2.71)										
1239F	(2.71)										
1289F	(2.71)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 240-822-DCS

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: Method Blank B7864_20065 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_20065_DF_TLX-CU
Cliend Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	QC Batch No.:	20065
Date Collected:	n/a	Split:	-	Date Extracted:	28-Apr-2023
Date Received:	n/a	Dilution:	-	Date Analyzed:	04-May-2023 14:49
Lab Project No:	B7864	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2.16)		2.16	(2.16)	(2.16)	(2.16)
12378-PeCDD	(2.66)		2.66	(1.33)	(2.66)	(2.66)
123478-HxCDD	(2.4)		2.4	(0.24)	(0.24)	(0.24)
123678-HxCDD	(2.41)		2.41	(0.241)	(0.241)	(0.241)
123789-HxCDD	(2.31)		2.31	(0.231)	(0.231)	(0.231)
1234678-HpCDD	(1.85)		1.85	(0.0185)	(0.0185)	(0.0185)
OCDD	(4.51)		4.51	(0.00451)	(0.000451)	(0.00135)
2378-TCDF	(2.71)		2.71	(0.271)	(0.271)	(0.271)
12378-PeCDF	(2.23)		2.23	(0.111)	(0.111)	(0.0669)
23478-PeCDF	(2.17)		2.17	(1.08)	(1.08)	(0.651)
123478-HxCDF	(1.7)		1.7	(0.17)	(0.17)	(0.17)
123678-HxCDF	(1.8)		1.8	(0.18)	(0.18)	(0.18)
234678-HxCDF	(1.48)		1.48	(0.148)	(0.148)	(0.148)
123789-HxCDF	(1.99)		1.99	(0.199)	(0.199)	(0.199)
1234678-HpCDF	(1.25)		1.25	(0.0125)	(0.0125)	(0.0125)
1234789-HpCDF	(1.58)		1.58	(0.0158)	(0.0158)	(0.0158)
OCDF	(4.19)		4.19	(0.00419)	(0.000419)	(0.00126)

TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	3.21	3.88	3.64
EMPC = 0, ND = DL	6.43	7.75	7.28
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	3.21	3.88	3.64
EMPC = EMPC, ND = DL	6.43	7.75	7.28
EMPC = EMPC, < J-level = 0	0	0	0

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Checkcode: 240-822-DCS

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Sample ID: Method Blank B7864_20065 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20065_DF_TLX-RJ	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:51:42

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.85			ES 2378-TCDD	81.9	
12378-PeCDD	ND	2.44			ES 12378-PeCDD	89.5	
123478-HxCDD	ND	2.45			ES 123478-HxCDD	84.2	
123678-HxCDD	ND	2.47			ES 123678-HxCDD	83.8	
123789-HxCDD	ND	2.51			ES 123789-HxCDD	86.3	
1234678-HpCDD	ND	1.8			ES 1234678-HpCDD	93.3	
OCDD	ND	7.48			ES OCDD	67.6	
2378-TCDF	ND	2.04			ES 2378-TCDF	83.5	
12378-PeCDF	ND	2.3			ES 12378-PeCDF	89.7	
23478-PeCDF	ND	2.36			ES 23478-PeCDF	84.7	
123478-HxCDF	ND	1.39			ES 123478-HxCDF	83.4	
123678-HxCDF	ND	1.35			ES 123678-HxCDF	81.8	
234678-HxCDF	ND	1.39			ES 234678-HxCDF	84.3	
123789-HxCDF	ND	1.51			ES 123789-HxCDF	88.9	
1234678-HpCDF	ND	1.25			ES 1234678-HpCDF	91.1	
1234789-HpCDF	ND	1.3			ES 1234789-HpCDF	88.1	
OCDF	ND	2.73			ES OCDF	71.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93	
Total TCDD	ND	2.85	ND		CS 12347-PeCDD	100	
Total PeCDD	ND	2.44	ND		CS 12346-PeCDF	98.5	
Total HxCDD	ND	2.47	ND		CS 123469-HxCDF	91.6	
Total HpCDD	ND	1.8	ND		CS 1234689-HpCDF	100	
Total TCDF	ND	2.04	ND				
Total PeCDF	ND	2.33	ND				
Total HxCDF	ND	1.41	ND				
Total HpCDF	ND	1.28	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	3.81	3.81	3.81				
TEQ: ND=DL	7.63	7.63	7.63				

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Sample ID: Method Blank B7864_20065 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_20065_DF_TLX-RJ	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:51:42

Tetra-Dioxins	Conc. (pg/L)	Qualifiers	Penta-Dioxins	Conc. (pg/L)	Qualifiers	Hexa-Dioxins	Conc (pg/L)	Qualifiers	Hepta-Dioxins	Conc (pg/L)	Qualifiers
1368D	(2.85)		12479/12468D	(2.44)		124679/124689D	(2.47)		1234679D	(1.8)	
1379D	(2.85)		12469D	(2.44)		123468D	(2.47)		1234678D	(1.8)	
1369D	(2.85)		12368D	(2.44)		123679/123689D	(2.47)				
1469D	(2.85)		12478D	(2.44)		123469D	(2.47)				
1247D...[4]	(2.85)		12379D	(2.44)		123478D	(2.45)				
1378D	(2.85)		12369D...[3]	(2.44)		123678D	(2.47)				
1268D	(2.85)		12346/12347D	(2.44)		123467D	(2.47)				
1478D	(2.85)		12378D	(2.44)		123789D	(2.51)		Conc.	0	
1279D	(2.85)		12367D	(2.44)					EMPC	0	
1234/1269D	(2.85)		12389D	(2.44)							
1236D	(2.85)								Octa-Dioxin	Conc (pg/L)	Qualifiers
1237/1238D	(2.85)										
1239D	(2.85)								OCDD	(7.48)	
2378D	(2.85)										
1278D	(2.85)										
1267D	(2.85)										
1289D	(2.85)										
Conc.	0		Conc.	0		Conc.	0				
EMPC	0		EMPC	0		EMPC	0				

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WHO-2005 TEQs	Conc.	EMPC
TEQ: ND=0	0	0
TEQ: ND=DL/2	3.81	3.81
TEQ: ND=DL	7.63	7.63

	Conc.	EMPC
Total PCDD/Fs	0	0

Checkcode: 753-086-VQX

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: Method Blank B7864_20065 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID:	MB1_20065_DF_TLX-RJ	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No.:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:51:42

Tetra-Furans	Conc. (pg/L)	Qualifiers	Penta-Furans	Conc. (pg/L)	Qualifiers	Hexa-Furans	Conc (pg/L)	Qualifiers	Hepta-Furans	Conc (pg/L)	Qualifiers
1368F	(2.04)		13468/12468F	(2.16)		123468F	(1.41)		1234678F	(1.25)	
1468F	(2.04)		13678F...[3]	(2.33)		124678/134678F	(1.41)		1234679F	(1.28)	
2468F	(2.04)		12368F...[3]	(2.33)		134679F	(1.41)		1234689F	(1.28)	
1346/1246F	(2.04)		14678F	(2.33)		124679F	(1.41)		1234789F	(1.3)	
1347F...[3]	(2.04)		13479F	(2.33)		124689F	(1.41)				
1348F	(2.04)		13469/12479F	(2.33)		123467F	(1.41)				
1248F...[3]	(2.04)		12346F	(2.33)		123478F	(1.39)				
1268F	(2.04)		23468/12469F	(2.33)		123678F	(1.35)				
1467F	(2.04)		12347F	(2.33)		123479F	(1.41)				
1478F	(2.04)		12348F	(2.33)		123469F	(1.41)				
1369/1237F	(2.04)		12378F	(2.3)		123679F	(1.41)				
2467F	(2.04)		12678/12367F	(2.33)		234678F	(1.39)		**Conc.**	0	
2368F	(2.04)		12379F	(2.33)		234678/123689F	0		**EMPC**	0	
1238F...[5]	(2.04)		12679F	(2.33)		123689F	(1.41)				
1278F	(2.04)		23467/12369F	(2.33)		123789F	(1.51)		**Octa-Furan**	**Conc**	**Qualifiers**
1349F	(2.04)		23478F	(2.36)		123789/123489F	0			(pg/L)	
1267F	(2.04)		23478/12489F	0		123489F	(1.41)		OCDF	(2.73)	
2346/1249F	(2.04)		12489F	(2.33)							
2347/1279F	(2.04)		12349F	(2.33)							
2348F	(2.04)		12389F	(2.33)							
2378F	(2.04)										
2367/3467F	(2.04)										
1269F	(2.04)										
1239F	(2.04)										
1289F	(2.04)										
Conc.	0		**Conc.**	0		**Conc.**	0				
EMPC	0		**EMPC**	0		**EMPC**	0				

Checkcode: 753-086-VQX

Report Created: 05-May-2023 09:37 Analyst: pw

Sample ID: Method Blank B7864_20065 — TEQ Summary — Method 1613B

Client Project Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Sample ID:	MB1_20065_DF_TLX-RJ
Cliend Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	QC Batch No.:	20065
Date Collected:	n/a	Split:	-	Date Extracted:	28-Apr-2023
Date Received:	n/a	Dilution:	-	Date Analyzed:	03-May-2023 12:51
Lab Project No:	B7864	Units	pg/L		

Analyte	Result	Qualifiers	DLs	I-TEQ	WHO-1998	WHO-2005
2378-TCDD	(2.85)		2.85	(2.85)	(2.85)	(2.85)
12378-PeCDD	(2.44)		2.44	(1.22)	(2.44)	(2.44)
123478-HxCDD	(2.45)		2.45	(0.245)	(0.245)	(0.245)
123678-HxCDD	(2.47)		2.47	(0.247)	(0.247)	(0.247)
123789-HxCDD	(2.51)		2.51	(0.251)	(0.251)	(0.251)
1234678-HpCDD	(1.8)		1.8	(0.018)	(0.018)	(0.018)
OCDD	(7.48)		7.48	(0.00748)	(0.000748)	(0.00224)
2378-TCDF	(2.04)		2.04	(0.204)	(0.204)	(0.204)
12378-PeCDF	(2.3)		2.3	(0.115)	(0.115)	(0.069)
23478-PeCDF	(2.36)		2.36	(1.18)	(1.18)	(0.707)
123478-HxCDF	(1.39)		1.39	(0.139)	(0.139)	(0.139)
123678-HxCDF	(1.35)		1.35	(0.135)	(0.135)	(0.135)
234678-HxCDF	(1.39)		1.39	(0.139)	(0.139)	(0.139)
123789-HxCDF	(1.51)		1.51	(0.151)	(0.151)	(0.151)
1234678-HpCDF	(1.25)		1.25	(0.0125)	(0.0125)	(0.0125)
1234789-HpCDF	(1.3)		1.3	(0.013)	(0.013)	(0.013)
OCDF	(2.73)		2.73	(0.00273)	(0.000273)	(0.000818)

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TEQ Summaries			
EMPC = 0, ND = 0	0	0	0
EMPC = 0, ND = DL / 2	3.47	4.07	3.81
EMPC = 0, ND = DL	6.93	8.14	7.63
EMPC = 0, < J-level = 0	0	0	0
EMPC = EMPC, ND = 0	0	0	0
EMPC = EMPC, ND = DL / 2	3.47	4.07	3.81
EMPC = EMPC, ND = DL	6.93	8.14	7.63
EMPC = EMPC, < J-level = 0	0	0	0

Checkcode: 753-086-VQX

SGS North America - DF v0.99

Sample ID: 0_20065_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20065_DF-RJ	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	9:42:10

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.6				ES 2378-TCDD	88.8	
12378-PeCDD	49.9				ES 12378-PeCDD	88.3	
123478-HxCDD	55.4				ES 123478-HxCDD	94.2	
123678-HxCDD	56.2				ES 123678-HxCDD	91.9	
123789-HxCDD	54.6				ES 123789-HxCDD	93.4	
1234678-HpCDD	56.2				ES 1234678-HpCDD	87.1	
OCDD	115				ES OCDD	62.9	
2378-TCDF	11.6				ES 2378-TCDF	90.2	
12378-PeCDF	56.5				ES 12378-PeCDF	91.2	
23478-PeCDF	62.8				ES 23478-PeCDF	87.9	
123478-HxCDF	59.2				ES 123478-HxCDF	88.3	
123678-HxCDF	60.3				ES 123678-HxCDF	87.5	
234678-HxCDF	61				ES 234678-HxCDF	91.6	
123789-HxCDF	55.9				ES 123789-HxCDF	93.4	
1234678-HpCDF	60.6				ES 1234678-HpCDF	88.4	
1234789-HpCDF	56.9				ES 1234789-HpCDF	84.6	
OCDF	116				ES OCDF	66	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.7	
Total TCDD	53.6		53.6		CS 12347-PeCDD	98.9	
Total PeCDD	73.3		73.3		CS 12346-PeCDF	99.9	
Total HxCDD	180		180		CS 123469-HxCDF	96.3	
Total HpCDD	68.3		68.3		CS 1234689-HpCDF	98.6	
Total TCDF	64		64				
Total PeCDF	144		144				
Total HxCDF	250		250				
Total HpCDF	118		118				
Total PCDD/Fs	**1,180**		**1,180**				
WHO-2005 TEQs							
TEQ: ND=0	125		125				
TEQ: ND=DL/2	125	0.316	125				
TEQ: ND=DL	125	0.632	125				

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Sample ID: 0_20065_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7864	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20065_DF-RJ	Date Extracted:	28-Apr-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20065	Date Analyzed:	03-May-2023
		Split:	-	Dilution:	-	Time Analyzed:	10:28:55

Analyte	Conc. (pg/uL)	DL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.1				ES 2378-TCDD	83.3	
12378-PeCDD	51.2				ES 12378-PeCDD	83.7	
123478-HxCDD	58.1				ES 123478-HxCDD	82.6	
123678-HxCDD	57.9				ES 123678-HxCDD	85.2	
123789-HxCDD	54.3				ES 123789-HxCDD	89	
1234678-HpCDD	60				ES 1234678-HpCDD	82.8	
OCDD	119				ES OCDD	68.8	
2378-TCDF	11.4				ES 2378-TCDF	85.2	
12378-PeCDF	56.8				ES 12378-PeCDF	85.5	
23478-PeCDF	61.4				ES 23478-PeCDF	87	
123478-HxCDF	58.9				ES 123478-HxCDF	84.1	
123678-HxCDF	59.3				ES 123678-HxCDF	82.4	
234678-HxCDF	62.2				ES 234678-HxCDF	84.3	
123789-HxCDF	56.9				ES 123789-HxCDF	87.3	
1234678-HpCDF	58.9				ES 1234678-HpCDF	89.1	
1234789-HpCDF	56.9				ES 1234789-HpCDF	85.4	
OCDF	124				ES OCDF	68.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95.6	
Total TCDD	54.6		54.6		CS 12347-PeCDD	103	
Total PeCDD	75.1		75.1		CS 12346-PeCDF	99.8	
Total HxCDD	185		185		CS 123469-HxCDF	96.6	
Total HpCDD	72.2		72.2		CS 1234689-HpCDF	104	
Total TCDF	66		66				
Total PeCDF	132		142				
Total HxCDF	251		251				
Total HpCDF	116		116				
Total PCDD/Fs	**1,190**		**1,200**				
WHO-2005 TEQs							
TEQ: ND=0	127		127				
TEQ: ND=DL/2	127	0.28	127				
TEQ: ND=DL	127	0.56	127				

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Sample DUP			Method 1613B
Sample ID: 0_20065_OPR001			
Analyte	**OPR1_20065_DF-RJ pg/uL**	**OPR2_20065_DF-RJ (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	11.6	12.1	3.9%
1,2,3,7,8-PeCDD	49.9	51.2	2.6%
1,2,3,4,7,8-HxCDD	55.4	58.1	4.7%
1,2,3,6,7,8-HxCDD	56.2	57.9	2.9%
1,2,3,7,8,9-HxCDD	54.6	54.3	0.5%
1,2,3,4,6,7,8-HpCDD	56.2	60	6.5%
OCDD	115	119	3.6%
2,3,7,8-TCDF	11.6	11.4	1.2%
1,2,3,7,8-PeCDF	56.5	56.8	0.5%
2,3,4,7,8-PeCDF	62.8	61.4	2.2%
1,2,3,4,7,8-HxCDF	59.2	58.9	0.5%
1,2,3,6,7,8-HxCDF	60.3	59.3	1.6%
2,3,4,6,7,8-HxCDF	61	62.2	2.1%
1,2,3,7,8,9-HxCDF	55.9	56.9	1.7%
1,2,3,4,6,7,8-HpCDF	60.6	58.9	2.9%
1,2,3,4,7,8,9-HpCDF	56.9	56.9	0.1%
OCDF	116	124	6.6%
Totals			
Total TCDD	53.6	54.6	1.7%
Total PeCDD	73.3	75.1	2.4%
Total HxCDD	180	185	2.3%
Total HpCDD	68.3	72.2	5.6%
Total TCDF	64	66	3.2%
Total PeCDF	144	142	1.1%
Total HxCDF	250	251	0.5%
Total HpCDF	118	116	1.5%

Sample Receipt Notification

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Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*28-Apr-23 at 10:11*
AP Project name:	*B7864*
Requested TAT:	*3 business days*
Projected due date:	*3-May-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto Waste Pits South Impoundment*
Project PO#:	
QAAP/Contract #:	
Requested Analysis:	*M1613B*
Phone#:	*225-454-4363*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-042723-W-MTK-WTS-1-Total	B7864_001	Water	1	1-Liter Amber	27-Apr-23	15:05	0.6	1	3975 9043 6277
12599404-042723-W-MTK-WTS-1-Dissolved	B7864_002	Water	1	1-Liter Amber	27-Apr-23	15:05	0.6	1	3975 9043 6277

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 28 Apr 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto Waste Pits South Improvement
P.O. #:
QUOTE #:
SITE REF:
TURN AROUND TIME: 3 Day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
SSOW: 12599404-2022-004

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS:
PHONE: EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Total Brown/Furan	Dissolved D/F	MS MSD	MS/ DUP	REMARKS
12599404-042723-W-MTK-WTS-1	4/27/23	1505	2	W	X	X			
Temp Blank	—	—	1	W					

PRESERVATIVE: 1 | 1

ANALYSIS & METHOD

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	4/27/23	1700	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: Ashley Owens DATE: 4/28/23 TIME: 10:11
COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT
CARRIER: FedEx TEMP: °C 0.6°
TRACKING #: 3975 9043 6277

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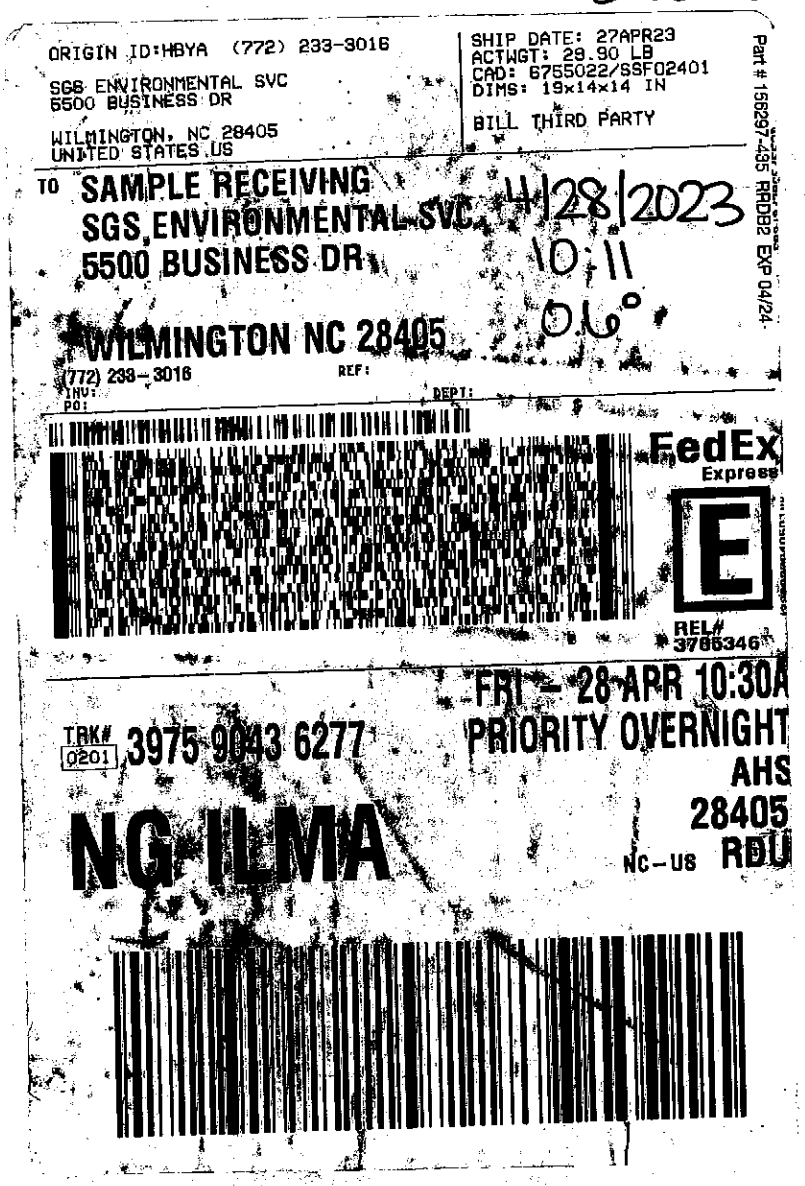
B78864



ORIGIN ID:HBYA (772) 233-3016
SGS ENVIRONMENTAL SVC
6500 BUSINESS DR
WILMINGTON, NC 28405
UNITED STATES US

SHIP DATE: 27APR23
ACTWGT: 28.90 LB
CAD: 6755022/SSFO2401
DIMS: 19x14x14 IN
BILL THIRD PARTY

Part # 156297-435 RRDB2 EXP 04/24

TO SAMPLE RECEIVING
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR
WILMINGTON NC 28405
(772) 233-3016
INV:
PO:
REF:
DEPT:

4/28/2023
10:11
0.6°

FedEx Express
REL# 3785346

FRI - 28 APR 10:30A
PRIORITY OVERNIGHT
AHS
28405
NC-US RDU

TRK# 0201 3975 9043 6277

NG ILMA

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-060123-W-MTK-WTS-2-Total — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7990	Date Received:	02-Jun-2023
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.05 L	Lab Sample ID	B7990_20162_DF_001	Date Extracted:	05-Jun-2023
Date Collected:	01-Jun-2023	pH:	6	QC Batch No:	20162	Date Analyzed:	07-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	16:01:51

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	89.2	
12378-PeCDD	ND	50			ES 12378-PeCDD	89.8	
123478-HxCDD	ND	50			ES 123478-HxCDD	97.7	
123678-HxCDD	ND	50			ES 123678-HxCDD	97.1	
123789-HxCDD	ND	50			ES 123789-HxCDD	94.1	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	87.6	
OCDD	ND	100			ES OCDD	66.8	
2378-TCDF	ND	10			ES 2378-TCDF	88.1	
12378-PeCDF	ND	50			ES 12378-PeCDF	89.5	
23478-PeCDF	ND	50			ES 23478-PeCDF	91.9	
123478-HxCDF	ND	50			ES 123478-HxCDF	97.6	
123678-HxCDF	ND	50			ES 123678-HxCDF	102	
234678-HxCDF	ND	50			ES 234678-HxCDF	101	
123789-HxCDF	ND	50			ES 123789-HxCDF	89.8	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	96.6	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	79.6	
OCDF	ND	100			ES OCDF	65.6	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
					CS 12347-PeCDD	105	
					CS 12346-PeCDF	98.1	
					CS 123469-HxCDF	115	
					CS 1234689-HpCDF	105	

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Sample ID: Method Blank B7990_20162 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7990	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20162_DF_TLX	Date Extracted:	05-Jun-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20162	Date Analyzed:	07-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:14:16

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	92	
12378-PeCDD	ND	50			ES 12378-PeCDD	91.3	
123478-HxCDD	ND	50			ES 123478-HxCDD	92.3	
123678-HxCDD	ND	50			ES 123678-HxCDD	93.3	
123789-HxCDD	ND	50			ES 123789-HxCDD	89.2	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	88.6	
OCDD	ND	100			ES OCDD	62.8	
2378-TCDF	ND	10			ES 2378-TCDF	92.7	
12378-PeCDF	ND	50			ES 12378-PeCDF	91.1	
23478-PeCDF	ND	50			ES 23478-PeCDF	89.2	
123478-HxCDF	ND	50			ES 123478-HxCDF	95.7	
123678-HxCDF	ND	50			ES 123678-HxCDF	97.3	
234678-HxCDF	ND	50			ES 234678-HxCDF	98	
123789-HxCDF	ND	50			ES 123789-HxCDF	91.9	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	90.6	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	78.6	
OCDF	ND	100			ES OCDF	67.2	

Standard	CS Recoveries	
CS 37Cl-2378-TCDD	102	
CS 12347-PeCDD	104	
CS 12346-PeCDF	99.4	
CS 123469-HxCDF	109	
CS 1234689-HpCDF	99	

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Sample ID: 0_20162_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7990	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20162_DF	Date Extracted:	05-Jun-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20162	Date Analyzed:	07-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:51:32

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.1	0.5			ES 2378-TCDD	92	
12378-PeCDD	50.1	2.5			ES 12378-PeCDD	93.1	
123478-HxCDD	55.5	2.5			ES 123478-HxCDD	98.6	
123678-HxCDD	58.4	2.5			ES 123678-HxCDD	96.9	
123789-HxCDD	54.2	2.5			ES 123789-HxCDD	95	
1234678-HpCDD	54.2	2.5			ES 1234678-HpCDD	86.7	
OCDD	115	5			ES OCDD	61.9	
2378-TCDF	12	0.5			ES 2378-TCDF	93.6	
12378-PeCDF	51.4	2.5			ES 12378-PeCDF	92.3	
23478-PeCDF	55.4	2.5			ES 23478-PeCDF	92.4	
123478-HxCDF	53.1	2.5			ES 123478-HxCDF	96.6	
123678-HxCDF	52.6	2.5			ES 123678-HxCDF	100	
234678-HxCDF	54.4	2.5			ES 234678-HxCDF	101	
123789-HxCDF	49.9	2.5			ES 123789-HxCDF	92.1	
1234678-HpCDF	53.4	2.5			ES 1234678-HpCDF	92.8	
1234789-HpCDF	53.5	2.5			ES 1234789-HpCDF	80.2	
OCDF	106	5			ES OCDF	66.2	

					Standard	CS Recoveries	
					CS 37Cl-2378-TCDD	103	
					CS 12347-PeCDD	103	
					CS 12346-PeCDF	103	
					CS 123469-HxCDF	110	
					CS 1234689-HpCDF	100	

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Sample ID: 0_20162_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B7990	Date Received:	n/a
Project ID:	San Jacinto Waste Pits South Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20162_DF	Date Extracted:	05-Jun-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20162	Date Analyzed:	07-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:39:07

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.4	0.5			ES 2378-TCDD	93.4	
12378-PeCDD	52.9	2.5			ES 12378-PeCDD	90.9	
123478-HxCDD	56.7	2.5			ES 123478-HxCDD	98.1	
123678-HxCDD	58.9	2.5			ES 123678-HxCDD	97	
123789-HxCDD	55.8	2.5			ES 123789-HxCDD	95.1	
1234678-HpCDD	54.4	2.5			ES 1234678-HpCDD	88.9	
OCDD	120	5			ES OCDD	67.5	
2378-TCDF	11.9	0.5			ES 2378-TCDF	89.7	
12378-PeCDF	52.3	2.5			ES 12378-PeCDF	87.9	
23478-PeCDF	58	2.5			ES 23478-PeCDF	87.3	
123478-HxCDF	50.7	2.5			ES 123478-HxCDF	104	
123678-HxCDF	51.2	2.5			ES 123678-HxCDF	104	
234678-HxCDF	54.7	2.5			ES 234678-HxCDF	101	
123789-HxCDF	50.5	2.5			ES 123789-HxCDF	93.5	
1234678-HpCDF	54.4	2.5			ES 1234678-HpCDF	95.9	
1234789-HpCDF	54.2	2.5			ES 1234789-HpCDF	80.2	
OCDF	101	5			ES OCDF	71.9	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
					CS 12347-PeCDD	99	
					CS 12346-PeCDF	93.8	
					CS 123469-HxCDF	108	
					CS 1234689-HpCDF	99.5	

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Sample DUP			Method 1613B
Sample ID: 0_20162_OPR001			
Analyte	**OPR1_20162_DF pg/uL**	**OPR2_20162_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	12.1	12.4	1.8%
1,2,3,7,8-PeCDD	50.1	52.9	5.4%
1,2,3,4,7,8-HxCDD	55.5	56.7	2.2%
1,2,3,6,7,8-HxCDD	58.4	58.9	0.9%
1,2,3,7,8,9-HxCDD	54.2	55.8	2.8%
1,2,3,4,6,7,8-HpCDD	54.2	54.4	0.4%
OCDD	115	120	3.9%
2,3,7,8-TCDF	12	11.9	1.3%
1,2,3,7,8-PeCDF	51.4	52.3	1.6%
2,3,4,7,8-PeCDF	55.4	58	4.5%
1,2,3,4,7,8-HxCDF	53.1	50.7	4.5%
1,2,3,6,7,8-HxCDF	52.6	51.2	2.8%
2,3,4,6,7,8-HxCDF	54.4	54.7	0.6%
1,2,3,7,8,9-HxCDF	49.9	50.5	1.1%
1,2,3,4,6,7,8-HpCDF	53.4	54.4	1.9%
1,2,3,4,7,8,9-HpCDF	53.5	54.2	1.4%
OCDF	106	101	4.5%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*02-Jun-23 at 10:17*
AP Project name:	*B7990*
Requested TAT:	*3 business days*
Projected due date:	*7-Jun-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto Waste Pits South Impoundment*
Project PO#:	*340-009759*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-060123-W-MTK-WTS-2-Total	B7990_001	Water	2	1-Liter Amber	01-Jun-23	12:10	0.8	1	3990 8378 6954
12599404-060123-W-MTK-WTS-2-Dissolved	B7990_002	Water - HOLD	1	1-Liter Amber	01-Jun-23	12:10	0.8	1	3990 8378 6954

Preservation Type: **Sample Seals:** No

Notes/Comments:
Samples received intact.

Double Volume for Total D/F.
Hold Dissolved Sample for GHD Instructions, lab needs to filter if analyzed.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 2 Jun 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SGS CHAIN OF CUSTODY

B7990

PROJECT INFO

PROJECT: San Jacinto Waste Pits South Impoundment

P.O. #:

QUOTE #:

SITE REF: 12599404

TURN AROUND TIME: 3 Day TAT

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

GHD SSOW: 12599404-2022-004

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	Total D/F	Dissolved D/F	QC MS	QC MSD	QC DUP	QTY	REMARKS
12599404-060123-W-MTK-WTS-2	6/1/23	1210	C	W	3	X	X					- See SSOW
Temp Blank	—	—	—	W	1							- Method 1613 B
												- Double volume for Total D/F
												- Hold Dissolved sample for GHD instructions, lab needs to filter if analyzed

6/01/23

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	6/1/23	1700	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: ashley Owens DATE: 6/2/2023 TIME: 10:17

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 0.8°

TRACKING #:

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.sgs.com/ehs

Member of the SGS Group (SGS SA)

B7990

ORIGIN ID:HBYA (772) 233-3016
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR
WILMINGTON, NC 28405
UNITED STATES US

SHIP DATE: 01JUN23
ACTWGT: 32.25 LB
CAD: 6755022/SSF02421
DIMS: 20x11x12 IN
BILL THIRD PARTY

Part # 15629 EXP 05/24

TO ATTN SAMPLE RECEIVING
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR

WILMINGTON NC 28405
(772) 233-3016 REF:
INV:
PO: DEPT:

6/2/2023
10:17
0.8° (T.B.)

FedEx Express

E

J232023040501uv

FRI - 02 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0201 3990 8378 6954

NG ILMA

28405
NC-US RDU

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-061423-W-MTK-WTS-3-Total — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8037	Date Received:	15-Jun-2023
Project ID:	San Jacinto Waste Pits, S. Impoundment	Weight/Volume:	1.02 L	Lab Sample ID	B8037_20199_DF_001	Date Extracted:	15-Jun-2023
Date Collected:	14-Jun-2023	pH:	6	QC Batch No:	20199	Date Analyzed:	17-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	8:22:13

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	88.1	
12378-PeCDD	ND	50			ES 12378-PeCDD	92.8	
123478-HxCDD	ND	50			ES 123478-HxCDD	92.3	
123678-HxCDD	ND	50			ES 123678-HxCDD	88.7	
123789-HxCDD	ND	50			ES 123789-HxCDD	94.1	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	93.1	
OCDD	ND	100			ES OCDD	77.5	
2378-TCDF	ND	10			ES 2378-TCDF	86.2	
12378-PeCDF	ND	50			ES 12378-PeCDF	90	
23478-PeCDF	ND	50			ES 23478-PeCDF	89.6	
123478-HxCDF	ND	50			ES 123478-HxCDF	94.4	
123678-HxCDF	ND	50			ES 123678-HxCDF	96.9	
234678-HxCDF	ND	50			ES 234678-HxCDF	98.8	
123789-HxCDF	ND	50			ES 123789-HxCDF	100	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	95.7	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	89.9	
OCDF	ND	100			ES OCDF	83.8	

Standard	CS Recoveries	
CS 37Cl-2378-TCDD	95	
CS 12347-PeCDD	103	
CS 12346-PeCDF	99.7	
CS 123469-HxCDF	106	
CS 1234689-HpCDF	105	

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Sample ID: Method Blank B8037_20199 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8037	Date Received:	n/a
Project ID:	San Jacinto Waste Pits, S. Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20199_DF_TLX	Date Extracted:	15-Jun-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20199	Date Analyzed:	17-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	7:34:38

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	86.9	
12378-PeCDD	ND	50			ES 12378-PeCDD	91.5	
123478-HxCDD	ND	50			ES 123478-HxCDD	89.4	
123678-HxCDD	ND	50			ES 123678-HxCDD	90.4	
123789-HxCDD	ND	50			ES 123789-HxCDD	91.4	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	102	
OCDD	ND	100			ES OCDD	86.8	
2378-TCDF	ND	10			ES 2378-TCDF	85.4	
12378-PeCDF	ND	50			ES 12378-PeCDF	86.8	
23478-PeCDF	ND	50			ES 23478-PeCDF	90.3	
123478-HxCDF	ND	50			ES 123478-HxCDF	98.9	
123678-HxCDF	ND	50			ES 123678-HxCDF	98.7	
234678-HxCDF	ND	50			ES 234678-HxCDF	101	
123789-HxCDF	ND	50			ES 123789-HxCDF	99.4	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	97.7	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	95	
OCDF	ND	100			ES OCDF	90.9	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	101	
					CS 12347-PeCDD	108	
					CS 12346-PeCDF	102	
					CS 123469-HxCDF	112	
					CS 1234689-HpCDF	116	

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Sample ID: 0_20199_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8037	Date Received:	n/a
Project ID:	San Jacinto Waste Pits, S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20199_DF	Date Extracted:	15-Jun-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20199	Date Analyzed:	17-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:12:45

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.4	0.5			ES 2378-TCDD	86.6	
12378-PeCDD	48.7	2.5			ES 12378-PeCDD	91.9	
123478-HxCDD	55	2.5			ES 123478-HxCDD	87.2	
123678-HxCDD	56.1	2.5			ES 123678-HxCDD	84.6	
123789-HxCDD	53.1	2.5			ES 123789-HxCDD	87.9	
1234678-HpCDD	49.9	2.5			ES 1234678-HpCDD	96	
OCDD	110	5			ES OCDD	82.9	
2378-TCDF	10.1	0.5			ES 2378-TCDF	84.6	
12378-PeCDF	46.4	2.5			ES 12378-PeCDF	89.3	
23478-PeCDF	50.5	2.5			ES 23478-PeCDF	90.6	
123478-HxCDF	49.4	2.5			ES 123478-HxCDF	93.6	
123678-HxCDF	48.3	2.5			ES 123678-HxCDF	94.3	
234678-HxCDF	49.7	2.5			ES 234678-HxCDF	97.4	
123789-HxCDF	45.9	2.5			ES 123789-HxCDF	95.5	
1234678-HpCDF	50.4	2.5			ES 1234678-HpCDF	94.8	
1234789-HpCDF	50.6	2.5			ES 1234789-HpCDF	88.3	
OCDF	98.1	5			ES OCDF	88	

Standard	CS Recoveries	
CS 37Cl-2378-TCDD	101	
CS 12347-PeCDD	107	
CS 12346-PeCDF	96.9	
CS 123469-HxCDF	107	
CS 1234689-HpCDF	109	

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Sample ID: 0_20199_OPR002

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8037	Date Received:	n/a
Project ID:	San Jacinto Waste Pits, S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20199_DF	Date Extracted:	15-Jun-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20199	Date Analyzed:	17-Jun-2023
		Split:	-	Dilution:	-	Time Analyzed:	5:59:29

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.1	0.5			ES 2378-TCDD	84.3	
12378-PeCDD	53.9	2.5			ES 12378-PeCDD	88.4	
123478-HxCDD	58.9	2.5			ES 123478-HxCDD	87.8	
123678-HxCDD	58.2	2.5			ES 123678-HxCDD	88.5	
123789-HxCDD	57.9	2.5			ES 123789-HxCDD	88.5	
1234678-HpCDD	55.5	2.5			ES 1234678-HpCDD	95.6	
OCDD	118	5			ES OCDD	85	
2378-TCDF	11.8	0.5			ES 2378-TCDF	83.6	
12378-PeCDF	52.8	2.5			ES 12378-PeCDF	83.8	
23478-PeCDF	56.3	2.5			ES 23478-PeCDF	86.3	
123478-HxCDF	52.9	2.5			ES 123478-HxCDF	95.7	
123678-HxCDF	53.8	2.5			ES 123678-HxCDF	94.6	
234678-HxCDF	54.7	2.5			ES 234678-HxCDF	97.2	
123789-HxCDF	50.8	2.5			ES 123789-HxCDF	96.8	
1234678-HpCDF	54.5	2.5			ES 1234678-HpCDF	97.4	
1234789-HpCDF	53.3	2.5			ES 1234789-HpCDF	94.6	
OCDF	108	5			ES OCDF	90.6	

					Standard	CS Recoveries	
					CS 37Cl-2378-TCDD	93.6	
					CS 12347-PeCDD	107	
					CS 12346-PeCDF	97.3	
					CS 123469-HxCDF	106	
					CS 1234689-HpCDF	109	

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Sample DUP			Method 1613B
Sample ID: 0_20199_OPR001			
Analyte	**OPR1_20199_DF pg/uL**	**OPR2_20199_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	11.4	12.1	6.3%
1,2,3,7,8-PeCDD	48.7	53.9	10.3%
1,2,3,4,7,8-HxCDD	55	58.9	6.8%
1,2,3,6,7,8-HxCDD	56.1	58.2	3.7%
1,2,3,7,8,9-HxCDD	53.1	57.9	8.7%
1,2,3,4,6,7,8-HpCDD	49.9	55.5	10.8%
OCDD	110	118	6.8%
2,3,7,8-TCDF	10.1	11.8	15.3%
1,2,3,7,8-PeCDF	46.4	52.8	12.9%
2,3,4,7,8-PeCDF	50.5	56.3	10.7%
1,2,3,4,7,8-HxCDF	49.4	52.9	6.8%
1,2,3,6,7,8-HxCDF	48.3	53.8	10.8%
2,3,4,6,7,8-HxCDF	49.7	54.7	9.6%
1,2,3,7,8,9-HxCDF	45.9	50.8	10.1%
1,2,3,4,6,7,8-HpCDF	50.4	54.5	7.7%
1,2,3,4,7,8,9-HpCDF	50.6	53.3	5.3%
OCDF	98.1	108	9.2%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*15-Jun-23 at 09:29*
AP Project name:	*B8037*
Requested TAT:	*3 business days*
Projected due date:	*20-Jun-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto Waste Pits, S. Impoundment*
Project PO#:	*340-009759*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225.454.4363*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-061423-W-MTK-WTS-3-Total	B8037_001	Water	2	1-Liter Amber	14-Jun-23	14:00	0.8	1	3996 4696 2141
12599404-061423-W-MTK-WTS-3-Dissolved	B8037_002	Water - HOLD	1	1-Liter Amber	14-Jun-23	14:00	0.8	1	3996 4696 2141

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 15 Jun 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SGS CHAIN OF CUSTODY

B8037

PROJECT INFO

PROJECT: San Jacinto Waste Pits, S. Impoundment

P.O. #: 12599404

QUOTE #:

SITE REF: 12599404 (GHD project #)

TURN AROUND TIME: 3-day TAT

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

GHD SOW: 12599404-2022-004

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS: 2237 S. Acadian Thruway, Suite 701, Baton Rouge, LA, 70808

PHONE: 225-454-4363 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	PRESERVATIVE	ANALYSIS & METHOD: Total D/F	ANALYSIS & METHOD: Dissolved D/F	QC MS	QC MSD	QC DUP	QTY	REMARKS
12599404-061423-W-MTK-WTS-3	6/14/23	1400	C	W	3		X	X					
Temp Blend	—	—	—	W	1								-2x volume for total DF
													-Hold Dissolved D/F
													-1613B for D/F analysis

6.14.23

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	6/14/23	1600	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:

Ashley Dixon 6/15/23 9:29

COOLER SEAL ☑ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 0.8°

TRACKING #:

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 3500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.sgs.com/ehs

Member of the SGS Group (SGS SA)

B8037

ORIGIN ID:HBYA (772) 233-3016

SGS ENVIRONMENTAL SVC
5500 BUSINESS DR

WILMINGTON, NC 28405
UNITED STATES US

SHIP DATE: 14JUN23
ACTWGT: 30.75 LB
CAD: 6755022/SSFO2421
DIMS: 18x12x15 IN

BILL THIRD PARTY

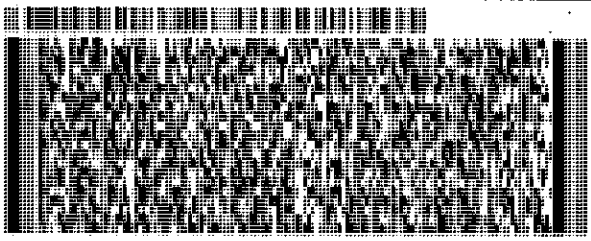
Part # 15[illegible]EXP 05/24

TO **ATTN: SAMPLE MANAGEMENT**
SGS ENVIRONMENTLAL SVC
5500 BUSINESS DR

WILMINGTON NC 28405

(000) 000-0000 REF:
INV:
PO: DEPT:

6/15/2023
9:29
0.8° (T.B.)



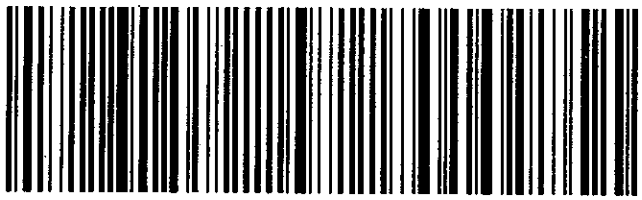
FedEx Express

TRK# 0201 **3996 4696 2141**

THU - 15 JUN 10:30A
PRIORITY OVERNIGHT

AHS
28405
NC-US **RDU**

NG ILMA



FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-072023-W-MTK-WTS-4-Total — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8187	Date Received:	21-Jul-2023
Project ID:	San Jacinto WP S. Impoundment	Weight/Volume:	0.94 L	Lab Sample ID	B8187_20302_DF_001	Date Extracted:	24-Jul-2023
Date Collected:	20-Jul-2023	pH:	6	QC Batch No:	20302	Date Analyzed:	26-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	0:34:51

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	83	
12378-PeCDD	ND	50			ES 12378-PeCDD	79.7	
123478-HxCDD	ND	50			ES 123478-HxCDD	84.1	
123678-HxCDD	ND	50			ES 123678-HxCDD	91.5	
123789-HxCDD	ND	50			ES 123789-HxCDD	89	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	77.1	
OCDD	ND	100			ES OCDD	61.8	
2378-TCDF	ND	10			ES 2378-TCDF	82	
12378-PeCDF	ND	50			ES 12378-PeCDF	80.7	
23478-PeCDF	ND	50			ES 23478-PeCDF	81.3	
123478-HxCDF	ND	50			ES 123478-HxCDF	90.3	
123678-HxCDF	ND	50			ES 123678-HxCDF	105	
234678-HxCDF	ND	50			ES 234678-HxCDF	97	
123789-HxCDF	ND	50			ES 123789-HxCDF	86.8	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	81.9	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	75.9	
OCDF	ND	100			ES OCDF	68.5	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.8	
					CS 12347-PeCDD	95.1	
					CS 12346-PeCDF	95.6	
					CS 123469-HxCDF	112	
					CS 1234689-HpCDF	95.6	

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QC Results

Method Blank
On-going Precision & Recovery (OPR/Blank Spike)

Sample ID: Method Blank B8187_20302 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8187	Date Received:	n/a
Project ID:	San Jacinto WP S. Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20302_DF_TLX	Date Extracted:	24-Jul-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20302	Date Analyzed:	25-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	23:02:25

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	86	
12378-PeCDD	ND	50			ES 12378-PeCDD	84	
123478-HxCDD	ND	50			ES 123478-HxCDD	87.5	
123678-HxCDD	ND	50			ES 123678-HxCDD	93.5	
123789-HxCDD	ND	50			ES 123789-HxCDD	94.6	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	79.9	
OCDD	ND	100			ES OCDD	64.4	
2378-TCDF	ND	10			ES 2378-TCDF	85.4	
12378-PeCDF	ND	50			ES 12378-PeCDF	85.2	
23478-PeCDF	ND	50			ES 23478-PeCDF	86.4	
123478-HxCDF	ND	50			ES 123478-HxCDF	91.8	
123678-HxCDF	ND	50			ES 123678-HxCDF	107	
234678-HxCDF	ND	50			ES 234678-HxCDF	101	
123789-HxCDF	ND	50			ES 123789-HxCDF	89.9	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	85.2	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	78.7	
OCDF	ND	100			ES OCDF	67.8	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	96.7	
					CS 12347-PeCDD	99.7	
					CS 12346-PeCDF	98.8	
					CS 123469-HxCDF	115	
					CS 1234689-HpCDF	95.9	

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Sample ID: 0_20302_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8187	Date Received:	n/a
Project ID:	San Jacinto WP S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20302_DF	Date Extracted:	24-Jul-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20302	Date Analyzed:	25-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	19:57:58

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.4	0.5			ES 2378-TCDD	86.7	
12378-PeCDD	52.3	2.5			ES 12378-PeCDD	82.2	
123478-HxCDD	54.6	2.5			ES 123478-HxCDD	85	
123678-HxCDD	57.8	2.5			ES 123678-HxCDD	93.5	
123789-HxCDD	51.9	2.5			ES 123789-HxCDD	92.7	
1234678-HpCDD	56.5	2.5			ES 1234678-HpCDD	77	
OCDD	111	5			ES OCDD	67.3	
2378-TCDF	11.2	0.5			ES 2378-TCDF	88.5	
12378-PeCDF	49.2	2.5			ES 12378-PeCDF	83.4	
23478-PeCDF	54	2.5			ES 23478-PeCDF	83.5	
123478-HxCDF	52.1	2.5			ES 123478-HxCDF	89.5	
123678-HxCDF	49.6	2.5			ES 123678-HxCDF	103	
234678-HxCDF	51.6	2.5			ES 234678-HxCDF	96.1	
123789-HxCDF	49.5	2.5			ES 123789-HxCDF	87.2	
1234678-HpCDF	52.1	2.5			ES 1234678-HpCDF	82.7	
1234789-HpCDF	50.1	2.5			ES 1234789-HpCDF	79.1	
OCDF	105	5			ES OCDF	72.6	

Standard	CS Recoveries	
CS 37Cl-2378-TCDD	92.6	
CS 12347-PeCDD	94.1	
CS 12346-PeCDF	93.6	
CS 123469-HxCDF	109	
CS 1234689-HpCDF	93.1	

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Sample ID: 0_20302_OPR002

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8187	Date Received:	n/a
Project ID:	San Jacinto WP S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20302_DF	Date Extracted:	24-Jul-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20302	Date Analyzed:	25-Jul-2023
		Split:	-	Dilution:	-	Time Analyzed:	20:43:48

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	13	0.5			ES 2378-TCDD	80.6	
12378-PeCDD	53.4	2.5			ES 12378-PeCDD	77.1	
123478-HxCDD	58.6	2.5			ES 123478-HxCDD	76.3	
123678-HxCDD	56.1	2.5			ES 123678-HxCDD	89.5	
123789-HxCDD	53.5	2.5			ES 123789-HxCDD	85.7	
1234678-HpCDD	57.6	2.5			ES 1234678-HpCDD	71.3	
OCDD	117	5			ES OCDD	57.1	
2378-TCDF	11.5	0.5			ES 2378-TCDF	80.1	
12378-PeCDF	50.1	2.5			ES 12378-PeCDF	78.5	
23478-PeCDF	54.9	2.5			ES 23478-PeCDF	79.8	
123478-HxCDF	52.4	2.5			ES 123478-HxCDF	84.6	
123678-HxCDF	52.8	2.5			ES 123678-HxCDF	95.2	
234678-HxCDF	54.2	2.5			ES 234678-HxCDF	89.7	
123789-HxCDF	49.8	2.5			ES 123789-HxCDF	79.6	
1234678-HpCDF	51.7	2.5			ES 1234678-HpCDF	77.9	
1234789-HpCDF	51.5	2.5			ES 1234789-HpCDF	73.4	
OCDF	104	5			ES OCDF	63.5	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	94.8	
					CS 12347-PeCDD	97.1	
					CS 12346-PeCDF	97.4	
					CS 123469-HxCDF	109	
					CS 1234689-HpCDF	90.7	

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Sample DUP			Method 1613B
Sample ID: 0_20302_OPR001			
Analyte	**OPR1_20302_DF pg/uL**	**OPR2_20302_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	12.4	13	4.3%
1,2,3,7,8-PeCDD	52.3	53.4	2.1%
1,2,3,4,7,8-HxCDD	54.6	58.6	7.1%
1,2,3,6,7,8-HxCDD	57.8	56.1	2.9%
1,2,3,7,8,9-HxCDD	51.9	53.5	3.0%
1,2,3,4,6,7,8-HpCDD	56.5	57.6	2.0%
OCDD	111	117	4.7%
2,3,7,8-TCDF	11.2	11.5	2.5%
1,2,3,7,8-PeCDF	49.2	50.1	2.0%
2,3,4,7,8-PeCDF	54	54.9	1.7%
1,2,3,4,7,8-HxCDF	52.1	52.4	0.6%
1,2,3,6,7,8-HxCDF	49.6	52.8	6.3%
2,3,4,6,7,8-HxCDF	51.6	54.2	4.9%
1,2,3,7,8,9-HxCDF	49.5	49.8	0.6%
1,2,3,4,6,7,8-HpCDF	52.1	51.7	0.8%
1,2,3,4,7,8,9-HpCDF	50.1	51.5	2.7%
OCDF	105	104	1.2%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*21-Jul-23 at 09:46*
AP Project name:	*B8187*
Requested TAT:	*3 business days*
Projected due date:	*26-Jul-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto WP S. Impoundment*
Project PO#:	*340-009759*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225.454.4363*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-072023-W-MTK-WTS-4-Total	B8187_001	Water	2	1-Liter Amber	20-Jul-23	14:00	5.3	1	7814 2515 3975
12599404-072023-W-MTK-WTS-4-Dissolved	B8187_002	Water - HOLD	1	1-Liter Amber	20-Jul-23	14:00	5.3	1	7814 2515 3975

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 21 Jul 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

Amber Jars → Wilmington

SGS CHAIN OF CUSTODY

B8187

PROJECT INFO

PROJECT: San Jacinto WP S. Impoundment

P.O. #:

QUOTE #:

SITE REF: GHD #12599404

TURN AROUND TIME: 5-day TAT

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SSOW: 12599404-2022-004

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS: 2237 S. Acadian Thruway, Suite 701, Baton Rouge LA

PHONE: 225-454-4363 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	PRESERVATIVE: Total D/F	PRESERVATIVE: Dissolved D/F	QC MS	QC MSD	QC DUP	QTY	REMARKS
12599404-07 23-W-MTK-WTS 4	7/20/23	1400	C	W	3	X	X					
Temp Blank	—	—	—	W	1							-2x volume for Total D/F
												-Hold Dissolved D/F
												-1613B for D/F analysis

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE:	TIME:
[signature]	7/20/23	1430		Ashley Owens	7/21/23	9:46
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:	COOLER SEAL: ☐ INTACT ☐ BROKEN ☑ ABSENT		
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☑ ABSENT		
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER: FedEx	TEMP: °C 5.3°	
				TRACKING #:		

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Member of the SGS Group (SGS SA)

B8187

ORIGIN ID:HBYA (432) 413-5156
CHRISTOPHER JOHN MATTAIR

1601 S MAIN ST

HIGHLANDS, TX 77562
UNITED STATES US

SHIP DATE: 20JUL23
ACTWGT: 29.90 LB
CAD: 6755022/SSF02422
DIMS: 16x10x14 IN

BILL CREDIT CARD

5.30
(T.B.)

TO ATTN: SAMPLE MANAGEMENT
SGS NORTH AMERICA
5500 BUSINESS DR

WILMINGTON NC 28405

7/21
9:46

(999) 999-9999 REF:
INV:
PO: DEPT:

FedEx
Express

E

REL#
3785346

FRI - 21 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7814 2515 3975

AHS
28405
NC-US RDU

NG ILMA

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-110723-W-MTK-WTS-5 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	09-Nov-2023
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	0.98 L	Lab Sample ID	B8747_20626_DF_001	Date Extracted:	09-Nov-2023
Date Collected:	07-Nov-2023	pH:	7	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:08:35

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	95.6	
12378-PeCDD	ND	50			ES 12378-PeCDD	94.4	
123478-HxCDD	ND	50			ES 123478-HxCDD	90.1	
123678-HxCDD	ND	50			ES 123678-HxCDD	96.5	
123789-HxCDD	ND	50			ES 123789-HxCDD	93.2	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	93.8	
OCDD	ND	100			ES OCDD	84.5	
2378-TCDF	ND	10			ES 2378-TCDF	92.9	
12378-PeCDF	ND	50			ES 12378-PeCDF	89.9	
23478-PeCDF	ND	50			ES 23478-PeCDF	85.8	
123478-HxCDF	ND	50			ES 123478-HxCDF	101	
123678-HxCDF	ND	50			ES 123678-HxCDF	114	
234678-HxCDF	ND	50			ES 234678-HxCDF	105	
123789-HxCDF	ND	50			ES 123789-HxCDF	101	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	98	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	91.5	
OCDF	ND	100			ES OCDF	95.4	

					Standard	CS Recoveries	
					CS 37Cl-2378-TCDD	101	

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Sample ID: 12599404-110723-W-MTK-WTS-5-MS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	09-Nov-2023
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	0.98 L	Lab Sample ID	B8747_20626_DF_001MS	Date Extracted:	09-Nov-2023
Date Collected:	07-Nov-2023	pH:	7	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	12:54:46

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	250	10			ES 2378-TCDD	86	
12378-PeCDD	1120	50			ES 12378-PeCDD	86.3	
123478-HxCDD	1140	50			ES 123478-HxCDD	81.9	
123678-HxCDD	1140	50			ES 123678-HxCDD	88.9	
123789-HxCDD	1130	50			ES 123789-HxCDD	85.4	
1234678-HpCDD	1120	50			ES 1234678-HpCDD	81.8	
OCDD	2330	100			ES OCDD	78.6	
2378-TCDF	226	10			ES 2378-TCDF	84.5	
12378-PeCDF	1000	50			ES 12378-PeCDF	79.4	
23478-PeCDF	1130	50			ES 23478-PeCDF	80.4	
123478-HxCDF	1040	50			ES 123478-HxCDF	90.8	
123678-HxCDF	1030	50			ES 123678-HxCDF	99.2	
234678-HxCDF	1090	50			ES 234678-HxCDF	92.1	
123789-HxCDF	1040	50			ES 123789-HxCDF	87.1	
1234678-HpCDF	1090	50			ES 1234678-HpCDF	84.3	
1234789-HpCDF	1030	50			ES 1234789-HpCDF	83.4	
OCDF	2130	100			ES OCDF	85.1	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	86.3	

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Sample ID: 12599404-110723-W-MTK-WTS-5-MSD — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	09-Nov-2023
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	B8747_20626_DF_001MSD	Date Extracted:	09-Nov-2023
Date Collected:	07-Nov-2023	pH:	7	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	13:40:56

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	259	10			ES 2378-TCDD	92.1	
12378-PeCDD	1100	50			ES 12378-PeCDD	89	
123478-HxCDD	1150	50			ES 123478-HxCDD	86.1	
123678-HxCDD	1170	50			ES 123678-HxCDD	90.9	
123789-HxCDD	1130	50			ES 123789-HxCDD	92.7	
1234678-HpCDD	1120	50			ES 1234678-HpCDD	86.4	
OCDD	2400	100			ES OCDD	86.8	
2378-TCDF	236	10			ES 2378-TCDF	88.1	
12378-PeCDF	1010	50			ES 12378-PeCDF	85.9	
23478-PeCDF	1120	50			ES 23478-PeCDF	82.9	
123478-HxCDF	1060	50			ES 123478-HxCDF	93.8	
123678-HxCDF	1040	50			ES 123678-HxCDF	105	
234678-HxCDF	1050	50			ES 234678-HxCDF	99.4	
123789-HxCDF	1030	50			ES 123789-HxCDF	93.7	
1234678-HpCDF	1060	50			ES 1234678-HpCDF	90.3	
1234789-HpCDF	1080	50			ES 1234789-HpCDF	84.4	
OCDF	2090	100			ES OCDF	92	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	92.4	

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MS/MSD Comparison

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Method 1613B

Sample ID: 12599404-110723-W-MTK-WTS-5

Analyte	Native Conc.	MS Spike	MS Conc.	MS Rec.	MSD Spike	MSD Conc.	MSD Rec.	RPD
	(pg/L)	(pg/L)	(pg/L)	%	(pg/L)	(pg/L)	%	
2,3,7,8-TCDD	ND	204	250	123	200	259	129	5%
1,2,3,7,8-PeCDD	ND	1020	1120	110	1000	1100	110	0%
1,2,3,4,7,8-HxCDD	ND	1020	1140	112	1000	1150	115	3%
1,2,3,6,7,8-HxCDD	ND	1020	1140	112	1000	1170	117	4%
1,2,3,7,8,9-HxCDD	ND	1020	1130	111	1000	1130	113	2%
1,2,3,4,6,7,8-HpCDD	ND	1020	1120	110	1000	1120	112	2%
OCDD	15.8	2040	2330	113	2000	2400	119	5%
2,3,7,8-TCDF	ND	204	226	111	200	236	118	6%
1,2,3,7,8-PeCDF	ND	1020	1000	98.4	1000	1010	101	3%
2,3,4,7,8-PeCDF	ND	1020	1130	111	1000	1120	112	1%
1,2,3,4,7,8-HxCDF	ND	1020	1040	102	1000	1060	106	4%
1,2,3,6,7,8-HxCDF	ND	1020	1030	101	1000	1040	104	3%
2,3,4,6,7,8-HxCDF	ND	1020	1090	107	1000	1050	105	2%
1,2,3,7,8,9-HxCDF	ND	1020	1040	102	1000	1030	103	1%
1,2,3,4,6,7,8-HpCDF	ND	1020	1090	107	1000	1060	106	1%
1,2,3,4,7,8,9-HpCDF	ND	1020	1030	101	1000	1080	108	7%
OCDF	ND	2040	2130	104	2000	2090	105	1%

* % Recovery limits for MS and MSD: 70-130% of expected value, if native < RL
* RPD limit for MS vs. MSD recoveries: +/- 20%, if native < RL

Sample ID: 12599404-110723-W-MTK-DUP-1 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	09-Nov-2023
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	0.97 L	Lab Sample ID	B8747_20626_DF_002	Date Extracted:	09-Nov-2023
Date Collected:	07-Nov-2023	pH:	7	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:27:15

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	91.6	
12378-PeCDD	ND	50			ES 12378-PeCDD	91.4	
123478-HxCDD	ND	50			ES 123478-HxCDD	88.9	
123678-HxCDD	ND	50			ES 123678-HxCDD	94.6	
123789-HxCDD	ND	50			ES 123789-HxCDD	101	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	94.3	
OCDD	ND	100			ES OCDD	88.8	
2378-TCDF	ND	10			ES 2378-TCDF	91.2	
12378-PeCDF	ND	50			ES 12378-PeCDF	87.6	
23478-PeCDF	ND	50			ES 23478-PeCDF	87	
123478-HxCDF	ND	50			ES 123478-HxCDF	97.4	
123678-HxCDF	ND	50			ES 123678-HxCDF	112	
234678-HxCDF	ND	50			ES 234678-HxCDF	105	
123789-HxCDF	ND	50			ES 123789-HxCDF	98.1	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	96.1	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	94.1	
OCDF	ND	100			ES OCDF	96.3	

Standard	CS Recoveries	
CS 37Cl-2378-TCDD	95	

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Sample ID: Method Blank B8747_20626 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	n/a
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20626_DF_TLX	Date Extracted:	09-Nov-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	11:22:28

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	89.1	
12378-PeCDD	ND	50			ES 12378-PeCDD	89.6	
123478-HxCDD	ND	50			ES 123478-HxCDD	83.1	
123678-HxCDD	ND	50			ES 123678-HxCDD	88.4	
123789-HxCDD	ND	50			ES 123789-HxCDD	89.7	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	86	
OCDD	ND	100			ES OCDD	80	
2378-TCDF	ND	10			ES 2378-TCDF	87.6	
12378-PeCDF	ND	50			ES 12378-PeCDF	84.2	
23478-PeCDF	ND	50			ES 23478-PeCDF	79.3	
123478-HxCDF	ND	50			ES 123478-HxCDF	92.6	
123678-HxCDF	ND	50			ES 123678-HxCDF	102	
234678-HxCDF	ND	50			ES 234678-HxCDF	97.3	
123789-HxCDF	ND	50			ES 123789-HxCDF	90.9	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	92	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	90.2	
OCDF	ND	100			ES OCDF	91.4	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.3	

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Sample ID: 0_20626_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	n/a
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20626_DF	Date Extracted:	09-Nov-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	9:03:58

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	12.6	0.5			ES 2378-TCDD	85.1	
12378-PeCDD	53.9	2.5			ES 12378-PeCDD	80.1	
123478-HxCDD	55.5	2.5			ES 123478-HxCDD	79.2	
123678-HxCDD	56.5	2.5			ES 123678-HxCDD	86.1	
123789-HxCDD	51.2	2.5			ES 123789-HxCDD	90.3	
1234678-HpCDD	51.3	2.5			ES 1234678-HpCDD	84.6	
OCDD	108	5			ES OCDD	85.4	
2378-TCDF	11.1	0.5			ES 2378-TCDF	87.1	
12378-PeCDF	47.4	2.5			ES 12378-PeCDF	81.1	
23478-PeCDF	52.5	2.5			ES 23478-PeCDF	80.1	
123478-HxCDF	49.9	2.5			ES 123478-HxCDF	89.6	
123678-HxCDF	48.2	2.5			ES 123678-HxCDF	104	
234678-HxCDF	49.7	2.5			ES 234678-HxCDF	96.7	
123789-HxCDF	49.3	2.5			ES 123789-HxCDF	87.6	
1234678-HpCDF	48.4	2.5			ES 1234678-HpCDF	90.9	
1234789-HpCDF	47.9	2.5			ES 1234789-HpCDF	85.1	
OCDF	98	5			ES OCDF	88	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	90.3	

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Sample ID: 0_20626_OPR002

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8747	Date Received:	n/a
Project ID:	San Jacinto WP South Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20626_DF	Date Extracted:	09-Nov-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20626	Date Analyzed:	14-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	9:50:09

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	13	0.5			ES 2378-TCDD	91.1	
12378-PeCDD	53.6	2.5			ES 12378-PeCDD	86.6	
123478-HxCDD	57.4	2.5			ES 123478-HxCDD	85.4	
123678-HxCDD	57.8	2.5			ES 123678-HxCDD	93.1	
123789-HxCDD	55	2.5			ES 123789-HxCDD	93.7	
1234678-HpCDD	57	2.5			ES 1234678-HpCDD	84.4	
OCDD	117	5			ES OCDD	85.1	
2378-TCDF	11.6	0.5			ES 2378-TCDF	89.5	
12378-PeCDF	50.2	2.5			ES 12378-PeCDF	84.5	
23478-PeCDF	56.5	2.5			ES 23478-PeCDF	81.8	
123478-HxCDF	52	2.5			ES 123478-HxCDF	96.1	
123678-HxCDF	51.2	2.5			ES 123678-HxCDF	107	
234678-HxCDF	52.9	2.5			ES 234678-HxCDF	101	
123789-HxCDF	49.8	2.5			ES 123789-HxCDF	95.7	
1234678-HpCDF	51.2	2.5			ES 1234678-HpCDF	93.1	
1234789-HpCDF	50.1	2.5			ES 1234789-HpCDF	91.8	
OCDF	103	5			ES OCDF	92.5	

					Standard	CS Recoveries	
					CS 37Cl-2378-TCDD	94	

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Sample DUP			Method 1613B
Sample ID: 0_20626_OPR001			
Analyte	**OPR1_20626_DF pg/uL**	**OPR2_20626_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	12.6	13	3.1%
1,2,3,7,8-PeCDD	53.9	53.6	0.6%
1,2,3,4,7,8-HxCDD	55.5	57.4	3.3%
1,2,3,6,7,8-HxCDD	56.5	57.8	2.3%
1,2,3,7,8,9-HxCDD	51.2	55	7.2%
1,2,3,4,6,7,8-HpCDD	51.3	57	10.5%
OCDD	108	117	8.5%
2,3,7,8-TCDF	11.1	11.6	4.3%
1,2,3,7,8-PeCDF	47.4	50.2	5.7%
2,3,4,7,8-PeCDF	52.5	56.5	7.3%
1,2,3,4,7,8-HxCDF	49.9	52	4.0%
1,2,3,6,7,8-HxCDF	48.2	51.2	6.1%
2,3,4,6,7,8-HxCDF	49.7	52.9	6.4%
1,2,3,7,8,9-HxCDF	49.3	49.8	1.0%
1,2,3,4,6,7,8-HpCDF	48.4	51.2	5.6%
1,2,3,4,7,8,9-HpCDF	47.9	50.1	4.5%
OCDF	98	103	4.6%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*09-Nov-23 at 09:46*
AP Project name:	*B8747*
Requested TAT:	*3 business days*
Projected due date:	*14-Nov-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto WP South Impoundment*
Project PO#:	*340-009759*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-110723-W-MTK-WTS-5	B8747_001	Water - MS/MSD	6	1-Liter Amber	07-Nov-23	10:30	2.3	1	7860 6833 3825
12599404-110723-W-MTK-DUP-1	B8747_002	Water	2	1-Liter Amber	07-Nov-23	n/a	2.3	1	7860 6833 3825

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact. Sample 001 time logged per sample labels.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 9 Nov 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

SGS CHAIN OF CUSTODY

B8747

PROJECT INFO

PROJECT: San Jacinto WP South Impoundment

P.O. #:

QUOTE #:

SITE REF: 12599404

TURN AROUND TIME: 3-day TAT

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

GHDSSOW:12599404-2022-004

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

PRESERVATIVE

ANALYSIS & METHOD

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Total Dioxin/Furan										MS MSD	MS/ DUP	REMARKS
12599404-110723-W-MTK-WTS-5	11/7/23		6	W	X												-WTS-5 is MS/MSD
12599404-110723-W-MTK-DUP-1	11/7/23	—	2	W	X												
Temp Blank	—	—	1	W													

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE:	TIME:
[signature] Marc Kemper GHD	11/7/23	16 00		[signature]	11/9/23	9:46
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:	COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT		
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT		
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER: FedEx	TEMP: °C 2.3°	
				TRACKING #:		

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Member of the SGS Group (SGS SA)

B8747

ORIGIN ID:HBYA (772) 233-3016
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR
WILMINGTON, NC 28405
UNITED STATES US

SHIP DATE: 07NOV23
ACTWGT: 54.00 LB
CAD: 6755021/SSF02460
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO ATTN SAMPLE RECEIVING
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR

WILMINGTON NC 28405
(772) 233-3016 REF:
INV:
PO: DEPT:

11/9
9.46
2.30 (T.B.)

FedEx Express

WED - 08 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7860 6833 3825

NG ILMA

28405
NC-US RDU

FINAL LAB REPORT

SJRWP-12599404-2022-001

B7409

05-Jan-2023

Prepared by

SGS NORTH AMERICA

Prepared for

GHD Services Inc.

Wells Richard

5551 Corporate Blvd Suite 200
Baton Rouge, LA 70808
Phone: 225-296-6508
Email: wells.richard@ghd.com

This report is approved by

Tamara Burkamper

tamara.burkamper@sgs.com

Senior Project Manager

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SGS remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please do not hesitate to contact us.

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Results reported relate only to the items tested.

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	SJRWP-12599404-2022-001
SGS Project #	B7409
Analytical Protocol(s)	1613B
No. Samples Submitted	3
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	2
Date Received	10-Dec-22
Condition Received	Good
Temperature upon Receipt (ºC)	3.1
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

Requested sample analysis per Method 1613, Revision B Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/HRMS, October 1994.

Samples were prepped per SW-846 Test Method 3520C Continuous Liquid-Liquid Extraction. Revision 3, December 1996 and per SOPs DC_441.9, clean up per DC_365.12 and analyzed per DC_364.16.

MDL and/or validation studies provided upon request.

Aqueous samples are reported on “as-is” basis.

Data processing uses proprietary software.

Non-Detects are reported to the EDL, which are below the calculated J-Level.

Prep chemists include Taylor McKnight, Harrison Wright, Zachary Hatcher and Elijah Edwards.

Analytical Chemists include Paul Walton and/or Tyler Fritz.

All Samples were extracted and analyzed within recommended holding times.

Initial Calibration meets requirements. The low point of the ICAL is 0.25 pg/uL.

Continuing Calibration meets requirements, with the following exception: the reported concentration of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and the associated standard in the samples and method blank may be biased high.

No dilutions or re-extractions were required.

MB1_19724: the reported percent recovery of labeled cleanup standard CS 1,2,3,4,7-PeCDD is above SOP criteria; there is no method criteria for this standard and no impact on detection limits (DL) or results.

OPR1/OPR2_19724 meet accuracy and precision criteria.

Samples were extracted at ~0.500 L with a final extract volume of 20uL; the lesser sample volume resulted in elevated detection limits (DL) and reporting limits (RL).

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS / APPROVALS / PERMITS

Alaska DEC LAP	17-012
Alaska DEC LCP	NC00919
Arkansas	88-0682
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Colorado	NC00919
Connecticut	PH-0258
USDA Soil Permit	P330-20-00103
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2017, 2009 TNI, DoD ELAP QSM 5.4)
Florida DOH	E87634
Hawaii DOH	Approval
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2020020
Massachusetts	M-NC919
Michigan	9950
Minnesota (Primary NELAP For Method 23)	037-999-459
Montana	0106
New Hampshire (Secondary NELAP)	2083
New Jersey	NC100
New York	11685
North Carolina DEQ	481
Ohio	87785
Oklahoma	2205
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
UCMR 5	NC00919
US Coast Guard	16714/159.317/SGS
U.S. Fish and Wildlife Service	A22801
Vermont	VT-87634
Virginia	460214
Washington	C913

Sample ID: 12599404-111623-W-MTK-WTS-6 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8802	Date Received:	17-Nov-2023
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	1.04 L	Lab Sample ID	B8802_20663_DF_001	Date Extracted:	20-Nov-2023
Date Collected:	16-Nov-2023	pH:	6	QC Batch No:	20663	Date Analyzed:	22-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	19:36:29

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	78.4	
12378-PeCDD	ND	50			ES 12378-PeCDD	75.6	
123478-HxCDD	ND	50			ES 123478-HxCDD	68.2	
123678-HxCDD	ND	50			ES 123678-HxCDD	78.7	
123789-HxCDD	ND	50			ES 123789-HxCDD	76.6	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	73.3	
OCDD	ND	100			ES OCDD	77	
2378-TCDF	ND	10			ES 2378-TCDF	77.2	
12378-PeCDF	ND	50			ES 12378-PeCDF	72.4	
23478-PeCDF	ND	50			ES 23478-PeCDF	71.6	
123478-HxCDF	ND	50			ES 123478-HxCDF	77.2	
123678-HxCDF	ND	50			ES 123678-HxCDF	87.2	
234678-HxCDF	ND	50			ES 234678-HxCDF	80	
123789-HxCDF	ND	50			ES 123789-HxCDF	73.6	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	75.2	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	70.4	
OCDF	ND	100			ES OCDF	77.5	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.8	

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5500 Business Drive
Wilmington, NC 28405, USA
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Sample ID: Method Blank B8802_20663 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8802	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	1.00 L	Lab Sample ID	MB1_20663_DF_TLX	Date Extracted:	20-Nov-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20663	Date Analyzed:	22-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	18:04:04

Analyte	Conc. (pg/L)	RL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	10			ES 2378-TCDD	75.2	
12378-PeCDD	ND	50			ES 12378-PeCDD	72.6	
123478-HxCDD	ND	50			ES 123478-HxCDD	74.6	
123678-HxCDD	ND	50			ES 123678-HxCDD	80.2	
123789-HxCDD	ND	50			ES 123789-HxCDD	80.1	
1234678-HpCDD	ND	50			ES 1234678-HpCDD	74.8	
OCDD	ND	100			ES OCDD	74	
2378-TCDF	ND	10			ES 2378-TCDF	79.6	
12378-PeCDF	ND	50			ES 12378-PeCDF	75.2	
23478-PeCDF	ND	50			ES 23478-PeCDF	72.2	
123478-HxCDF	ND	50			ES 123478-HxCDF	79	
123678-HxCDF	ND	50			ES 123678-HxCDF	91.4	
234678-HxCDF	ND	50			ES 234678-HxCDF	80.7	
123789-HxCDF	ND	50			ES 123789-HxCDF	76.1	
1234678-HpCDF	ND	50			ES 1234678-HpCDF	77.6	
1234789-HpCDF	ND	50			ES 1234789-HpCDF	69.8	
OCDF	ND	100			ES OCDF	75.8	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	88.8	

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Sample ID: 0_20663_OPR001 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8802	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR1_20663_DF	Date Extracted:	20-Nov-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20663	Date Analyzed:	22-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	14:59:12

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	13.1	0.5			ES 2378-TCDD	81.2	
12378-PeCDD	53.6	2.5			ES 12378-PeCDD	80.7	
123478-HxCDD	58.3	2.5			ES 123478-HxCDD	73.3	
123678-HxCDD	60.5	2.5			ES 123678-HxCDD	78.1	
123789-HxCDD	52.1	2.5			ES 123789-HxCDD	85.4	
1234678-HpCDD	56.9	2.5			ES 1234678-HpCDD	76.9	
OCDD	120	5			ES OCDD	80.2	
2378-TCDF	11.4	0.5			ES 2378-TCDF	79.1	
12378-PeCDF	50.9	2.5			ES 12378-PeCDF	77.8	
23478-PeCDF	56.1	2.5			ES 23478-PeCDF	75.9	
123478-HxCDF	51.4	2.5			ES 123478-HxCDF	79	
123678-HxCDF	52.7	2.5			ES 123678-HxCDF	86.4	
234678-HxCDF	53.4	2.5			ES 234678-HxCDF	81.8	
123789-HxCDF	50.6	2.5			ES 123789-HxCDF	76.2	
1234678-HpCDF	52.1	2.5			ES 1234678-HpCDF	77.8	
1234789-HpCDF	54.8	2.5			ES 1234789-HpCDF	69.1	
OCDF	103	5			ES OCDF	76.1	
					Standard	**CS Recoveries**	
					CS 37Cl-2378-TCDD	90.6	

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Sample ID: 0_20663_OPR002 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	GHD Services Inc.	Matrix:	Aqueous	Lab Project ID:	B8802	Date Received:	n/a
Project ID:	San Jacinto Waste Pits S. Impoundment	Weight/Volume:	1 uL	Lab Sample ID	OPR2_20663_DF	Date Extracted:	20-Nov-2023
Date Collected:	n/a	pH:	n/a	QC Batch No:	20663	Date Analyzed:	22-Nov-2023
		Split:	-	Dilution:	-	Time Analyzed:	15:45:23

Analyte	Conc. (pg/uL)	RL (pg/uL)	EMPC (pg/uL)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	11.9	0.5			ES 2378-TCDD	85.2	
12378-PeCDD	51	2.5			ES 12378-PeCDD	81.4	
123478-HxCDD	52.9	2.5			ES 123478-HxCDD	80.5	
123678-HxCDD	55.4	2.5			ES 123678-HxCDD	86.1	
123789-HxCDD	52.3	2.5			ES 123789-HxCDD	86.7	
1234678-HpCDD	54.3	2.5			ES 1234678-HpCDD	83.4	
OCDD	113	5			ES OCDD	88.3	
2378-TCDF	10.7	0.5			ES 2378-TCDF	85.4	
12378-PeCDF	49	2.5			ES 12378-PeCDF	80.7	
23478-PeCDF	53.4	2.5			ES 23478-PeCDF	78	
123478-HxCDF	50.7	2.5			ES 123478-HxCDF	82.3	
123678-HxCDF	50.2	2.5			ES 123678-HxCDF	92.6	
234678-HxCDF	51	2.5			ES 234678-HxCDF	87.6	
123789-HxCDF	47	2.5			ES 123789-HxCDF	82.7	
1234678-HpCDF	50	2.5			ES 1234678-HpCDF	83.5	
1234789-HpCDF	50.6	2.5			ES 1234789-HpCDF	77.1	
OCDF	102	5			ES OCDF	86.3	

					Standard	CS Recoveries	
					CS 37Cl-2378-TCDD	87.4	

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Wilmington, NC 28405, USA
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Sample DUP			Method 1613B
Sample ID: 0_20663_OPR001			
Analyte	**OPR1_20663_DF pg/uL**	**OPR2_20663_DF (DUP) pg/uL**	**RPD**
2,3,7,8-TCDD	13.1	11.9	9.3%
1,2,3,7,8-PeCDD	53.6	51	4.9%
1,2,3,4,7,8-HxCDD	58.3	52.9	9.8%
1,2,3,6,7,8-HxCDD	60.5	55.4	8.8%
1,2,3,7,8,9-HxCDD	52.1	52.3	0.4%
1,2,3,4,6,7,8-HpCDD	56.9	54.3	4.8%
OCDD	120	113	6.2%
2,3,7,8-TCDF	11.4	10.7	6.0%
1,2,3,7,8-PeCDF	50.9	49	3.7%
2,3,4,7,8-PeCDF	56.1	53.4	4.9%
1,2,3,4,7,8-HxCDF	51.4	50.7	1.4%
1,2,3,6,7,8-HxCDF	52.7	50.2	5.0%
2,3,4,6,7,8-HxCDF	53.4	51	4.6%
1,2,3,7,8,9-HxCDF	50.6	47	7.4%
1,2,3,4,6,7,8-HpCDF	52.1	50	4.1%
1,2,3,4,7,8,9-HpCDF	54.8	50.6	8.0%
OCDF	103	102	1.3%

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Tamara Burkamper*
Receipt Date & Time:	*17-Nov-23 at 09:23*
AP Project name:	*B8802*
Requested TAT:	*3 business days*
Projected due date:	*22-Nov-23*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Tamara.Burkamper@sgs.com*

Company Contact:	*Wells Richard*
Company:	*GHD Services Inc.*
Project Name & Site:	*San Jacinto Waste Pits S. Impoundment*
Project PO#:	*340-009759*
QAAP/Contract #:	*file*
Requested Analysis:	*M1613B*
Phone#:	*225-296-6508*
Email Address:	*wells.richard@ghd.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp (°C)	Container #	Shipping #
12599404-111623-W-MTK-WTS-6	B8802_001	W	2	1L	16-Nov-23	13:30	3.2	1	7864 9624 9763

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Malachi Clark *Logged in by: Malachi Clark* *QC'ed by:* AK 17 Nov 23

All services are rendered in accordance with the applicable SGS General Conditions of Service accessible via: http://www.sgs.com/terms_and_conditions.htm

B8802

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto Waste Pits S. Impoundment
P.O. #:
QUOTE #:
SITE REF: 12599404
TURN AROUND TIME: 3-Day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ QoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
SSOW: 12599404-2022-004

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS:
PHONE: EMAIL: Wells.Richard@ghd.com

INVOICE TO (☑ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	PRESERVATIVE	ANALYSIS & METHOD	QC MS	QC MSD	QC DUP	QTY	REMARKS
						1	Total D/F					
12599404-111623-W-MTK-WTS-6	11/16/23	13:30	C	W	2		X					
Temp Blank	—	—	—	W	1							

11/16/23

COLLECTED/RELINQUISHED BY (1): GHD	DATE: 11/16/23	TIME: 1430	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE: 11/17/23 TIME: 9:23
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:	COOLER SEAL: ☑ INTACT ☐ BROKEN ☐ ABSENT	
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☑ ABSENT	
				CARRIER: Fedex	TEMP: °C 3.2°
				TRACKING #:	

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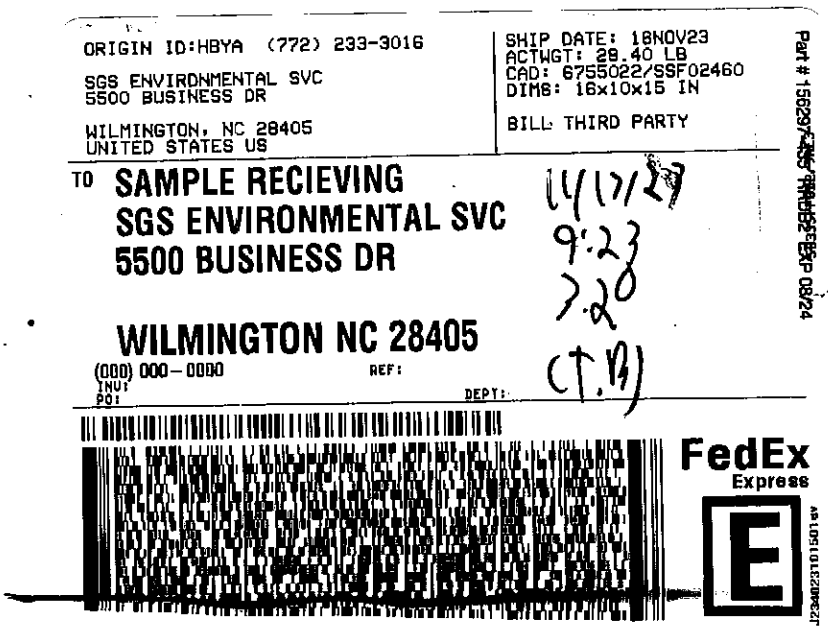
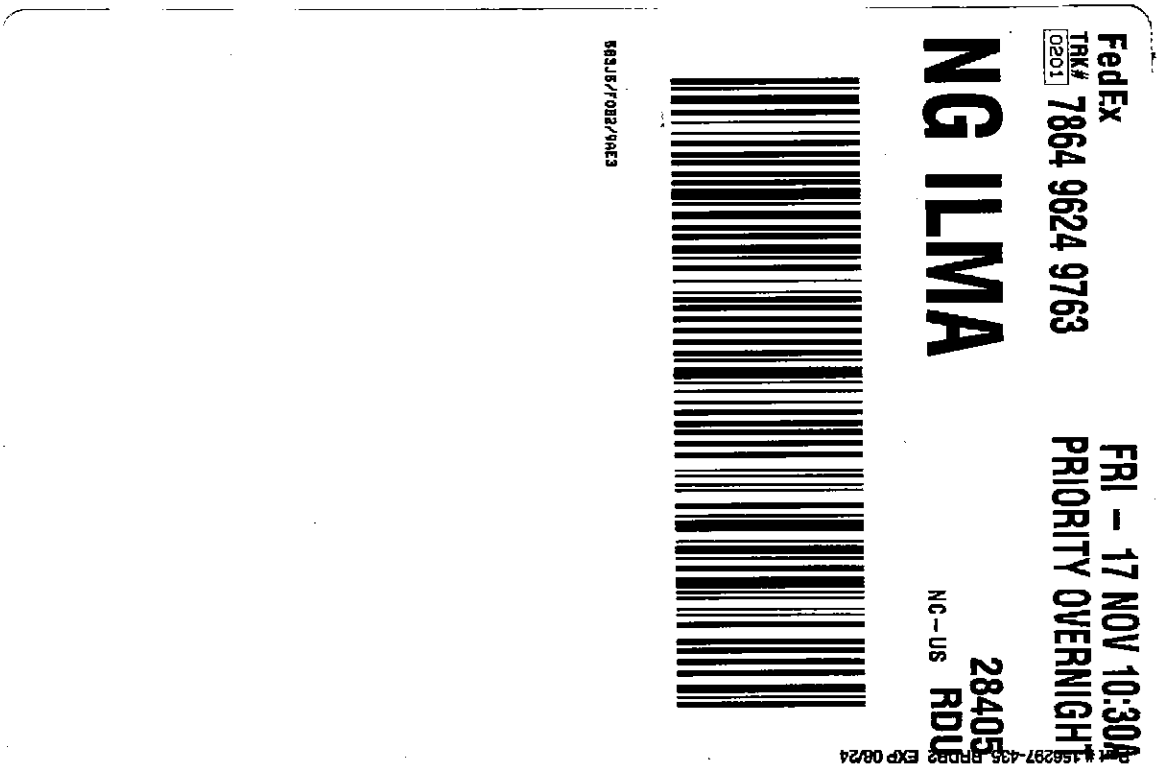
Member of the SGS Group (SGS SA)

B8802


ORIGIN ID:HBYA (772) 233-3016
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR
WILMINGTON, NC 28405
UNITED STATES US
SHIP DATE: 18NOV23
ACTWGT: 29.40 LB
CAD: 6755022/SSF02460
DIMS: 16x10x15 IN
BILL THIRD PARTY
TO SAMPLE RECIEVING
SGS ENVIRONMENTAL SVC
5500 BUSINESS DR
WILMINGTON NC 28405
(000) 000-0000
REF:
DEPT:
11/17/23
9:23
3.20
CT.BJ
FedEx
Express


FedEx
TRK# 0201 7864 9624 9763
NG ILMA
28405
NC-US RDU
FRI - 17 NOV 10:30A
PRIORITY OVERNIGHT

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

July 28, 2023

Wells Richard
GHD
2237 S. Acadian Thruway
Suite 701
Baton Rouge, LA 70808

Work Order: **HS23071774**

Laboratory Results for: **San Jacinto WP S Impoundment**

Dear Wells Richard,

ALS Environmental received 1 sample(s) on Jul 27, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Anna Kinchen
Project Manager

Client: GHD
Project: San Jacinto WP S Impoundment
Work Order: HS23071774

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23071774-01	12599404-072723-W-WTS-4-TSS	Water		27-Jul-2023 16:45	27-Jul-2023 18:35	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **CASE NARRATIVE**
Project: San Jacinto WP S Impoundment
Work Order: HS23071774

WetChemistry by Method M2540D

Batch ID: R442658

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
ANALYTICAL REPORT
Project: San Jacinto WP S Impoundment
WorkOrder:HS23071774
Sample ID: 12599404-072723-W-WTS-4-TSS
Lab ID:HS23071774-01
Collection Date: 27-Jul-2023 16:45
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL SUSPENDED SOLIDS BY SM 2540D-2011		**Method:M2540D**					Analyst: DC
Suspended Solids (Residue, Non -Filterable)	**4.67**		**2.50**	**2.50**	**mg/L**	1	28-Jul-2023 10:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP S Impoundment
WorkOrder: HS23071774

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R442658 (0)	**Test Name :** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011				**Matrix:** Water	
HS23071774-01	12599404-072723-W-WTS-4-TSS	27 Jul 2023 16:45			28 Jul 2023 10:30	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP S Impoundment
WorkOrder: HS23071774

QC BATCH REPORT

Batch ID: R442658 (0) **Instrument:** Balance1 **Method:** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011

MBLK Sample ID: **WMBLK-072823** Units: **mg/L** Analysis Date: **28-Jul-2023 10:30**
Client ID: Run ID: **Balance1_442658** SeqNo: **7458972** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	< 2.50	2.50								

LCS Sample ID: **WLCS-07282023** Units: **mg/L** Analysis Date: **28-Jul-2023 10:30**
Client ID: Run ID: **Balance1_442658** SeqNo: **7458971** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	96	2.50	100	0	96.0	85 - 115				

DUP Sample ID: **HS23071707-01DUP** Units: **mg/L** Analysis Date: **28-Jul-2023 10:30**
Client ID: Run ID: **Balance1_442658** SeqNo: **7458966** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	34	2.50					34	0	20	

DUP Sample ID: **HS23071489-01DUP** Units: **mg/L** Analysis Date: **28-Jul-2023 10:30**
Client ID: Run ID: **Balance1_442658** SeqNo: **7458954** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	60.6	2.50					60.4	0.331	20	

The following samples were analyzed in this batch: HS23071774-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto WP S Impoundment
WorkOrder: **HS23071774**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352; 2022-2023	31-Jul-2023
Louisiana	03087-2023	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23071774 **Date/Time Received:** **27-Jul-2023 18:35**

Client Name: GHD Baton Rouge **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	27-Jul-2023 18:47	**Reviewed by:**	/S/ Jessica Monfore	28-Jul-2023 07:11
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Temperature(s)/Thermometer(s):	4.6UC/4.5C	IR31
Cooler(s)/Kit(s):	Blue	
Date/Time sample(s) sent to storage:	7/27/23	

Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTIONS | RIGHT PARTNER

HS23071774

GHD

San Jacinto WP S Impoundment

CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto WP S. Impoundment
P.O. #:
QUOTE #:
SITE REF: GHD #12599404
TURN AROUND TIME: 1-Day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
GHD SSOW: 12599404-2023-001-TSS

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS: 2237 S. Acadian Thruway, Suite 701, Baton Rouge, LA
PHONE: 225-454-4363 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	PRESERVATIVE	ANALYSIS & METHOD: TSS	QC: MS	QC: MSD	QC: DUP	QTY	REMARKS
12599404-072723-W-WTS-4-TSS	7/27/23	1645	G	W	1		X					
Temp Blank		—		W	1							

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY: DATE: TIME:
RELINQUISHED BY (2):	DATE: 7/27/23	TIME: 1835	RECEIVED BY: CG 7-27-23 1835	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT CARRIER: TEMP: °C TRACKING #:

Page 1 of 1

4.6 1831
BLUE

RIGHT SOLUTIONS | RIGHT PARTNER

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

August 24, 2023

Wells Richard
GHD
2237 S. Acadian Thruway
Suite 701
Baton Rouge, LA 70808

Work Order: **HS23081322**

Laboratory Results for: **12599404 San Jacinto**

Dear Wells Richard,

ALS Environmental received 2 sample(s) on Aug 17, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Anna Kinchen
Project Manager

Client: GHD
Project: 12599404 San Jacinto
Work Order: HS23081322

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23081322-01	12599404-081723-Test-1	Water		17-Aug-2023 09:30	17-Aug-2023 12:00	☐
HS23081322-02	12599404-081723-Test-2	Water		17-Aug-2023 09:35	17-Aug-2023 12:00	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **CASE NARRATIVE**
Project: 12599404 San Jacinto
Work Order: HS23081322

Metals by Method SW7470A

Batch ID: 199395

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A

Batch ID: 199321

Sample ID: HS23080798-01MSD

- MSD is for an unrelated sample

Sample ID: HS23080798-01PDS

- PDS is for an unrelated sample

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
Sample ID: 12599404-081723-Test-1
Collection Date: 17-Aug-2023 09:30

ANALYTICAL REPORT
WorkOrder:HS23081322
Lab ID:HS23081322-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 22-Aug-2023		Analyst: MSC
Antimony	**0.0263**		**0.000400**	**0.00200**	**mg/L**	1	22-Aug-2023 23:53
Arsenic	**0.0364**		**0.000400**	**0.00200**	**mg/L**	1	22-Aug-2023 23:53
Barium	**0.105**		**0.00190**	**0.00400**	**mg/L**	1	22-Aug-2023 23:53
Cadmium	< 0.000200		0.000200	0.00200	mg/L	1	22-Aug-2023 23:53
Chromium	**0.00100**	J	**0.000400**	**0.00400**	**mg/L**	1	22-Aug-2023 23:53
Copper	**0.0770**		**0.00100**	**0.00200**	**mg/L**	1	22-Aug-2023 23:53
Lead	**0.00717**		**0.000600**	**0.00200**	**mg/L**	1	22-Aug-2023 23:53
Nickel	**0.0128**		**0.000600**	**0.00200**	**mg/L**	1	22-Aug-2023 23:53
Selenium	**0.00479**		**0.00110**	**0.00200**	**mg/L**	1	22-Aug-2023 23:53
Silver	< 0.000200		0.000200	0.00200	mg/L	1	22-Aug-2023 23:53
Thallium	< 0.000200		0.000200	0.00200	mg/L	1	22-Aug-2023 23:53
Zinc	**0.457**		**0.00200**	**0.00400**	**mg/L**	1	22-Aug-2023 23:53
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 23-Aug-2023		Analyst: JS
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	23-Aug-2023 15:22

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
Sample ID: 12599404-081723-Test-2
Collection Date: 17-Aug-2023 09:35

ANALYTICAL REPORT
WorkOrder:HS23081322
Lab ID:HS23081322-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 22-Aug-2023		Analyst: MSC
Antimony	**0.0265**		**0.000400**	**0.00200**	**mg/L**	1	22-Aug-2023 23:55
Arsenic	**0.0419**		**0.000400**	**0.00200**	**mg/L**	1	22-Aug-2023 23:55
Barium	**0.122**		**0.00190**	**0.00400**	**mg/L**	1	22-Aug-2023 23:55
Cadmium	< 0.000200		0.000200	0.00200	mg/L	1	22-Aug-2023 23:55
Chromium	**0.000610**	J	**0.000400**	**0.00400**	**mg/L**	1	22-Aug-2023 23:55
Copper	**0.0188**		**0.00100**	**0.00200**	**mg/L**	1	22-Aug-2023 23:55
Lead	**0.00369**		**0.000600**	**0.00200**	**mg/L**	1	22-Aug-2023 23:55
Nickel	**0.00499**		**0.000600**	**0.00200**	**mg/L**	1	22-Aug-2023 23:55
Selenium	**0.00628**		**0.00110**	**0.00200**	**mg/L**	1	22-Aug-2023 23:55
Silver	< 0.000200		0.000200	0.00200	mg/L	1	22-Aug-2023 23:55
Thallium	< 0.000200		0.000200	0.00200	mg/L	1	22-Aug-2023 23:55
Zinc	**0.214**		**0.00200**	**0.00400**	**mg/L**	1	22-Aug-2023 23:55
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 23-Aug-2023		Analyst: JS
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	23-Aug-2023 15:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: HS23081322

Batch ID: 199321 **Start Date:** 22 Aug 2023 10:30 **End Date:** 22 Aug 2023 10:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23081322-01		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2
HS23081322-02		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2

Batch ID: 199395 **Start Date:** 23 Aug 2023 08:30 **End Date:** 23 Aug 2023 08:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23081322-01		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2
HS23081322-02		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: HS23081322

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 199321 (0)	**Test Name :** ICP-MS METALS BY SW6020A				**Matrix:** Water	
HS23081322-01	12599404-081723-Test-1	17 Aug 2023 09:30		22 Aug 2023 10:30	22 Aug 2023 23:53	1
HS23081322-02	12599404-081723-Test-2	17 Aug 2023 09:35		22 Aug 2023 10:30	22 Aug 2023 23:55	1
Batch ID: 199395 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS23081322-01	12599404-081723-Test-1	17 Aug 2023 09:30		23 Aug 2023 08:30	23 Aug 2023 15:22	1
HS23081322-02	12599404-081723-Test-2	17 Aug 2023 09:35		23 Aug 2023 08:30	23 Aug 2023 15:24	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: HS23081322

QC BATCH REPORT

Batch ID: 199321 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

MBLK Sample ID: **MBLK-199321** Units: **mg/L** Analysis Date: **22-Aug-2023 23:32**
Client ID: Run ID: **ICPMS07_444566** SeqNo: **7504604** PrepDate: **22-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	< 0.000400	0.00200								
Arsenic	< 0.000400	0.00200								
Barium	< 0.00190	0.00400								
Cadmium	< 0.000200	0.00200								
Chromium	< 0.000400	0.00400								
Copper	< 0.00100	0.00200								
Lead	< 0.000600	0.00200								
Nickel	< 0.000600	0.00200								
Selenium	< 0.00110	0.00200								
Silver	< 0.000200	0.00200								
Thallium	< 0.000200	0.00200								
Zinc	< 0.00200	0.00400								

LCS Sample ID: **LCS-199321** Units: **mg/L** Analysis Date: **22-Aug-2023 23:35**
Client ID: Run ID: **ICPMS07_444566** SeqNo: **7504605** PrepDate: **22-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04816	0.00200	0.05	0	96.3	80 - 120				
Arsenic	0.04751	0.00200	0.05	0	95.0	80 - 120				
Barium	0.04756	0.00400	0.05	0	95.1	80 - 120				
Cadmium	0.04735	0.00200	0.05	0	94.7	80 - 120				
Chromium	0.04823	0.00400	0.05	0	96.5	80 - 120				
Copper	0.04879	0.00200	0.05	0	97.6	80 - 120				
Lead	0.04495	0.00200	0.05	0	89.9	80 - 120				
Nickel	0.05363	0.00200	0.05	0	107	80 - 120				
Selenium	0.04697	0.00200	0.05	0	93.9	80 - 120				
Silver	0.04753	0.00200	0.05	0	95.1	80 - 120				
Zinc	0.05023	0.00400	0.05	0	100	80 - 120				

LCS Sample ID: **LCS-199321** Units: **mg/L** Analysis Date: **23-Aug-2023 12:10**
Client ID: Run ID: **ICPMS07_444623** SeqNo: **7505083** PrepDate: **22-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Thallium	0.04173	0.00200	0.05	0	83.5	80 - 120				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: HS23081322

QC BATCH REPORT

Batch ID: 199321 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

MS Sample ID: **HS23080798-01MS** Units: **mg/L** Analysis Date: **22-Aug-2023 23:42**
Client ID: Run ID: **ICPMS07_444566** SeqNo: **7504608** PrepDate: **22-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05104	0.00200	0.05	0.000115	102	80 - 120				
Arsenic	0.05027	0.00200	0.05	0.000194	100	80 - 120				
Barium	0.06567	0.00400	0.05	0.0161	99.1	80 - 120				
Cadmium	0.05833	0.00200	0.05	0.007493	102	80 - 120				
Chromium	0.05017	0.00400	0.05	0.00126	97.8	80 - 120				
Copper	0.2277	0.00200	0.05	0.1789	97.6	80 - 120				
Lead	0.053	0.00200	0.05	0.00571	94.6	80 - 120				
Nickel	0.107	0.00200	0.05	0.05606	102	80 - 120				
Selenium	0.04959	0.00200	0.05	0.000414	98.4	80 - 120				
Silver	0.05016	0.00200	0.05	0.000017	100	80 - 120				
Thallium	0.0413	0.00200	0.05	0.000197	82.2	80 - 120				
Zinc	1.671	0.00400	0.05	1.623	95.2	80 - 120				O

MSD Sample ID: **HS23080798-01MSD** Units: **mg/L** Analysis Date: **22-Aug-2023 23:44**
Client ID: Run ID: **ICPMS07_444566** SeqNo: **7504609** PrepDate: **22-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04914	0.00200	0.05	0.000115	98.0	80 - 120	0.05104	3.8	20	
Arsenic	0.04759	0.00200	0.05	0.000194	94.8	80 - 120	0.05027	5.47	20	
Barium	0.06316	0.00400	0.05	0.0161	94.1	80 - 120	0.06567	3.9	20	
Cadmium	0.05655	0.00200	0.05	0.007493	98.1	80 - 120	0.05833	3.1	20	
Chromium	0.04842	0.00400	0.05	0.00126	94.3	80 - 120	0.05017	3.55	20	
Copper	0.22	0.00200	0.05	0.1789	82.3	80 - 120	0.2277	3.43	20	
Lead	0.05083	0.00200	0.05	0.00571	90.2	80 - 120	0.053	4.18	20	
Nickel	0.1017	0.00200	0.05	0.05606	91.3	80 - 120	0.107	5.07	20	
Selenium	0.04836	0.00200	0.05	0.000414	95.9	80 - 120	0.04959	2.5	20	
Silver	0.04773	0.00200	0.05	0.000017	95.4	80 - 120	0.05016	4.97	20	
Thallium	0.03906	0.00200	0.05	0.000197	77.7	80 - 120	0.0413	5.57	20	S
Zinc	1.616	0.00400	0.05	1.623	-13.8	80 - 120	1.671	3.32	20	SO

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: HS23081322

QC BATCH REPORT

Batch ID: 199321 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

PDS Sample ID: **HS23080798-01PDS** Units: **mg/L** Analysis Date: **22-Aug-2023 23:46**
Client ID: Run ID: **ICPMS07_444566** SeqNo: **7504610** PrepDate: **22-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09484	0.00200	0.1	0.000115	94.7	75 - 125				
Arsenic	0.0974	0.00200	0.1	0.000194	97.2	75 - 125				
Barium	0.114	0.00400	0.1	0.0161	97.9	75 - 125				
Cadmium	0.1057	0.00200	0.1	0.007493	98.2	75 - 125				
Chromium	0.09666	0.00400	0.1	0.00126	95.4	75 - 125				
Copper	0.2704	0.00200	0.1	0.1789	91.6	75 - 125				
Lead	0.09817	0.00200	0.1	0.00571	92.5	75 - 125				
Nickel	0.1506	0.00200	0.1	0.05606	94.5	75 - 125				
Selenium	0.09415	0.00200	0.1	0.000414	93.7	75 - 125				
Silver	0.09894	0.00200	0.1	0.000017	98.9	75 - 125				
Thallium	0.09265	0.00200	0.1	0.000197	92.5	75 - 125				
Zinc	1.664	0.00400	0.1	1.623	41.1	75 - 125				SO

SD Sample ID: **HS23080798-01SD** Units: **mg/L** Analysis Date: **22-Aug-2023 23:39**
Client ID: Run ID: **ICPMS07_444566** SeqNo: **7504607** PrepDate: **22-Aug-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	< 0.00200	0.0100					0.000115	0	10	
Arsenic	< 0.00200	0.0100					0.000194	0	10	
Barium	0.01663	0.0200					0.0161	0	10	J
Cadmium	0.007694	0.0100					0.007493	0	10	J
Chromium	< 0.00200	0.0200					0.00126	0	10	
Copper	0.1817	0.0100					0.1789	1.59	10	
Lead	0.005906	0.0100					0.00571	0	10	J
Selenium	< 0.00550	0.0100					0.000414	0	10	
Silver	< 0.00100	0.0100					0.000017	0	10	
Thallium	< 0.00100	0.0100					0.000197	0	10	
Zinc	1.634	0.0200					1.623	0.697	10	

The following samples were analyzed in this batch: HS23081322-01 HS23081322-02

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: HS23081322

QC BATCH REPORT

Batch ID: 199395 (0) **Instrument: HG04** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-199395** Units: **mg/L** Analysis Date: **23-Aug-2023 14:50**
Client ID: Run ID: **HG04_444674** SeqNo: **7505980** PrepDate: **23-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	< 0.0000300	0.000200								

LCS Sample ID: **LCS-199395** Units: **mg/L** Analysis Date: **23-Aug-2023 14:54**
Client ID: Run ID: **HG04_444674** SeqNo: **7505981** PrepDate: **23-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.000200	0.005	0	99.2	80 - 120				

MS Sample ID: **HS23081210-09MS** Units: **mg/L** Analysis Date: **23-Aug-2023 14:59**
Client ID: Run ID: **HG04_444674** SeqNo: **7505984** PrepDate: **23-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00464	0.000200	0.005	0.000332	86.2	75 - 125				

MSD Sample ID: **HS23081210-09MSD** Units: **mg/L** Analysis Date: **23-Aug-2023 15:01**
Client ID: Run ID: **HG04_444674** SeqNo: **7505985** PrepDate: **23-Aug-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00453	0.000200	0.005	0.000332	84.0	75 - 125	0.00464	2.4	20	

The following samples were analyzed in this batch: HS23081322-01 HS23081322-02

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: 12599404 San Jacinto
WorkOrder: **HS23081322**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23081322 **Date/Time Received:** **17-Aug-2023 12:00**

Client Name: GHD Baton Rouge **Received by:** **Nelson D. Dusara**

Completed By:	/S/ Paresh M. Giga	22-Aug-2023 10:50	**Reviewed by:**	/S/ Anna Kinchen	24-Aug-2023 08:06
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:none
Samplers name present on COC?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.2C/1.1C U/C	IR31	
Cooler(s)/Kit(s):	Blue		
Date/Time sample(s) sent to storage:	8/22/23 10:55		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: Due 8/24/23 per AK

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTIONS | RIGHT PARTNER

ALS

SGS

CHAIN OF CUSTODY

HS23081322

GHD

12599404 San Jacinto

PROJECT INFO

PROJECT: San Jacinto Waste Pits S Impoundment

P.O. #:

QUOTE #:

SITE REF: GHD 12599404

TURN AROUND TIME: Standard

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

12599404-2023-002

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS: 2237 S Acadian Thruway, Suite 701, Baton Rouge 70808

PHONE: 225-454-4363 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

PRESERVATIVE

BNO

ANALYSIS & METHOD

Total Metals

SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	Total Metals									QC MS	QC MSD	QC DUP	QTY	REMARKS
12599404-081723-Test-1	8/17/23	0930	G	W	1	X													
12599404-081723-Test-2	8/17/23	0935	G	W	1	X													

8.17.23

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE:	TIME:
GHD	8/17/23	1200	Nelson 08/17/23	12:00		
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT		
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT		
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER:	TEMP: °C	
				TRACKING #:		

Page 1 of 1 blue 12 IR31 client

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 03, 2023

Wells Richard
GHD
2237 S. Acadian Thruway
Suite 701
Baton Rouge, LA 70808

Work Order: **HS23110149**

Laboratory Results for: **San Jacinto Waste Pits - South Impoundment**

Dear Wells Richard,

ALS Environmental received 1 sample(s) on Nov 02, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Anna Kinchen
Project Manager

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
Work Order: HS23110149

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23110149-01	12599404-110223-W-MTK-WTS-5-TSS	Water		02-Nov-2023 15:00	02-Nov-2023 16:15	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **CASE NARRATIVE**
Project: San Jacinto Waste Pits - South Impoundment
Work Order: HS23110149

WetChemistry by Method M2540D

Batch ID: R450844

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **ANALYTICAL REPORT**
Project: San Jacinto Waste Pits - South Impoundment WorkOrder:HS23110149
Sample ID: 12599404-110223-W-MTK-WTS-5-TSS Lab ID:HS23110149-01
Collection Date: 02-Nov-2023 15:00 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL SUSPENDED SOLIDS BY SM 2540D-2011		**Method:M2540D**					Analyst: DC
Suspended Solids (Residue, Non -Filterable)	**17.0**		**2.50**	**2.50**	**mg/L**	1	03-Nov-2023 06:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110149

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R450844 (0)	**Test Name :** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011				**Matrix:** Water	
HS23110149-01	12599404-110223-W-MTK-WTS-5-TSS	02 Nov 2023 15:00			03 Nov 2023 06:30	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110149

QC BATCH REPORT

Batch ID: R450844 (0) **Instrument: Balance1** **Method: TOTAL SUSPENDED SOLIDS BY SM 2540D-2011**

MBLK Sample ID: **WMBLK-11032023** Units: **mg/L** Analysis Date: **03-Nov-2023 06:30**
Client ID: Run ID: **Balance1_450844** SeqNo: **7650392** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	< 2.50	2.50								

LCS Sample ID: **WLCS-11032023** Units: **mg/L** Analysis Date: **03-Nov-2023 06:30**
Client ID: Run ID: **Balance1_450844** SeqNo: **7650391** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	95	2.50	100	0	95.0	85 - 115				

DUP Sample ID: **HS23110147-01DUP** Units: **mg/L** Analysis Date: **03-Nov-2023 06:30**
Client ID: Run ID: **Balance1_450844** SeqNo: **7650388** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	401.3	2.50					400.7	0.166	20	

DUP Sample ID: **HS23102030-01DUP** Units: **mg/L** Analysis Date: **03-Nov-2023 06:30**
Client ID: Run ID: **Balance1_450844** SeqNo: **7650378** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	61.2	2.50					61.2	0	20	

The following samples were analyzed in this batch: HS23110149-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: **HS23110149**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23110149 **Date/Time Received:** **02-Nov-2023 16:15**

Client Name: GHD Baton Rouge **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	02-Nov-2023 16:24	**Reviewed by:**	/S/ Anna Kinchen	03-Nov-2023 13:58
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:059469
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.5UC/2.4C	IR31	
Cooler(s)/Kit(s):	Red		
Date/Time sample(s) sent to storage:	11/2/23		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTIONS | RIGHT PARTNER

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 059469

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis
Purchase Order		Project Name	San Jacinto Waste Pits - South Impoundment	A TSS
Work Order	GHD SSOW: 12599404-2023-003	Project Number	12599404	B
Company Name		Bill To Company	GHD	C
Send Report To	Wells Richard	Invoice Attn		D
Address	2237 S. Acadian Thruway Suite 701	Address	18300 Market St	E
				F
City/State/Zip	Baton Rouge / LA / 70808	City/State/Zip	Channelview / TX / 77530	G
Phone	225-296-6508	Phone		H
Fax		Fax		I
e-Mail Address	Wells.Richard@ghd.com	e-Mail Address		J

HS23110149
GHD
San Jacinto Waste Pits - South Impoundment

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12599404-110223-W-MTK-WTS-5-TSS	11/02/23	1500	W	—	1	X										
2	Temp Blank	—	—	W	—	1											
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Marc Kemper GHD

Shipment Method: Drop-Off

Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☒ 3 BD ☐ 2 BD ☐ 1 BD

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	11/02/23	1615	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			CA 11-2-23 1615
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp.
REP	2.5
1231	

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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RIGHT SOLUTIONS | RIGHT PARTNER

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 21, 2023

Wells Richard
GHD
2237 S. Acadian Thruway
Suite 701
Baton Rouge, LA 70808

Work Order: **HS23110479**

Laboratory Results for: **San Jacinto Waste Pits - South Impoundment**

Dear Wells Richard,

ALS Environmental received 2 sample(s) on Nov 07, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: ANNA.KINCHEN
Anna Kinchen
Project Manager

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
Work Order: HS23110479

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23110479-01	12599404-110723-W-MTK-WTS-5	Water		07-Nov-2023 10:30	07-Nov-2023 15:45	☐
HS23110479-02	12599404-110723-W-MTK-DUP-1	Water		07-Nov-2023 00:00	07-Nov-2023 15:45	☐

Client: GHD **CASE NARRATIVE**
Project: San Jacinto Waste Pits - South Impoundment
Work Order: HS23110479

Metals by Method SW7470A

Batch ID: 203269

Sample ID: HS23110253-05MS

- MS and MSD are for an unrelated sample

Metals by Method SW6020A

Batch ID: 203216

Sample ID: 12599404-110723-W-MTK-DUP-1 (HS23110479-02)

- The reporting limit(s) is/are elevated due to dilution for high concentrations of non-target analytes

Sample ID: 12599404-110723-W-MTK-WTS-5 (HS23110479-01)

- The reporting limit(s) is/are elevated due to dilution for high concentrations of non-target analytes

Sample ID: 12599404-110723-W-MTK-WTS-5 (HS23110479-01MS)

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Barium)

Sample ID: 12599404-110723-W-MTK-WTS-5 (HS23110479-01MSD)

- Zinc failed for MSD but passed on MS and PDS

WetChemistry by Method M2540D

Batch ID: R451263

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: GHD

ANALYTICAL REPORT

Project: San Jacinto Waste Pits - South Impoundment

WorkOrder:HS23110479

Sample ID: 12599404-110723-W-MTK-WTS-5

Lab ID:HS23110479-01

Collection Date: 07-Nov-2023 10:30

Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**		Prep:SW3010A / 08-Nov-2023		Analyst: MSC
Antimony	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Arsenic	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Barium	**0.533**		**0.0200**	**mg/L**	5	09-Nov-2023 21:37
Cadmium	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Chromium	ND		0.0200	mg/L	5	09-Nov-2023 21:37
Copper	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Lead	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Nickel	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Selenium	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Silver	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Thallium	ND		0.0100	mg/L	5	09-Nov-2023 21:37
Zinc	**0.121**		**0.0200**	**mg/L**	5	09-Nov-2023 21:37
MERCURY BY SW7470A		**Method:SW7470A**		Prep:SW7470A / 09-Nov-2023		Analyst: JS
Mercury	ND		0.000200	mg/L	1	09-Nov-2023 17:39
TOTAL SUSPENDED SOLIDS BY SM 2540D-2011		**Method:M2540D**				Analyst: DC
Suspended Solids (Residue, Non -Filterable)	**21.3**		**2.50**	**mg/L**	1	08-Nov-2023 07:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Houston, US Date: 21-Nov-23

Client: GHD

ANALYTICAL REPORT

Project: San Jacinto Waste Pits - South Impoundment

WorkOrder:HS23110479

Sample ID: 12599404-110723-W-MTK-DUP-1

Lab ID:HS23110479-02

Collection Date: 07-Nov-2023 00:00

Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**		Prep:SW3010A / 08-Nov-2023		Analyst: MSC
Antimony	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Arsenic	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Barium	**0.376**		**0.0200**	**mg/L**	5	09-Nov-2023 21:54
Cadmium	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Chromium	ND		0.0200	mg/L	5	09-Nov-2023 21:54
Copper	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Lead	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Nickel	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Selenium	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Silver	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Thallium	ND		0.0100	mg/L	5	09-Nov-2023 21:54
Zinc	**0.0876**		**0.0200**	**mg/L**	5	09-Nov-2023 21:54
MERCURY BY SW7470A		**Method:SW7470A**		Prep:SW7470A / 09-Nov-2023		Analyst: JS
Mercury	ND		0.000200	mg/L	1	09-Nov-2023 17:45
TOTAL SUSPENDED SOLIDS BY SM 2540D-2011		**Method:M2540D**				Analyst: DC
Suspended Solids (Residue, Non -Filterable)	**8.40**		**2.50**	**mg/L**	1	08-Nov-2023 07:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

Batch ID: 203216 **Start Date:** 08 Nov 2023 13:00 **End Date:** 08 Nov 2023 13:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23110479-01		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2
HS23110479-02		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2

Batch ID: 203269 **Start Date:** 09 Nov 2023 09:30 **End Date:** 09 Nov 2023 09:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23110479-01		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2
HS23110479-02		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 203216 (0)	**Test Name :** ICP-MS METALS BY SW6020A				**Matrix:** Water	
HS23110479-01	12599404-110723-W-MTK-WTS-5	07 Nov 2023 10:30		08 Nov 2023 13:00	09 Nov 2023 21:37	5
HS23110479-02	12599404-110723-W-MTK-DUP-1	07 Nov 2023 00:00		08 Nov 2023 13:00	09 Nov 2023 21:54	5
Batch ID: 203269 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS23110479-01	12599404-110723-W-MTK-WTS-5	07 Nov 2023 10:30		09 Nov 2023 09:30	09 Nov 2023 17:39	1
HS23110479-02	12599404-110723-W-MTK-DUP-1	07 Nov 2023 00:00		09 Nov 2023 09:30	09 Nov 2023 17:45	1
Batch ID: R451263 (0)	**Test Name :** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011				**Matrix:** Water	
HS23110479-01	12599404-110723-W-MTK-WTS-5	07 Nov 2023 10:30			08 Nov 2023 07:30	1
HS23110479-02	12599404-110723-W-MTK-DUP-1	07 Nov 2023 00:00			08 Nov 2023 07:30	1

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

QC BATCH REPORT

Batch ID: 203216 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MBLK Sample ID: **MBLK-203216** Units: **mg/L** Analysis Date: **10-Nov-2023 11:26**
Client ID: Run ID: **ICPMS06_451465** SeqNo: **7666056** PrepDate: **08-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Cadmium	ND	0.00200								
Chromium	ND	0.00400								
Copper	ND	0.00200								
Lead	ND	0.00200								
Nickel	ND	0.00200								
Selenium	ND	0.00200								
Silver	ND	0.00200								
Thallium	ND	0.00200								
Zinc	ND	0.00400								

LCS Sample ID: **LCS-203216** Units: **mg/L** Analysis Date: **09-Nov-2023 21:03**
Client ID: Run ID: **ICPMS06_451362** SeqNo: **7665798** PrepDate: **08-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04654	0.00200	0.05	0	93.1	80 - 120				
Arsenic	0.04804	0.00200	0.05	0	96.1	80 - 120				
Barium	0.04794	0.00400	0.05	0	95.9	80 - 120				
Cadmium	0.04769	0.00200	0.05	0	95.4	80 - 120				
Chromium	0.04793	0.00400	0.05	0	95.9	80 - 120				
Copper	0.04926	0.00200	0.05	0	98.5	80 - 120				
Lead	0.04919	0.00200	0.05	0	98.4	80 - 120				
Nickel	0.04973	0.00200	0.05	0	99.5	80 - 120				
Selenium	0.04758	0.00200	0.05	0	95.2	80 - 120				
Silver	0.04745	0.00200	0.05	0	94.9	80 - 120				
Thallium	0.04309	0.00200	0.05	0	86.2	80 - 120				
Zinc	0.05123	0.00400	0.05	0	102	80 - 120				

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

QC BATCH REPORT

Batch ID: 203216 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MS Sample ID: **HS23110479-01MS** Units: **mg/L** Analysis Date: **09-Nov-2023 21:41**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **ICPMS06_451362** SeqNo: **7665809** PrepDate: **08-Nov-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04988	0.0100	0.05	0.005223	89.3	80 - 120				
Arsenic	0.0578	0.0100	0.05	0.00788	99.8	80 - 120				
Barium	0.5172	0.0200	0.05	0.5326	-30.8	80 - 120				SO
Cadmium	0.04837	0.0100	0.05	0.000062	96.6	80 - 120				
Chromium	0.0623	0.0200	0.05	0.0105	104	80 - 120				
Copper	0.04903	0.0100	0.05	0.001883	94.3	80 - 120				
Lead	0.04952	0.0100	0.05	0.000708	97.6	80 - 120				
Nickel	0.05849	0.0100	0.05	0.009712	97.5	80 - 120				
Selenium	0.05126	0.0100	0.05	0.002738	97.0	80 - 120				
Silver	0.04654	0.0100	0.05	0.00001	93.1	80 - 120				
Thallium	0.0526	0.0100	0.05	0.000296	105	80 - 120				
Zinc	0.1636	0.0200	0.05	0.1209	85.5	80 - 120				

MSD Sample ID: **HS23110479-01MSD** Units: **mg/L** Analysis Date: **09-Nov-2023 21:43**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **ICPMS06_451362** SeqNo: **7665810** PrepDate: **08-Nov-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04945	0.0100	0.05	0.005223	88.5	80 - 120	0.04988	0.856	20	
Arsenic	0.05891	0.0100	0.05	0.00788	102	80 - 120	0.0578	1.9	20	
Barium	0.5333	0.0200	0.05	0.5326	1.48	80 - 120	0.5172	3.07	20	SO
Cadmium	0.04992	0.0100	0.05	0.000062	99.7	80 - 120	0.04837	3.16	20	
Chromium	0.05888	0.0200	0.05	0.0105	96.8	80 - 120	0.0623	5.65	20	
Copper	0.04849	0.0100	0.05	0.001883	93.2	80 - 120	0.04903	1.11	20	
Lead	0.0508	0.0100	0.05	0.000708	100	80 - 120	0.04952	2.57	20	
Nickel	0.05961	0.0100	0.05	0.009712	99.8	80 - 120	0.05849	1.91	20	
Selenium	0.0519	0.0100	0.05	0.002738	98.3	80 - 120	0.05126	1.24	20	
Silver	0.04844	0.0100	0.05	0.00001	96.9	80 - 120	0.04654	3.99	20	
Thallium	0.05452	0.0100	0.05	0.000296	108	80 - 120	0.0526	3.59	20	
Zinc	0.1577	0.0200	0.05	0.1209	73.6	80 - 120	0.1636	3.69	20	S

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

QC BATCH REPORT

Batch ID: 203216 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

PDS Sample ID: **HS23110479-01PDS** Units: **mg/L** Analysis Date: **09-Nov-2023 21:47**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **ICPMS06_451362** SeqNo: **7665812** PrepDate: **08-Nov-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.9416	0.0100	1	0.005223	93.6	75 - 125				
Arsenic	1.052	0.0100	1	0.00788	104	75 - 125				
Barium	1.107	0.0200	0.5	0.5326	115	75 - 125				
Cadmium	1.02	0.0100	1	0.000062	102	75 - 125				
Chromium	1.025	0.0200	1	0.0105	101	75 - 125				
Copper	1.005	0.0100	1	0.001883	100	75 - 125				
Lead	1.024	0.0100	1	0.000708	102	75 - 125				
Nickel	0.9811	0.0100	1	0.009712	97.1	75 - 125				
Selenium	1.037	0.0100	1	0.002738	103	75 - 125				
Silver	0.9631	0.0100	1	0.00001	96.3	75 - 125				
Thallium	1.099	0.0100	1	0.000296	110	75 - 125				
Zinc	1.036	0.0200	1	0.1209	91.5	75 - 125				

SD Sample ID: **HS23110479-01SD** Units: **mg/L** Analysis Date: **09-Nov-2023 21:39**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **ICPMS06_451362** SeqNo: **7665808** PrepDate: **08-Nov-2023** DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	ND	0.0500					0.005223	0	10	
Arsenic	0.01355	0.0500					0.00788	0	10	J
Cadmium	ND	0.0500					0.000062	0	10	
Chromium	0.02712	0.100					0.0105	0	10	J
Copper	ND	0.0500					0.001883	0	10	
Lead	ND	0.0500					0.000708	0	10	
Nickel	ND	0.0500					0.009712	0	10	
Selenium	ND	0.0500					0.002738	0	10	
Silver	ND	0.0500					0.00001	0	10	
Thallium	ND	0.0500					0.000296	0	10	
Zinc	0.1284	0.100					0.1209	6.25	10	

SD Sample ID: **HS23110479-01SD** Units: **mg/L** Analysis Date: **10-Nov-2023 11:34**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **ICPMS06_451465** SeqNo: **7666060** PrepDate: **08-Nov-2023** DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.5094	0.100					0.5166	1.4	10	

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

QC BATCH REPORT

Batch ID: 203216 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

The following samples were analyzed in this batch: HS23110479-01 HS23110479-02

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

QC BATCH REPORT

Batch ID: 203269 (0) **Instrument: HG04** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-203269** Units: **mg/L** Analysis Date: **09-Nov-2023 17:16**
Client ID: Run ID: **HG04_451411** SeqNo: **7665149** PrepDate: **09-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.000200								

LCS Sample ID: **LCS-203269** Units: **mg/L** Analysis Date: **09-Nov-2023 17:17**
Client ID: Run ID: **HG04_451411** SeqNo: **7665150** PrepDate: **09-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00557	0.000200	0.005	0	111	80 - 120				

MS Sample ID: **HS23110479-01MS** Units: **mg/L** Analysis Date: **09-Nov-2023 17:41**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **HG04_451411** SeqNo: **7665162** PrepDate: **09-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00532	0.000200	0.005	-0.000021	107	75 - 125				

MS Sample ID: **HS23110253-05MS** Units: **mg/L** Analysis Date: **09-Nov-2023 19:27**
Client ID: Run ID: **HG04_451411** SeqNo: **7665205** PrepDate: **09-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00103	0.000200	0.005	-0.000033	21.3	75 - 125				S

MSD Sample ID: **HS23110479-01MSD** Units: **mg/L** Analysis Date: **09-Nov-2023 17:43**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **HG04_451411** SeqNo: **7665163** PrepDate: **09-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00522	0.000200	0.005	-0.000021	105	75 - 125	0.00532	1.9	20	

MSD Sample ID: **HS23110253-05MSD** Units: **mg/L** Analysis Date: **09-Nov-2023 17:26**
Client ID: Run ID: **HG04_451411** SeqNo: **7665155** PrepDate: **09-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00118	0.000200	0.005	-0.000033	24.3	75 - 125	0.00103	13.6	20	S

The following samples were analyzed in this batch: HS23110479-01 HS23110479-02

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: HS23110479

QC BATCH REPORT

Batch ID: R451263 (0) **Instrument:** Balance1 **Method:** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011

MBLK Sample ID: **WMBLK-11082023** Units: **mg/L** Analysis Date: **08-Nov-2023 07:30**
Client ID: Run ID: **Balance1_451263** SeqNo: **7661168** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	ND	2.50								

LCS Sample ID: **WLCS-11082023** Units: **mg/L** Analysis Date: **08-Nov-2023 07:30**
Client ID: Run ID: **Balance1_451263** SeqNo: **7661167** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	91	2.50	100	0	91.0	85 - 115				

DUP Sample ID: **HS23110479-01DUP** Units: **mg/L** Analysis Date: **08-Nov-2023 07:30**
Client ID: **12599404-110723-W-MTK-WTS-5** Run ID: **Balance1_451263** SeqNo: **7661165** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	22	2.50					21.33	3.08	20	

DUP Sample ID: **HS23110261-01DUP** Units: **mg/L** Analysis Date: **08-Nov-2023 07:30**
Client ID: Run ID: **Balance1_451263** SeqNo: **7661150** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	35.2	2.50					35.4	0.567	20	

The following samples were analyzed in this batch: HS23110479-01 HS23110479-02

Client: GHD
Project: San Jacinto Waste Pits - South Impoundment
WorkOrder: **HS23110479**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

ALS Houston, US Date: 21-Nov-23

Sample Receipt Checklist

Work Order ID: HS23110479 **Date/Time Received:** **07-Nov-2023 15:45**

Client Name: GHD Baton Rouge **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	07-Nov-2023 17:26	**Reviewed by:**	/S/ Anna Kinchen	09-Nov-2023 09:49
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:059471
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.7UC/1.6C	IR31	
Cooler(s)/Kit(s):	Red		
Date/Time sample(s) sent to storage:	11/7/23		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 059471

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis
Purchase Order		Project Name	San Jacinto Waste Pits S. Impoundment	A TSS SM 2540
Work Order	GHD SSOW: 12599404-2022-001-ALS	Project Number	12599404	B Total Metals SW-846 6010/7470
Company Name	GHD	Bill To Company	GHD	C
Send Report To	Wells Richard	Invoice Attn		D
Address		Address	18300 Market St	E
				F
City/State/Zip		City/State/Zip	Channelview, TX	G
Phone		Phone	—	H
Fax		Fax	—	I
e-Mail Address	Wells.Richard@ghd.com	e-Mail Address	—	J

HS23110479
GHD
San Jacinto Waste Pits - South Impoundment

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12599404-110723-W-MTK-WTS-5	11/07/23	1030	W	None, 2	6	X	X	← MS/MSD								
2	12599404-110723-W-MTK-DUP-1	11/07/23	—	W	None, 2	2	X	X									
3	Temp Blank	—	—	W	—	1											
4																	
5																	
6																	
7																	
8																	
9																	
10																	

11/7/23

Sampler(s) Please Print & Sign	Shipment Method	Turnaround Time in Business Days (BD)	Results Due Date:
Marc Kemper GHD	In-Person	☐ 10 BD ☐ 5 BD ☒ 3 BD ☐ 2 BD ☐ 1 BD	

Relinquished by:	Date:	Time:	Received by:	Notes:
	11/7/23	1545		
Relinquished by:	Date:	Time:	Received by (Laboratory): CA 11-7-23 1545	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
RED	1.7	☐ Level II Std QC ☐ TRRP Checklist
1821		☐ Level III Std QC/Raw Data ☐ TRRP Level IV
		☐ Level IV SW846/CLP
		☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

CLF-001

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 20, 2023

Wells Richard
GHD
2237 S. Acadian Thruway
Suite 701
Baton Rouge, LA 70808

Work Order: **HS23111101**

Laboratory Results for: **San Jacinto River Waste Pits SI**

Dear Wells Richard,

ALS Environmental received 1 sample(s) on Nov 16, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Anna Kinchen
Project Manager

Client: GHD
Project: San Jacinto River Waste Pits SI
Work Order: HS23111101

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23111101-01	12599404-111623-W-MTK-WTS-6	Water		16-Nov-2023 13:30	16-Nov-2023 15:50	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD **CASE NARRATIVE**
Project: San Jacinto River Waste Pits SI
Work Order: HS23111101

Metals by Method SW7470A

Batch ID: 203723

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A

Batch ID: 203644

Sample ID: 12599404-111623-W-MTK-WTS-6 (HS23111101-01MSD)

- Thallium failed for MSD but passed on MS and PDS

WetChemistry by Method M2540D

Batch ID: R452207

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
Sample ID: 12599404-111623-W-MTK-WTS-6
Collection Date: 16-Nov-2023 13:30

ANALYTICAL REPORT
WorkOrder:HS23111101
Lab ID:HS23111101-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**		Prep:SW3010A / 17-Nov-2023		Analyst: MSC
Antimony	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Arsenic	**0.00254**		**0.00200**	**mg/L**	1	17-Nov-2023 14:03
Barium	**0.254**		**0.00400**	**mg/L**	1	17-Nov-2023 14:03
Cadmium	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Chromium	ND		0.00400	mg/L	1	17-Nov-2023 14:03
Copper	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Lead	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Nickel	**0.00647**		**0.00200**	**mg/L**	1	17-Nov-2023 14:03
Selenium	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Silver	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Thallium	ND		0.00200	mg/L	1	17-Nov-2023 14:03
Zinc	**0.0169**		**0.00400**	**mg/L**	1	17-Nov-2023 14:03
MERCURY BY SW7470A		**Method:SW7470A**		Prep:SW7470A / 18-Nov-2023		Analyst: JS
Mercury	ND		0.000200	mg/L	1	18-Nov-2023 14:06
TOTAL SUSPENDED SOLIDS BY SM 2540D-2011		**Method:M2540D**				Analyst: DC
Suspended Solids (Residue, Non -Filterable)	**5.60**		**2.50**	**mg/L**	1	18-Nov-2023 11:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

Batch ID: 203644 **Start Date:** 17 Nov 2023 08:30 **End Date:** 17 Nov 2023 08:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23111101-01		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2

Batch ID: 203723 **Start Date:** 18 Nov 2023 08:30 **End Date:** 18 Nov 2023 08:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23111101-01		10 (mL)	10 (mL)	1	500 mL plastic, HNO3 to pH<2

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 203644 (0)	**Test Name :** ICP-MS METALS BY SW6020A				**Matrix:** Water	
HS23111101-01	12599404-111623-W-MTK-WTS-6	16 Nov 2023 13:30		17 Nov 2023 08:30	17 Nov 2023 14:03	1
Batch ID: 203723 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS23111101-01	12599404-111623-W-MTK-WTS-6	16 Nov 2023 13:30		18 Nov 2023 08:30	18 Nov 2023 14:06	1
Batch ID: R452207 (0)	**Test Name :** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011				**Matrix:** Water	
HS23111101-01	12599404-111623-W-MTK-WTS-6	16 Nov 2023 13:30			18 Nov 2023 11:00	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

QC BATCH REPORT

Batch ID: 203644 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MBLK Sample ID: **MBLK-203644** Units: **mg/L** Analysis Date: **17-Nov-2023 14:00**
Client ID: Run ID: **ICPMS06_452090** SeqNo: **7680625** PrepDate: **17-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	ND	0.00200								
Arsenic	ND	0.00200								
Barium	ND	0.00400								
Cadmium	ND	0.00200								
Chromium	ND	0.00400								
Copper	ND	0.00200								
Lead	ND	0.00200								
Nickel	ND	0.00200								
Selenium	ND	0.00200								
Silver	ND	0.00200								
Thallium	ND	0.00200								
Zinc	ND	0.00400								

LCS Sample ID: **LCS-203644** Units: **mg/L** Analysis Date: **17-Nov-2023 14:02**
Client ID: Run ID: **ICPMS06_452090** SeqNo: **7680626** PrepDate: **17-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04934	0.00200	0.05	0	98.7	80 - 120				
Arsenic	0.04464	0.00200	0.05	0	89.3	80 - 120				
Barium	0.04841	0.00400	0.05	0	96.8	80 - 120				
Cadmium	0.04669	0.00200	0.05	0	93.4	80 - 120				
Chromium	0.04655	0.00400	0.05	0	93.1	80 - 120				
Copper	0.04914	0.00200	0.05	0	98.3	80 - 120				
Lead	0.04575	0.00200	0.05	0	91.5	80 - 120				
Nickel	0.04811	0.00200	0.05	0	96.2	80 - 120				
Selenium	0.04422	0.00200	0.05	0	88.4	80 - 120				
Silver	0.04688	0.00200	0.05	0	93.8	80 - 120				
Zinc	0.05111	0.00400	0.05	0	102	80 - 120				

LCS Sample ID: **LCS-203644** Units: **mg/L** Analysis Date: **17-Nov-2023 14:27**
Client ID: Run ID: **ICPMS06_452090** SeqNo: **7680833** PrepDate: **17-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Thallium	0.04599	0.00200	0.05	0	92.0	80 - 120				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

QC BATCH REPORT

Batch ID: 203644 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MS Sample ID: **HS23111101-01MS** Units: **mg/L** Analysis Date: **17-Nov-2023 14:07**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **ICPMS06_452090** SeqNo: **7680629** PrepDate: **17-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05194	0.00200	0.05	0.001985	99.9	80 - 120				
Arsenic	0.05275	0.00200	0.05	0.002545	100	80 - 120				
Barium	0.2957	0.00400	0.05	0.2539	83.6	80 - 120				O
Cadmium	0.0504	0.00200	0.05	0.000013	101	80 - 120				
Chromium	0.05283	0.00400	0.05	0.002014	102	80 - 120				
Copper	0.04944	0.00200	0.05	0.000489	97.9	80 - 120				
Lead	0.05142	0.00200	0.05	0.000101	103	80 - 120				
Nickel	0.05459	0.00200	0.05	0.006469	96.2	80 - 120				
Selenium	0.05093	0.00200	0.05	0.001218	99.4	80 - 120				
Silver	0.04974	0.00200	0.05	0.000006	99.5	80 - 120				
Thallium	0.04083	0.00200	0.05	0.000765	80.1	80 - 120				
Zinc	0.06693	0.00400	0.05	0.01692	100	80 - 120				

MSD Sample ID: **HS23111101-01MSD** Units: **mg/L** Analysis Date: **17-Nov-2023 14:09**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **ICPMS06_452090** SeqNo: **7680630** PrepDate: **17-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0489	0.00200	0.05	0.001985	93.8	80 - 120	0.05194	6.04	20	
Arsenic	0.05043	0.00200	0.05	0.002545	95.8	80 - 120	0.05275	4.5	20	
Barium	0.3041	0.00400	0.05	0.2539	100	80 - 120	0.2957	2.79	20	O
Cadmium	0.05024	0.00200	0.05	0.000013	100	80 - 120	0.0504	0.334	20	
Chromium	0.05029	0.00400	0.05	0.002014	96.5	80 - 120	0.05283	4.94	20	
Copper	0.0479	0.00200	0.05	0.000489	94.8	80 - 120	0.04944	3.15	20	
Lead	0.05022	0.00200	0.05	0.000101	100	80 - 120	0.05142	2.36	20	
Nickel	0.05423	0.00200	0.05	0.006469	95.5	80 - 120	0.05459	0.669	20	
Selenium	0.04787	0.00200	0.05	0.001218	93.3	80 - 120	0.05093	6.18	20	
Silver	0.04637	0.00200	0.05	0.000006	92.7	80 - 120	0.04974	7.02	20	
Thallium	0.0402	0.00200	0.05	0.000765	78.9	80 - 120	0.04083	1.55	20	S
Zinc	0.06528	0.00400	0.05	0.01692	96.7	80 - 120	0.06693	2.5	20	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

QC BATCH REPORT

Batch ID: 203644 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

PDS Sample ID: **HS23111101-01PDS** Units: **mg/L** Analysis Date: **17-Nov-2023 14:11**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **ICPMS06_452090** SeqNo: **7680631** PrepDate: **17-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0942	0.00200	0.1	0.001985	92.2	75 - 125				
Arsenic	0.09927	0.00200	0.1	0.002545	96.7	75 - 125				
Barium	0.3488	0.00400	0.1	0.2539	94.8	75 - 125				
Cadmium	0.09757	0.00200	0.1	0.000013	97.6	75 - 125				
Chromium	0.09812	0.00400	0.1	0.002014	96.1	75 - 125				
Copper	0.09335	0.00200	0.1	0.000489	92.9	75 - 125				
Lead	0.09601	0.00200	0.1	0.000101	95.9	75 - 125				
Nickel	0.09883	0.00200	0.1	0.006469	92.4	75 - 125				
Selenium	0.09608	0.00200	0.1	0.001218	94.9	75 - 125				
Silver	0.09446	0.00200	0.1	0.000006	94.5	75 - 125				
Thallium	0.1001	0.00200	0.1	0.000765	99.4	75 - 125				
Zinc	0.1109	0.00400	0.1	0.01692	94.0	75 - 125				

SD Sample ID: **HS23111101-01SD** Units: **mg/L** Analysis Date: **17-Nov-2023 14:05**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **ICPMS06_452090** SeqNo: **7680628** PrepDate: **17-Nov-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	0.002294	0.0100					0.001985	0	10	J
Arsenic	0.002544	0.0100					0.002545	0	10	J
Barium	0.2572	0.0200					0.2539	1.3	10	
Cadmium	ND	0.0100					0.000013	0	10	
Chromium	ND	0.0200					0.002014	0	10	
Copper	ND	0.0100					0.000489	0	10	
Lead	ND	0.0100					0.000101	0	10	
Nickel	0.007069	0.0100					0.006469	0	10	J
Selenium	ND	0.0100					0.001218	0	10	
Silver	ND	0.0100					0.000006	0	10	
Thallium	ND	0.0100					0.000765	0	10	
Zinc	0.02384	0.0200					0.01692	0	10	

The following samples were analyzed in this batch: HS23111101-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

QC BATCH REPORT

Batch ID: 203723 (0) **Instrument: HG04** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-203723** Units: **mg/L** Analysis Date: **18-Nov-2023 13:17**
Client ID: Run ID: **HG04_452208** SeqNo: **7682447** PrepDate: **18-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.000200								

LCS Sample ID: **LCS-203723** Units: **mg/L** Analysis Date: **18-Nov-2023 13:38**
Client ID: Run ID: **HG04_452208** SeqNo: **7682458** PrepDate: **18-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0048	0.000200	0.005	0	96.0	80 - 120				

MS Sample ID: **HS23111101-01MS** Units: **mg/L** Analysis Date: **18-Nov-2023 14:08**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **HG04_452208** SeqNo: **7682474** PrepDate: **18-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00461	0.000200	0.005	0.000001	92.2	75 - 125				

MSD Sample ID: **HS23111101-01MSD** Units: **mg/L** Analysis Date: **18-Nov-2023 14:09**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **HG04_452208** SeqNo: **7682475** PrepDate: **18-Nov-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00459	0.000200	0.005	0.000001	91.8	75 - 125	0.00461	0.435	20	

The following samples were analyzed in this batch: HS23111101-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: HS23111101

QC BATCH REPORT

Batch ID: R452207 (0) **Instrument:** Balance1 **Method:** TOTAL SUSPENDED SOLIDS BY SM 2540D-2011

MBLK Sample ID: **WMBLK-111823** Units: **mg/L** Analysis Date: **18-Nov-2023 11:00**
Client ID: Run ID: **Balance1_452207** SeqNo: **7682299** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	ND	2.50								

LCS Sample ID: **WLCS-11182023** Units: **mg/L** Analysis Date: **18-Nov-2023 11:00**
Client ID: Run ID: **Balance1_452207** SeqNo: **7682298** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	93	2.50	100	0	93.0	85 - 115				

DUP Sample ID: **HS23111101-01DUP** Units: **mg/L** Analysis Date: **18-Nov-2023 11:00**
Client ID: **12599404-111623-W-MTK-WTS-6** Run ID: **Balance1_452207** SeqNo: **7682297** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	5.4	2.50					5.6	3.64	20	

DUP Sample ID: **HS23110981-01DUP** Units: **mg/L** Analysis Date: **18-Nov-2023 11:00**
Client ID: Run ID: **Balance1_452207** SeqNo: **7682286** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Filterable)	19.2	2.50					19	1.05	20	

The following samples were analyzed in this batch: HS23111101-01

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Client: GHD
Project: San Jacinto River Waste Pits SI
WorkOrder: **HS23111101**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

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Sample Receipt Checklist

Work Order ID: HS23111101 **Date/Time Received:** **16-Nov-2023 15:50**

Client Name: GHD Baton Rouge **Received by:** **Paresh M. Giga**

Completed By:	/S/ Paresh M. Giga	16-Nov-2023 16:01	**Reviewed by:**	/S/ Anna Kinchen	20-Nov-2023 15:28
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **Client**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:059473
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.5C/1.4C U/C	IR31	
Cooler(s)/Kit(s):	Red		
Date/Time sample(s) sent to storage:	11/16/23 16:05		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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Cincinnati, OH +1 513 733 5336 | Fort Collins, CO +1 970 490 1511 | Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168
Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 059473

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	San Jacinto River Waste Pits S.I.	A	TSS SM 2540
Work Order	GHD SSOW:12599404-2023-002-ALS	Project Number	12599404	B	Total Metals SW-846 6010/7470
Company Name	GHD	Bill To Company	GHD	C	
Send Report To	Wells, Richard	Invoice Attn		D	
Address	GHD-Baton Rouge	Address	18300 Market St	E	
				F	
City/State/Zip		City/State/Zip	Channelview, TX	G	
Phone		Phone		H	
Fax		Fax		I	
e-Mail Address	Wells.Richard@ghd.com	e-Mail Address		J	

HS23111101
GHD
San Jacinto River Waste Pits SI

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12599404-111623-W-MTK-WTS-6	11/16/23	13:30	W	2, none	2	X	X									
2	Temp Blank	—	—	W	—	1											
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

11/16/23

Sampler(s) Please Print & Sign: Marc Kemper

Shipment Method: In-Person

Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☒ 3 BD ☐ 2 BD ☐ 1 BD

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
GHD	11-16-23	15:50	—	
Relinquished by: —	Date:	Time:	Received by (Laboratory): 11/16/23 15:50	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.
RB	0.1°C
	1.5°
	-431
	CF-0.1°

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-004; PO# 340-009759

SGS Job Number: JD64698

Sampling Date: 04/27/23

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Alice.Harpole@ghd.com; Kathleen.Shaw@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: 32

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about
how we can serve you better at:
EHS.US.CustomerCare@sgs.com

May 22, 2023

Ms. Kathleen Shaw
GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079

Re: SGS North America – Dayton, NJ Jobs # JD64698 – Reissues

Dear Ms. Shaw,

The final reports for SGS jobs number JD64698 have been edited to reflect corrections to the final results. These edits have been incorporated into the revised report which is attached.

Specifically, the client ID has been revised for sample JD64698-1 and -2 due to login error. The attached revised report incorporates these revisions.

SGS apologizes for this occurrence and for any inconvenience this situation may have caused. Please contact me at 732-329-0200 if I can be of further assistance in this matter.

Sincerely,

Report Department

SGS North America Inc

CONTINUOUS SERVICE IMPROVEMENT!

Our goal is to continuously improve our service to you. Please share your ideas about how we can serve you better at EHS.US.CustomerCare@sgs.com. Your feedback is appreciated!

SGS

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD64698

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-004; PO# 340-009759

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD64698-1	04/27/23	15:05		04/28/23	AQ	Water	12599404-042723-W-MTK-WTS-1
JD64698-1F	04/27/23	15:05		04/28/23	AQ	Water Filtered	12599404-042723-W-MTK-WTS-1
JD64698-2	04/27/23	13:55		04/28/23	AQ	Water	12599404-042723-W-MTK-WTS-1-TSS

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD64698
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	5/5/2023 1:45:19 PM

On 04/28/2023, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 0.9 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD64698 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP39320

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD64454-10MS, JD64454-10MSD, JD64454-10SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Chromium, Copper, Silver, Thallium, Zinc are outside control limits for sample MP39320-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP39320-SD1 for Zinc: Serial dilution indicates possible matrix interference.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP39309

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD64589-9MS, JD64589-9MSD were used as the QC samples for the metals analysis.

General Chemistry By Method SM2540 D-11/15

Matrix: AQ **Batch ID:** GN40838

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD64595-1DUP were used as the QC samples for the Solids, Total Suspended analysis.
- JD64698-2 for Solids, Total Suspended: Volume was reduced from 1 liter due to nature of sample matrix.
- JD64698-1 for Solids, Total Suspended: Volume was reduced from 1 liter due to nature of sample matrix.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JD64698
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 04/27/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD64698-1	**12599404-042723-W-MTK-WTS-1**					
Barium		217	200		ug/l	SW846 6010D
Mercury		0.22	0.20		ug/l	SW846 7470A
JD64698-1F	**12599404-042723-W-MTK-WTS-1**					
Arsenic		3.2	3.0		ug/l	SW846 6010D
Barium		222	200		ug/l	SW846 6010D
Mercury		0.27	0.20		ug/l	SW846 7470A
JD64698-2	**12599404-042723-W-MTK-WTS-1-TSS**					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 12599404-042723-W-MTK-WTS-1
Lab Sample ID: JD64698-1
Matrix: AQ - Water
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 04/27/23
Date Received: 04/28/23
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 3.0	3.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	217	200	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 3.0	3.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	0.22	0.20	ug/l	1	04/30/23	05/01/23	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Thallium	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA54091
(2) Instrument QC Batch: MA54103
(3) Prep QC Batch: MP39309
(4) Prep QC Batch: MP39320

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-042723-W-MTK-WTS-1		
Lab Sample ID:	JD64698-1	**Date Sampled:**	04/27/23
Matrix:	AQ - Water	**Date Received:**	04/28/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended [a]	< 4.0	4.0	mg/l	1	04/28/23 12:20	AS	SM2540 D-11/15

(a) Volume was reduced from 1 liter due to nature of sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-042723-W-MTK-WTS-1
Lab Sample ID: JD64698-1F
Matrix: AQ - Water Filtered
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 04/27/23
Date Received: 04/28/23
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	3.2	3.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	222	200	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 3.0	3.0	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	0.27	0.20	ug/l	1	04/30/23	05/01/23	LM	SW846 7470A [1]	SW846 7470A [3]
Nickel	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Thallium	< 10	10	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	05/01/23	05/02/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA54091
(2) Instrument QC Batch: MA54103
(3) Prep QC Batch: MP39309
(4) Prep QC Batch: MP39320

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-042723-W-MTK-WTS-1-TSS		
Lab Sample ID:	JD64698-2	**Date Sampled:**	04/27/23
Matrix:	AQ - Water	**Date Received:**	04/28/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended [a]	< 4.0	4.0	mg/l	1	04/28/23 12:20	AS	SM2540 D-11/15

(a) Volume was reduced from 1 liter due to nature of sample matrix.

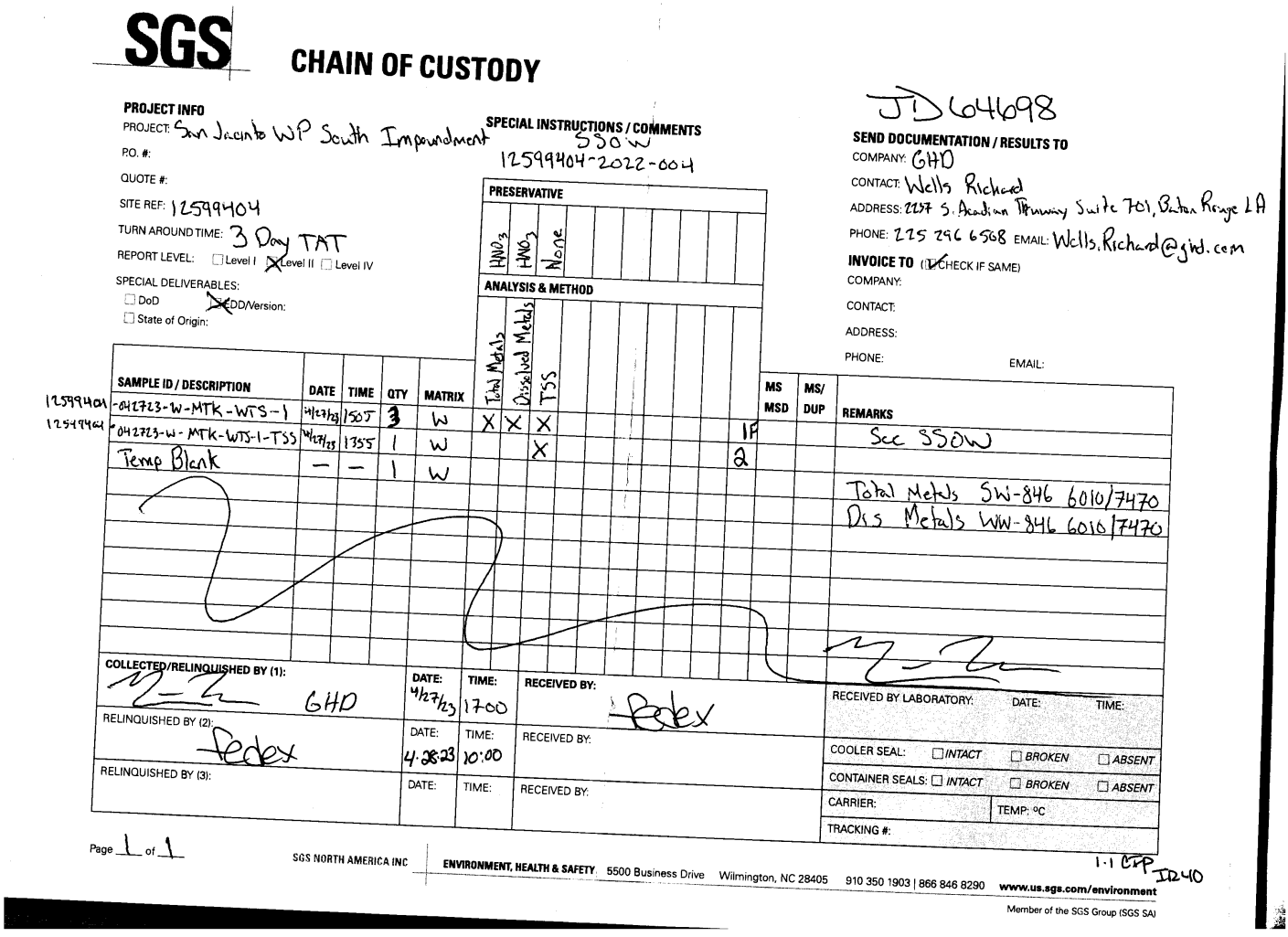
RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS CHAIN OF CUSTODY

JD64698

PROJECT INFO

PROJECT: San Jacinto WP South Impoundment

P.O. #:

QUOTE #:

SITE REF: 12599404

TURN AROUND TIME: 3 Day TAT

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SSOW
12599404-2022-004

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS: 2257 S. Acadian Thruway Suite 701, Baton Rouge LA

PHONE: 225 296 6568 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

	SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Total Metals	Dissolved Metals	TSS		MS MSD	MS/ DUP	REMARKS
12599404	-042723-W-MTK-WTS-1	4/27/23	1505	3	W	X	X	X	1P			See SSOW
12599404	-042723-W-MTK-WTS-1-TSS	4/27/23	1355	1	W			X	2			
	Temp Blank	—	—	1	W							Total Metals SW-846 6010/7470
												Dis Metals WW-846 6010/7470

PRESERVATIVE: HNO_3, HNO_3, None

ANALYSIS & METHOD

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
GHD	4/27/23	1700	Fedex
RELINQUISHED BY (2): Fedex	DATE: 4.28.23	TIME: 10:00	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: TIME:

COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT

CARRIER: TEMP: °C

TRACKING #:

1.1 CIP IR40

Page 1 of 1

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Member of the SGS Group (SGS SA)

5.1

5

JD64698: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD64698 **Client:** GHD **Project:** SAN JANICTO WP SOUTH IMPOUNDMEN

Date / Time Received: 4/28/2023 10:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (1.1);

Cooler Temps (Corrected) °C: Cooler 1: (0.9);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39309 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/30/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.034	.095	0.053	<0.20

Associated samples MP39309: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39309 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/30/23

Metal	JD64589-9 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.061	2.0	2	97.0	75-125

Associated samples MP39309: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39309 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/30/23

Metal	JD64589-9 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.061	2.0	2	97.0	0.0	20

Associated samples MP39309: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39309 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/30/23

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	1.9	2	95.0	80-120

Associated samples MP39309: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	27	150		
Antimony	6.0	2.2	4.7	-0.20	<6.0
Arsenic	3.0	1.3	2.8	-0.20	<3.0
Barium	200	1	13	0.40	<200
Beryllium	1.0	.2	.5		
Bismuth	20	2.1	8.6		
Boron	100	1	10		
Cadmium	3.0	.2	1	0.0	<3.0
Calcium	5000	7.7	99		
Cerium	100				
Chromium	10	.5	2	-0.30	<10
Cobalt	50	.4	2.6		
Copper	10	6.8	5.9	0.80	<10
Iron	100	15	32		
Lead	3.0	1.6	1.8	0.10	<3.0
Lithium	50	3.7	7.3		
Magnesium	5000	54	140		
Manganese	15	.1	1.4		
Molybdenum	20	.5	3.6		
Nickel	10	.3	1.7	0.10	<10
Phosphorus	50	1.8	18		
Potassium	10000	77	200		
Selenium	10	2	4.9	1.5	<10
Silicon	200	1.3	32		
Silver	10	.9	6.1	0.70	<10
Sodium	10000	23	570		
Strontium	10	.4	2.7		
Sulfur	50	4.1	45		
Thallium	10	1.6	1.8	-1.2	<10
Tin	10	.9	3.7		
Titanium	10	.9	2.5		
Tungsten	50	2	40		
Vanadium	50	.8	1.8		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/23

Metal	RL	IDL	MDL	MB raw	final
Zinc	20	.2	6.9	2.3	<20
Zirconium	10	.5	4.1		

Associated samples MP39320: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/23

Metal	JD64454-10 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony	0.0	2070	2000	103.5	75-125
Arsenic	17.3	2100	2000	104.1	75-125
Barium	135	2110	2000	98.8	75-125
Beryllium	anr				
Bismuth					
Boron					
Cadmium	0.0	1990	2000	99.5	75-125
Cerium					
Chromium	0.80	1930	2000	96.5	75-125
Cobalt					
Copper	9.8	1930	2000	96.0	75-125
Iron					
Lead	0.0	1910	2000	95.5	75-125
Lithium					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	2.0	1920	2000	95.9	75-125
Phosphorus					
Potassium					
Selenium	11.5	1990	2000	98.9	75-125
Silicon					
Silver	2.9	247	250	97.6	75-125
Sodium	anr				
Strontium					
Thallium	6.8	2010	2000	100.2	75-125
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	25.7	1970	2000	97.2	75-125
Zirconium					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/01/23

	JD64454-10	Spikelot		QC
Metal	Original MS	MPSPK2	% Rec	Limits

Associated samples MP39320: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/01/23

Metal	JD64454-10 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	2080	2000	104.0	0.5	20
Arsenic	17.3	2100	2000	104.1	0.0	20
Barium	135	2110	2000	98.8	0.0	20
Beryllium	anr					
Bismuth						
Boron						
Cadmium	0.0	1990	2000	99.5	0.0	20
Cerium						
Chromium	0.80	1930	2000	96.5	0.0	20
Cobalt						
Copper	9.8	1920	2000	95.5	0.5	20
Iron						
Lead	0.0	1920	2000	96.0	0.5	20
Lithium						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	2.0	1930	2000	96.4	0.5	20
Phosphorus						
Potassium						
Selenium	11.5	1990	2000	98.9	0.0	20
Silicon						
Silver	2.9	248	250	98.0	0.4	20
Sodium	anr					
Strontium						
Thallium	6.8	2010	2000	100.2	0.0	20
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	25.7	1970	2000	97.2	0.0	20
Zirconium						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/01/23

	JD64454-10	Spikelot		MSD	QC
Metal	Original MSD	MPSPK2	% Rec	RPD	Limit

Associated samples MP39320: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum				
Antimony	2000	2000	100.0	80-120
Arsenic	2010	2000	100.5	80-120
Barium	1950	2000	97.5	80-120
Beryllium	anr			
Bismuth				
Boron				
Cadmium	1920	2000	96.0	80-120
Calcium				
Cerium				
Chromium	1930	2000	96.5	80-120
Cobalt				
Copper	1900	2000	95.0	80-120
Iron				
Lead	1910	2000	95.5	80-120
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	1920	2000	96.0	80-120
Phosphorus				
Potassium				
Selenium	1930	2000	96.5	80-120
Silicon				
Silver	241	250	96.4	80-120
Sodium	anr			
Strontium				
Sulfur				
Thallium	2030	2000	101.5	80-120
Tin				
Titanium				
Tungsten				
Vanadium				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zinc	1930	2000	96.5	80-120
Zirconium				

Associated samples MP39320: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 05/01/23

Metal	JD64454-10 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	17.3	15.7	9.2	0-10
Barium	135	135	0.5	0-10
Beryllium	anr			
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Cerium				
Chromium	0.800	2.70	237.5(a)	0-10
Cobalt				
Copper	9.80	0.00	100.0(a)	0-10
Iron				
Lead	0.00	0.00	NC	0-10
Lithium				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	2.00	1.90	5.0	0-10
Phosphorus				
Potassium				
Selenium	11.5	11.5	0.0	0-10
Silicon				
Silver	2.90	6.10	110.3(a)	0-10
Sodium	anr			
Strontium				
Sulfur				
Thallium	6.80	0.00	100.0(a)	0-10
Tin				
Titanium				
Tungsten				
Vanadium				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP39320 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/01/23

Metal	JD64454-10 Original	SDL 1:5	%DIF	QC Limits
Zinc	25.7	29.5	14.8*(b)	0-10
Zirconium				

Associated samples MP39320: JD64698-1, JD64698-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Suspended	GN40838	4.0	0.0	mg/l	50	48.3 mg/l	96.6	80-120%

Associated Samples:
Batch GN40838: JD64698-1, JD64698-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD64698
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Suspended	GN40838	JD64595-1	mg/l	6.6	6.8	3.0	0-10%

Associated Samples:
Batch GN40838: JD64698-1, JD64698-2
(*) Outside of QC limits

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-004; PO# 340-009759

SGS Job Number: JD66784

Sampling Dates: 05/30/23 - 06/01/23

Report to:

edds@ghd.com
wells.richard@ghd.com
jason.davis@ghd.com
Alice.Harpole@ghd.com
Kathleen.Shaw@ghd.com;mary.cameron@ghd.com
ATTN: Distribution4

Total number of pages in report: **8**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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how we can serve you better at:
EHS.US.CustomerCare@sgs.com

Sample Summary

GHD Services Inc.

Job No: JD66784

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-004; PO# 340-009759

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JD66784-1	05/30/23	07:30	MTK	06/02/23	AQ	Water	12599404-053023-W-MTK-WTS-2-TSS
JD66784-2	06/01/23	12:10	MTK	06/02/23	AQ	Water	12599404-060123-W-MTK-WTS-2
JD66784-2F	06/01/23	12:10	MTK	06/02/23	AQ	Water Filtered	12599404-060123-W-MTK-WTS-2

Report of Analysis

Client Sample ID:	12599404-053023-W-MTK-WTS-2-TSS		
Lab Sample ID:	JD66784-1	**Date Sampled:**	05/30/23
Matrix:	AQ - Water	**Date Received:**	06/02/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended [a]	< 4.0	4.0	mg/l	1	06/05/23 11:20	AS	SM2540 D-11/15

(a) Volume was reduced from 1 liter due to nature of sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-060123-W-MTK-WTS-2		
Lab Sample ID:	JD66784-2	**Date Sampled:**	06/01/23
Matrix:	AQ - Water	**Date Received:**	06/02/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 3.0	3.0	ug/l	1	06/05/23	06/08/23	ND	SW846 6010D [3]	SW846 3010A [4]
Barium	< 200	200	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 3.0	3.0	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/05/23	06/07/23	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Thallium	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA54263
(2) Instrument QC Batch: MA54271
(3) Instrument QC Batch: MA54273
(4) Prep QC Batch: MP39961
(5) Prep QC Batch: MP39977

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-060123-W-MTK-WTS-2		
Lab Sample ID:	JD66784-2	**Date Sampled:**	06/01/23
Matrix:	AQ - Water	**Date Received:**	06/02/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended [a]	< 4.0	4.0	mg/l	1	06/05/23 15:37	AS	SM2540 D-11/15

(a) Volume was reduced from 1 liter due to nature of sample matrix.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-060123-W-MTK-WTS-2		
Lab Sample ID:	JD66784-2F	**Date Sampled:**	06/01/23
Matrix:	AQ - Water Filtered	**Date Received:**	06/02/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	< 3.0	3.0	ug/l	1	06/05/23	06/08/23	ND	SW846 6010D [3]	SW846 3010A [4]
Barium	< 200	200	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	< 3.0	3.0	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Copper	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	< 3.0	3.0	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	< 0.20	0.20	ug/l	1	06/05/23	06/07/23	LM	SW846 7470A [1]	SW846 7470A [5]
Nickel	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Thallium	< 10	10	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]
Zinc	< 20	20	ug/l	1	06/05/23	06/07/23	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA54263
(2) Instrument QC Batch: MA54271
(3) Instrument QC Batch: MA54273
(4) Prep QC Batch: MP39961
(5) Prep QC Batch: MP39977

RL = Reporting Limit

SGS

WW

CHAIN OF CUSTODY

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 FAX: 337.237.7838
www.sgs.com/ehsusa

PAGE 1 OF 1

FED-EX Tracking #
Bottle Order Control #
SGS Quote #
SGS Job # JD66784

Client / Reporting Information

Company Name: GHD
Street Address: 2237 S. Acadian Thruway, Suite 701
City: Baton Rouge State: LA Zip: 70808
Project Contact: Wells Richard E-mail: Wells.Richard@ghd.com
Phone #:
Sampler(s) Name(s): Mayc Kemper Phone #: 772-233-3016

Project Information

Project Name: San Jacinto Waste Pits South Impoundment
Street: 18300 Market St TX
City: Channelview State:
Project #: 12599404
Client Purchase Order #: SSOW: 12599404-2022-004
Project Manager: Wells Richard

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Sample #	Field ID / Point of Collection	Comp/Grab	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZnAcOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	Total Metals (SW-846 6010/7470)	Dissolved Metals (SW-846 6010/7470)	TSS	LAB USE ONLY
1	12599404-053023-W-MTK-WTS-2-TSS	Comp	05/30/23	0730	MTK	W	1						1								X	AZ3
2F	12599404-060123-W-MTK-WTS-2	Comp	06/01/23	1210	MTK	W	3				2		1						X	X	X	CZ3
	Temp Blank	—	—	—	—	W	1						1									

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Initial Assessment 2B EA
Label Verification

06/01/23

Turnaround Time (Business days)

- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [x] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+5)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [x] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions

Note: Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 GHD	6/01/2023 1700	1 Fedex	2 FedEx	6/2 10:15	2 James Kuon
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not Intact ☐ Absent
Preserved where applicable ☐
On Ice ☑ Cooler Temp. 0.5 CIP
Therm ID IR40

Copy of EHSA QAC 0026 00 FORM Scott Standard COC FINAL

http://www.sgs.com/en/terms-and-conditions.

JD66784: Chain of Custody
Page 1 of 2

7 of 8

SGS Sample Receipt Summary

Job Number: JD66784 **Client:** GHD **Project:** SAN JACOB WASTE PITS SOUTH IMPOU

Date / Time Received: 6/2/2023 10:15:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (0.5);

Cooler Temps (Corrected) °C: Cooler 1: (0.3);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-004; PO# 340-009759

SGS Job Number: JD67607

Sampling Date: 06/14/23

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Kathleen.Shaw@ghd.com; mary.cameron@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: 30

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Test results relate only to samples analyzed.

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Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD67607

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-004; PO# 340-009759

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD67607-1	06/14/23	10:00	MTK	06/15/23	AQ	Water	12599404-061423-W-MTK-WTS-3-TSS
JD67607-2	06/14/23	14:00	MTK	06/15/23	AQ	Water	12599404-061423-W-MTK-WTS-3

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD67607
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	6/22/2023 12:44:31 P

On 06/15/2023, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 4.5 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD67607 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP40205

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD67524-2FMS, JD67524-2FMSD, JD67524-2FSDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Arsenic, Cadmium, Copper, Nickel, Silver, Zinc are outside control limits for sample MP40205-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP40255

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD67574-1MS, JD67574-1MSD were used as the QC samples for the metals analysis.

General Chemistry By Method SM2540 D-11/15

Matrix: AQ **Batch ID:** GN42677

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD67653-1DUP were used as the QC samples for the Solids, Total Suspended analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JD67607
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 06/14/23

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD67607-1	**12599404-061423-W-MTK-WTS-3-TSS**					
No hits reported in this sample.						
JD67607-2	**12599404-061423-W-MTK-WTS-3**					
Zinc		28.8	20		ug/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-061423-W-MTK-WTS-3-TSS		
Lab Sample ID:	JD67607-1	**Date Sampled:**	06/14/23
Matrix:	AQ - Water	**Date Received:**	06/15/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended	< 4.0	4.0	mg/l	1	06/16/23 10:28	AS	SM2540 D-11/15

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-061423-W-MTK-WTS-3
Lab Sample ID: JD67607-2
Matrix: AQ - Water
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 06/14/23
Date Received: 06/15/23
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 3.0	3.0	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 3.0	3.0	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Copper	< 10	10	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 3.0	3.0	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	06/19/23	06/19/23	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 10	10	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Thallium	< 10	10	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]
Zinc	28.8	20	ug/l	1	06/16/23	06/19/23	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA54318
(2) Instrument QC Batch: MA54332
(3) Prep QC Batch: MP40205
(4) Prep QC Batch: MP40255

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-061423-W-MTK-WTS-3		
Lab Sample ID:	JD67607-2	**Date Sampled:**	06/14/23
Matrix:	AQ - Water	**Date Received:**	06/15/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended	< 4.0	4.0	mg/l	1	06/16/23 10:28	AS	SM2540 D-11/15

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS North America Inc. - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL. 337.237.4775 FAX: 337.237.7838
www.sgs.com/ehsusa

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job #: JD67607 NONE

Company Name: GHD
Street Address: 2297 S. Acadian Thruway, Suite 701
City / State / Zip: Baton Rouge LA 70808
Project Contact / E-mail: Wells Richard Wells.Richard@ghd.com
Phone #: 225-454-4363
Sampler(s) Name(s) / Phone #: Marc Kemper 772-233-3812 Marc.Kemper@ghd.com

Project Name: San Jacinto Waste Pits S. Impoundment
Street: 18000 Market St
City / State: Channelview TX
Project #: 12599404
Client Purchase Order #: SSOW: 12599404-2022-004
Project Manager: Wells Richard

Billing Information (If different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	Collection: Comp/Grab	Date	Time	Sampled By	Matrix	# Of bottles	Number of preserved Bottles: HCl	NaOH	ZnAc/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	TSS	Total Metals (SW846 6010/7470)	Dissolved Metals (SW846 6010/7470)	LAB USE ONLY
1	12599404-061423-W-MTK-WTS-3-TSS	C	6/14/23	1000	MTK	W	1						1						X			A27
2	12599404-061423-W-MTK-WTS-3	C	6/14/23	1400	MTK	W	3					2	1						X	X	X	G18
	Temp Blank	—	—	—	—	W	1															

Initial Assessment KG 2B
Label Verification 6.14.23

Turnaround Time (Business days)
- [ ] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 4 Business Days RUSH
- [x] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [ ] Other

Approved By (SGS PM): / Date:

Emergency & Rush T/A data available via Lablink. Approval needed for RUSH/Emergency TAT

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] REDT1 (Level3+$)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] RECAP
- [ ] State Forms
- [x] EDD Format
- [ ] Other

Commercial "A" = Results Only,
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw Data

Comments / Special Instructions
Note: Sample inventory is verified upon receipt in the Laboratory
See SSOW
- Hold dissolved metals

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	GHD	6/14/23 1600	FedEx	FedEx	6/15/23 (0:30	
2						
3						
4						
5						

Custody Seal #: ☐ Intact ☐ Not Intact ☐ Absent
Preserved where applicable ☐ On Ice ☐ Cooler Temp. 4.7
Therm ID:

IR-40

Copy of EHSA-QAC-0026-00-FORM-Scott - Standard COC-FINAL

http://www.sgs.com/en/terms-and-conditions.

SGS Sample Receipt Summary

Job Number: JD67607 **Client:** GHD **Project:** SAN JACINTO WASTE PITS S. IMPOUND

Date / Time Received: 6/15/2023 10:20:00 AM **Delivery Method:** FED EX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (4.7);

Cooler Temps (Corrected) °C: Cooler 1: (4.5);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun 40		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/16/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	9.2	150		
Antimony	6.0	2.8	4.7	-0.80	<6.0
Arsenic	3.0	2.6	2.8	-0.90	<3.0
Barium	200	.2	13	-0.10	<200
Beryllium	1.0	.2	.5		
Bismuth	20	2.5	8.6		
Boron	100	1.8	10		
Cadmium	3.0	.4	1	0.0	<3.0
Calcium	5000	13	99		
Cerium	100				
Chromium	10	.7	2	-0.10	<10
Cobalt	50	.6	2.6		
Copper	10	.7	5.9	1.5	<10
Iron	100	3.3	32		
Lead	3.0	2	1.8	0.40	<3.0
Lithium	50	1.5	7.3		
Magnesium	5000	25	140		
Manganese	15	.1	1.4		
Molybdenum	20	.6	3.6		
Nickel	10	.8	1.7	-0.30	<10
Phosphorus	50	7	18		
Potassium	10000	35	200		
Selenium	10	3.6	4.9	1.2	<10
Silicon	200	2.2	32		
Silver	10	.6	6.1	0.90	<10
Sodium	10000	14	570		
Strontium	10	.1	2.7		
Sulfur	50	3.7	45		
Thallium	10	5.2	1.8	0.30	<10
Tin	10	1.4	3.7		
Titanium	10	.8	2.5		
Tungsten	50	1.3	40		
Vanadium	50	.5	1.8		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/16/23

Metal	RL	IDL	MDL	MB raw	final
Zinc	20	.3	6.9	0.20	<20
Zirconium	10	.5	4.1		

Associated samples MP40205: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/16/23

Metal	JD67524-2F Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	anr				
Antimony	0.0	1910	2000	95.5	75-125
Arsenic	7.7	1910	2000	95.1	75-125
Barium	26.1	1910	2000	94.2	75-125
Beryllium	anr				
Bismuth					
Boron					
Cadmium	2.4	1880	2000	93.9	75-125
Calcium	anr				
Cerium					
Chromium	0.0	1880	2000	94.0	75-125
Cobalt	anr				
Copper	0.90	1860	2000	93.0	75-125
Iron	anr				
Lead	0.0	1900	2000	95.0	75-125
Lithium					
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel	2.5	1900	2000	94.9	75-125
Phosphorus					
Potassium	anr				
Selenium	0.0	1860	2000	93.0	75-125
Silicon					
Silver	0.60	234	250	93.4	75-125
Sodium	anr				
Strontium					
Sulfur					
Thallium	0.0	1930	2000	96.5	75-125
Tin					
Titanium					
Tungsten					
Vanadium	anr				

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/16/23

Metal	JD67524-2F Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Zinc	5.8	1890	2000	94.2	75-125
Zirconium					

Associated samples MP40205: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/16/23

Metal	JD67524-2F Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	0.0	1960	2000	98.0	2.6	20
Arsenic	7.7	1950	2000	97.1	2.1	20
Barium	26.1	1950	2000	96.2	2.1	20
Beryllium	anr					
Bismuth						
Boron						
Cadmium	2.4	1920	2000	95.9	2.1	20
Calcium	anr					
Cerium						
Chromium	0.0	1930	2000	96.5	2.6	20
Cobalt	anr					
Copper	0.90	1900	2000	95.0	2.1	20
Iron	anr					
Lead	0.0	1940	2000	97.0	2.1	20
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	2.5	1950	2000	97.4	2.6	20
Phosphorus						
Potassium	anr					
Selenium	0.0	1900	2000	95.0	2.1	20
Silicon						
Silver	0.60	240	250	95.8	2.5	20
Sodium	anr					
Strontium						
Sulfur						
Thallium	0.0	1970	2000	98.5	2.1	20
Tin						
Titanium						
Tungsten						
Vanadium	anr					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/16/23

Metal	JD67524-2F Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zinc	5.8	1930	2000	96.2	2.1	20
Zirconium						

Associated samples MP40205: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/16/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	anr			
Antimony	1900	2000	95.0	80-120
Arsenic	1890	2000	94.5	80-120
Barium	1900	2000	95.0	80-120
Beryllium	anr			
Bismuth				
Boron				
Cadmium	1870	2000	93.5	80-120
Calcium	anr			
Cerium				
Chromium	1920	2000	96.0	80-120
Cobalt	anr			
Copper	1860	2000	93.0	80-120
Iron	anr			
Lead	1940	2000	97.0	80-120
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	1940	2000	97.0	80-120
Phosphorus				
Potassium	anr			
Selenium	1860	2000	93.0	80-120
Silicon				
Silver	234	250	93.6	80-120
Sodium	anr			
Strontium				
Sulfur				
Thallium	1970	2000	98.5	80-120
Tin				
Titanium				
Tungsten				
Vanadium	anr			

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/16/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zinc	1940	2000	97.0	80-120
Zirconium				

Associated samples MP40205: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 06/16/23

Metal	JD67524-2F Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	0.00	0.00	NC	0-10
Arsenic	7.70	0.00	100.0(a)	0-10
Barium	26.1	24.9	4.6	0-10
Beryllium	anr			
Bismuth				
Boron				
Cadmium	2.40	0.00	100.0(a)	0-10
Calcium	anr			
Cerium				
Chromium	0.00	0.00	NC	0-10
Cobalt	anr			
Copper	0.900	0.00	100.0(a)	0-10
Iron	anr			
Lead	0.00	0.00	NC	0-10
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	2.50	0.00	100.0(a)	0-10
Phosphorus				
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.600	0.00	100.0(a)	0-10
Sodium	anr			
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	anr			

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40205 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/16/23

Metal	JD67524-2F Original	SDL 1:5	%DIF	QC Limits
Zinc	5.80	36.8	534.5(a)	0-10
Zirconium				

Associated samples MP40205: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40255 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/19/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.024	.095	0.0022	<0.20

Associated samples MP40255: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40255 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/19/23

Metal	JD67574-1 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	2.0	2	100.0	75-125

Associated samples MP40255: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40255 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/19/23

Metal	JD67574-1 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	1.9	2	95.0	5.1	20

Associated samples MP40255: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40255 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/19/23 06/19/23

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits	BSD Result	Spikelot HGPW3	% Rec	BSD RPD	QC Limit
Mercury	1.9	2	95.0	80-120	1.9	2	95.0	0.0	

Associated samples MP40255: JD67607-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Suspended	GN42677	4.0	0.0	mg/l	50	48.0	96.0	80-120%

Associated Samples:
Batch GN42677: JD67607-1, JD67607-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD67607
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Suspended	GN42677	JD67653-1	mg/l	1.5 U	0.0	0.0	0-10%

Associated Samples:
Batch GN42677: JD67607-1, JD67607-2
(*) Outside of QC limits

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

SJRWP - PCFSE, Harris County, TX

12599404; SSOW: 12599404-2022-004; PO# 340-009759

SGS Job Number: JD69734

Sampling Dates: 07/15/23 - 07/20/23

Report to:

GHD Services Inc.
11451 Katy Freeway Suite 400
Houston, TX 77079
wells.richard@ghd.com; jason.davis@ghd.com;
Kathleen.Shaw@ghd.com; mary.cameron@ghd.com;
ATTN: Kathleen Shaw

Total number of pages in report: **31**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

David Chastain
General Manager

Client Service contact: Beth Stopen 732-329-0200
Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA(68-00408), RI, SC, TX, UT, VA, WV

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Please share your ideas about how we can serve you better at:
EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

GHD Services Inc.

Job No: JD69734

SJRWP - PCFSE, Harris County, TX
Project No: 12599404; SSOW: 12599404-2022-004; PO# 340-009759

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD69734-1	07/15/23	14:40		07/21/23	AQ	Water	12599404-071523-W-MTK-WTS-4-TSS
JD69734-2	07/20/23	14:45		07/21/23	AQ	Water	12599404-072023-W-MTK-WTS-4

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	GHD Services Inc.	**Job No:**	JD69734
Site:	SJRWP - PCFSE, Harris County, TX	**Report Date**	7/26/2023 5:12:50 PM

On 07/21/2023, 2 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 3 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD69734 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP40936

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD69680-3MS, JD69680-3MSD, JD69680-3SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Chromium, Copper, Lead, Nickel, Silver, Zinc are outside control limits for sample MP40936-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP40956

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD69762-1FMS, JD69762-1FMSD were used as the QC samples for the metals analysis.

General Chemistry By Method SM2540 D-11/15

Matrix: AQ **Batch ID:** GN43998

- All method blanks for this batch meet method specific criteria.
- Sample(s) JD66186-38PADUP were used as the QC samples for the Solids, Total Suspended analysis.
- The following samples were run outside of holding time for method SM2540 D-11/15: JD69734-1 Analysis done out of holding time.
- JD69734-2 for Solids, Total Suspended: Volume was reduced from 1 liter due to nature of sample matrix.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JD69734
Account: GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX
Collected: 07/15/23 thru 07/20/23

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD69734-1	**12599404-071523-W-MTK-WTS-4-TSS**					
No hits reported in this sample.						
JD69734-2	**12599404-072023-W-MTK-WTS-4**					
Zinc		49.0	20		ug/l	SW846 6010D

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	12599404-071523-W-MTK-WTS-4-TSS		
Lab Sample ID:	JD69734-1	**Date Sampled:**	07/15/23
Matrix:	AQ - Water	**Date Received:**	07/21/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended [a]	< 4.0	4.0	mg/l	1	07/24/23 17:20	AS	SM2540 D-11/15

(a) Analysis done out of holding time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: 12599404-072023-W-MTK-WTS-4
Lab Sample ID: JD69734-2
Matrix: AQ - Water
Project: SJRWP - PCFSE, Harris County, TX

Date Sampled: 07/20/23
Date Received: 07/21/23
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Arsenic	< 3.0	3.0	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Barium	< 200	200	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Cadmium	< 3.0	3.0	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Chromium	< 10	10	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Copper	< 10	10	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Lead	< 3.0	3.0	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Mercury	< 0.20	0.20	ug/l	1	07/24/23	07/25/23	LM	SW846 7470A [1]	SW846 7470A [4]
Nickel	< 10	10	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Selenium	< 10	10	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Silver	< 10	10	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Thallium	< 10	10	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]
Zinc	49.0	20	ug/l	1	07/24/23	07/25/23	ND	SW846 6010D [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA54497
(2) Instrument QC Batch: MA54500
(3) Prep QC Batch: MP40936
(4) Prep QC Batch: MP40956

RL = Reporting Limit

Report of Analysis

Client Sample ID:	12599404-072023-W-MTK-WTS-4		
Lab Sample ID:	JD69734-2	**Date Sampled:**	07/20/23
Matrix:	AQ - Water	**Date Received:**	07/21/23
		Percent Solids:	n/a
Project:	SJRWP - PCFSE, Harris County, TX		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended [a]	< 4.0	4.0	mg/l	1	07/24/23 17:20	AS	SM2540 D-11/15

(a) Volume was reduced from 1 liter due to nature of sample matrix.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

WV

Plastic Jars → Dayton L

JD 69734

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: San Jacinto WP S. Impoundment
P.O. #:
QUOTE #:
SITE REF: GHD #12599404
TURN AROUND TIME: 5 day TAT
REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☒ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS
GHD SSOW: 12599404-2022-004

SEND DOCUMENTATION / RESULTS TO
COMPANY: GHD
CONTACT: Wells Richard
ADDRESS: 2237 S. Acadian Thruway, Suite 701, Baton Rouge, L
PHONE: 225-454-4363 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

PRESERVATIVE: HNO3, HNO3, |

ANALYSIS & METHOD: Total Metals, Dissolved Metals, TSS

	SAMPLE ID / DESCRIPTION	DATE	TIME	TYPE (C, G)	MATRIX	CONT	Total Metals	Dissolved Metals	TSS	QC MS	QC MSD	QC DUP	QTY	REMARKS
1	12599404-071523-W-MTK-WTS-4-TSS	7/15/23	1440	C	W	1			X					-Hold Dissolved Metals
2F	12599404-072023-W-MTK-WTS-4	7/20/23	1445	C	W	3	X	X	X					-See SSOW
	Temp Blank	—	—	—	W	1								-SW 846 6010/7470 analysis for Total + Dissolved Metals

G33
AB

Initial Assessment JB DV
Label Verification

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY: DATE: TIME:
[signature]	7/20/23	1500	fedex	
RELINQUISHED BY (2): fedex	DATE: 7/21/23	TIME: 1030	RECEIVED BY: [signature]	COOLER SEAL: ☐ INTACT ☐ BROKEN ☐ ABSENT
				CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:	CARRIER: TEMP: °C 3.3 IR46
				TRACKING #:

Page 1 of 1

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5.1
5

JD69734: Chain of Custody
Page 1 of 3

SGS Sample Receipt Summary

Job Number: JD69734 **Client:** GHD SERVICES INC. **Project:** SJRWP - PCFSE, HARRIS COUNTY, TX

Date / Time Received: 7/21/2023 10:20:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.3);

Cooler Temps (Corrected) °C: Cooler 1: (3.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun 40		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments: 1). For TSS analysis, both samples received a total of 1 x 1000ml NP bottle. The samples are of limited volume for this analysis.

Responded to by: Beth Stopen

Response Date: 7/24/23

OK to proceed as noted

JD69734: Chain of Custody
Page 3 of 3

Metals Analysis

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/24/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	9.2	150		
Antimony	6.0	2.8	4.7	0.30	<6.0
Arsenic	3.0	2.6	2.8	-1.1	<3.0
Barium	200	.2	13	0.10	<200
Beryllium	1.0	.2	.5		
Bismuth	20	2.5	8.6		
Boron	100	1.8	10		
Cadmium	3.0	.4	1	0.0	<3.0
Calcium	5000	13	99		
Cerium	100				
Chromium	10	.7	2	-0.20	<10
Cobalt	50	.6	2.6		
Copper	10	.7	5.9	0.40	<10
Iron	100	3.3	32		
Lead	3.0	2	1.8	0.80	<3.0
Lithium	50	1.5	7.3		
Magnesium	5000	25	140		
Manganese	15	.1	1.4		
Molybdenum	20	.6	3.6		
Nickel	10	.8	1.7	-0.10	<10
Phosphorus	50	7	18		
Potassium	10000	35	200		
Selenium	10	3.6	4.9	0.0	<10
Silicon	200	2.2	32		
Silver	10	.6	6.1	0.0	<10
Sodium	10000	14	570		
Strontium	10	.1	2.7		
Sulfur	50	3.7	45		
Thallium	10	5.2	1.8	-0.60	<10
Tin	10	1.4	3.7		
Titanium	10	.8	2.5		
Tungsten	50	1.3	40		
Vanadium	50	.5	1.8		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	RL	IDL	MDL	MB raw	final
Zinc	20	.3	6.9	-0.70	<20
Zirconium	10	.5	4.1		

Associated samples MP40936: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/24/23

Metal	JD69680-3 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum					
Antimony	0.0	1930	2000	96.5	75-125
Arsenic	0.0	1920	2000	96.0	75-125
Barium	13.5	2000	2000	99.3	75-125
Beryllium					
Bismuth					
Boron					
Cadmium	0.0	1920	2000	96.0	75-125
Calcium					
Cerium					
Chromium	4.7	1940	2000	96.8	75-125
Cobalt					
Copper	3.6	1920	2000	95.8	75-125
Iron					
Lead	2.9	1990	2000	99.4	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	6.5	2000	2000	99.7	75-125
Phosphorus					
Potassium					
Selenium	0.0	1860	2000	93.0	75-125
Silicon					
Silver	0.80	250	250	99.7	75-125
Sodium					
Strontium					
Sulfur					
Thallium	0.0	2010	2000	100.5	75-125
Tin					
Titanium					
Tungsten					
Vanadium					

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	JD69680-3 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Zinc	3.2	1940	2000	96.8	75-125
Zirconium					

Associated samples MP40936: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	JD69680-3 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	1980	2000	99.0	2.6	20
Arsenic	0.0	1970	2000	98.5	2.6	20
Barium	13.5	2020	2000	100.3	1.0	20
Beryllium						
Bismuth						
Boron						
Cadmium	0.0	1940	2000	97.0	1.0	20
Calcium						
Cerium						
Chromium	4.7	1950	2000	97.3	0.5	20
Cobalt						
Copper	3.6	1920	2000	95.8	0.0	20
Iron						
Lead	2.9	2000	2000	99.9	0.5	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	6.5	2010	2000	100.2	0.5	20
Phosphorus						
Potassium						
Selenium	0.0	1890	2000	94.5	1.6	20
Silicon						
Silver	0.80	254	250	101.3	1.6	20
Sodium						
Strontium						
Sulfur						
Thallium	0.0	2020	2000	101.0	0.5	20
Tin						
Titanium						
Tungsten						
Vanadium						

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	JD69680-3 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zinc	3.2	1950	2000	97.3	0.5	20
Zirconium						

Associated samples MP40936: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/24/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum				
Antimony	1940	2000	97.0	80-120
Arsenic	1940	2000	97.0	80-120
Barium	2000	2000	100.0	80-120
Beryllium				
Bismuth				
Boron				
Cadmium	1930	2000	96.5	80-120
Calcium				
Cerium				
Chromium	1960	2000	98.0	80-120
Cobalt				
Copper	1930	2000	96.5	80-120
Iron				
Lead	2000	2000	100.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	1990	2000	99.5	80-120
Phosphorus				
Potassium				
Selenium	1910	2000	95.5	80-120
Silicon				
Silver	251	250	100.4	80-120
Sodium				
Strontium				
Sulfur				
Thallium	2030	2000	101.5	80-120
Tin				
Titanium				
Tungsten				
Vanadium				

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/24/23

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zinc	1970	2000	98.5	80-120
Zirconium				

Associated samples MP40936: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 07/24/23

Metal	JD69680-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	13.5	13.7	1.5	0-10
Beryllium				
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Cerium				
Chromium	4.70	0.00	100.0(a)	0-10
Cobalt				
Copper	3.60	8.50	136.1(a)	0-10
Iron				
Lead	2.90	0.00	100.0(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	6.50	7.40	13.8 (a)	0-10
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.800	0.00	100.0(a)	0-10
Sodium				
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium				

SERIAL DILUTION RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40936 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	JD69680-3 Original	SDL 1:5	%DIF	QC Limits
Zinc	3.20	29.9	834.4(a)	0-10
Zirconium				

Associated samples MP40936: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.024	.095	-0.064	<0.20

Associated samples MP40956: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	JD69762-1F Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.0	2.0	2	100.0	75-125

Associated samples MP40956: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	JD69762-1F Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.1	2	105.0	4.9	20

Associated samples MP40956: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

QC Batch ID: MP40956 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/24/23

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	1.9	2	95.0	80-120

Associated samples MP40956: JD69734-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Suspended	GN43998	4.0	0.0	mg/l	50	49.8	99.6	80-120%

Associated Samples:
Batch GN43998: JD69734-1, JD69734-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: JD69734
Account: CRATXH - GHD Services Inc.
Project: SJRWP - PCFSE, Harris County, TX

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Suspended	GN43998	JD66186-38PA	mg/l	88.0	87.0	1.1	0-10%

Associated Samples:
Batch GN43998: JD69734-1, JD69734-2
(*) Outside of QC limits

Appendix E

Data Validation Memos

Technical Memorandum

14 February 2023

To	Wells Richard	**Tel**	860 747-8298
Copy to	File	**Email**	Kathleen.shaw@ghd.com, Marisa.Oriaku@ghd.com
From	Kathy Shaw, Marisa Oriaku	**Ref. No.**	12599404
Subject	Analytical Results and Reduced Validation Waste Characterization Investigation San Jacinto Southern Impoundment Channelview, Harris County, Texas December 2022		

1. Introduction

This document details a reduced validation of analytical results for soil samples collected in support of the Waste Characterization Investigation at the San Jacinto Southern Impoundment site during December 2022. Samples were submitted to SGS North America Laboratories located in Dayton, New Jersey and Wilmington, North Carolina. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS) and matrix spikes (MS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1) Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation", San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3, 2019
2) "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020.
3) "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020.
4) "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9240.1-65, EPA 542-R-20-007, November 2020

Items 2), 3) and 4) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

The samples summarized in Table 4 were qualified due to inadequate sample preservation. Texas Total Petroleum Hydrocarbons, (TX-1005) samples were collected in bulk; however, the method requires the samples to be collected in Terra Core® airtight sample collection samplers (or equivalent). The remaining samples were shipped and maintained in accordance with the sample preservation requirements.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, the laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Method Blank Analyses

All method blank results were non detect, indicating that laboratory contamination was not a factor for this investigation.

Organic Leachate Blank Analyses

Leachate blanks are prepared from a purified matrix for Toxicity Characteristic Leaching Procedure (TCLP) analysis and are analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory the leachate blanks should be analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.For this study, five analytical batches were missing the leachate blanks, so for those samples the potential laboratory contamination was assessed using only the laboratory method blanks.

The polychlorinated dibenzodioxin/polychlorinated dibenzo-p-furans (PCDDs/PCDFs) leachate blanks contained low concentrations of PCDDs/PCDFs. All associated samples with similar concentrations were qualified as non-detect in Table 5.

Inorganic Analyses

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries – Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for TX-1005 determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within the laboratory control limits.

5. Spiked C 13 Labelled PCDDs/PCDFs – Organic Analyses

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction. The labeled congeners are an internal standard for the quantitation of native congeners and serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction and analysis.

Labeled congener recoveries were assessed against method control limits. All labeled PCDD/PCDF recoveries were within the method acceptance ranges.

6. Laboratory Control Sample Analyses

LCS and/or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

High LCS recoveries and/or RPDs do not impact any associated non-detect sample results.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries and RPDs were within the control limits, demonstrating acceptable analytical accuracy and precision.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

Organic Analyses

Non-Site-specific samples were utilized as MS/MSDs. Qualification of samples associated with these MS/MSDs was not performed.

Inorganic Analyses

Non-Site-specific samples were utilized as MS/MSDs.

8. ICP/AES Serial Dilution

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. A minimum of 1 per 20 investigative samples or at least 1 per analytical batch must be analyzed at a five-fold dilution. For samples with sufficient analyte concentrations (>50 times the method detection limit), the serial dilution results must agree within 20 percent of the original results.

A serial dilution was performed on sample 12599404-120822-S-MTK-WC-4. The associated positive results greater than 50 times the MDL were qualified as estimated in Table 6.

9. Target Compound Identification

To minimize erroneous compound identification during PCDD/PCDF analyses, qualitative criteria including compound retention time, ion abundance ratio, and chromatography were evaluated according to the identification criteria established by the methods. An erroneous identification can be either a false positive (reporting a target compound when it is not present in the sample) or false negative (not reporting a compound that is present in the sample).

Most compounds reported adhered to the method-specified identification criteria. Some sample results were reported as positive hits although the ion abundance ratios were not met. The associated results were qualified as the estimated maximum possible concentration. A summary of these qualified data is presented in Table 7.

10. Analyte Reporting

The laboratory reported detected results down to the laboratory's sample specific method detection limit (MDL) adjusted for weight, volume, percent moisture, and dilution factors for each analyte. Positive analyte detections less than the RL but greater than the sample specific MDL were qualified as estimated

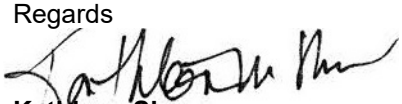
(J) in Table 2 unless qualified otherwise in this memorandum. Non detect data were reported down to the laboratory's sample specific MDL for each analyte.

All soil results were reported on a dry weight basis.

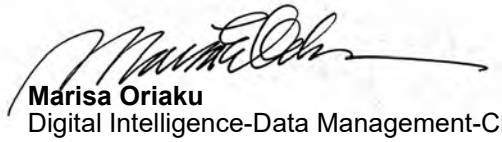
11. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Regards



Kathleen Shaw
Digital Intelligence-Data Management-Chemist



Marisa Oriaku
Digital Intelligence-Data Management-Chemist

Table 1

Sample Collection and Analysis Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

						Analysis/Parameters			
Sample Delivery Group	**Sample Identification**	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Dioxins/Furans-TCLP**	**Metals-TCLP**	**TX 1005**	**Comments**
B7413/JD56547	12599404-120122-S-MTK-WC-1	Grid-1	Soil	12/01/2022	10:30	X	X		
LA85924	12599404-120622-S-MTK-WC-1	Grid-1	Soil	12/06/2022	08:40			X	
B7460/JD56929/LA86010	12599404-120822-S-MTK-WC-10	Grid-10	Soil	12/08/2022	13:30	X	X	X	
B7423/JD56827/LA85970	12599404-120722-S-MTK-WC-11	Grid-11	Soil	12/07/2022	10:20	X	X	X	
B7423/JD56827/LA85970	12599404-120722-S-MTK-WC-12	Grid-12	Soil	12/07/2022	09:30	X	X	X	
B7421/JD56730/LA85924	12599404-120622-S-MTK-WC-13	Grid-13	Soil	12/06/2022	15:15	X	X	X	
B7421/JD56730/LA85924	12599404-120622-S-MTK-WC-14	Grid-14	Soil	12/06/2022	14:10	X	X	X	
B7421/JD56730/LA85924	12599404-120622-S-MTK-WC-15	Grid-15	Soil	12/06/2022	13:30	X	X	X	
B7421/JD56730/LA85924	12599404-120622-S-MTK-WC-16	Grid-16	Soil	12/06/2022	10:40	X	X	X	
B7460/JD56629/LA85838	12599404-120522-S-MTK-WC-17	Grid-17	Soil	12/05/2022	10:15	X	X	X	
B7460/JD56629/LA85838	12599404-120522-S-MTK-WC-18	Grid-18	Soil	12/05/2022	09:00	X	X	X	
B7410/JD56572/LA85803	12599404-120222-S-MTK-WC-19	Grid-19	Soil	12/02/2022	15:20	X	X	X	
B7413/JD56547	12599404-120122-S-MTK-WC-2	Grid-2	Soil	12/01/2022	11:50	X	X		

Table 1

Sample Collection and Analysis Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

						Analysis/Parameters			
Sample Delivery Group	**Sample Identification**	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Dioxins/Furans-TCLP**	**Metals-TCLP**	**TX 1005**	**Comments**
LA85924	12599404-120622-S-MTK-WC-2	Grid-2	Soil	12/06/2022	09:40			X	
B7410/JD56572/LA85803	12599404-120222-S-MTK-WC-20	Grid-20	Soil	12/02/2022	14:05	X	X	X	
B7410/JD56572/LA85803	12599404-120222-S-MTK-WC-21	Grid-21	Soil	12/02/2022	13:15	X	X	X	
B7410/JD56572/LA85803	12599404-120222-S-MTK-WC-22	Grid-22	Soil	12/02/2022	11:00	X	X	X	
B7410/JD56572/LA85803	12599404-120222-S-MTK-WC-23	Grid-23	Soil	12/02/2022	10:00	X	X	X	
B7409/JD56547	12599404-120122-S-MTK-WC-24	Grid-24	Soil	12/01/2022	14:20	X	X		
LA85838	12599404-120522-S-MTK-WC-24	Grid-24	Soil	12/05/2022	14:25			X	
B7409/JD56547	12599404-120122-S-MTK-WC-25	Grid-25	Soil	12/01/2022	15:35	X	X		
LA85838	12599404-120522-S-MTK-WC-25	Grid-25	Soil	12/05/2022	11:15			X	
B7410/JD56572/LA85803	12599404-120222-S-MTK-WC-26	Grid-26	Soil	12/02/2022	09:00	X	X	X	
B7423/JD56827/LA85970	12599404-120722-S-MTK-WC-3	Grid-3	Soil	12/07/2022	14:30	X	X	X	
B7422/JD56929/LA86010	12599404-120822-S-MTK-WC-4	Grid-4	Soil	12/08/2022	09:05	X	X	X	MS/MSD
B7422/JD56929/LA86010	12599404-120822-S-MTK-WC-5	Grid-5	Soil	12/08/2022	10:05	X	X	X	

Table 1

Sample Collection and Analysis Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

						Analysis/Parameters			
Sample Delivery Group	**Sample Identification**	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Dioxins/Furans-TCLP**	**Metals-TCLP**	**TX 1005**	**Comments**
B7423/JD56827/LA85970	12599404-120722-S-MTK-WC-6	Grid-6	Soil	12/07/2022	13:25	X	X	X	
B7460/JD56929/LA86010	12599404-120822-S-MTK-WC-7	Grid-7	Soil	12/08/2022	14:30	X	X	X	
B7460/JD56929/LA86010	12599404-120822-S-MTK-WC-8	Grid-8	Soil	12/08/2022	11:20	X	X	X	
B7423/JD56827/LA85970	12599404-120722-S-MTK-WC-9	Grid-9	Soil	12/07/2022	11:20	X	X	X	

Notes:

MS/MSD - Matrix Spike/Matrix Spike Duplicate

TCLP - Toxicity Characteristic Leaching Procedure

TX-1005 - TNRCC Method 1005 - Total Petroleum Hydrocarbons, Revision 03, June 1, 2001, Austin, TX

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-1	Grid-1	Grid-2	Grid-2
Sample Identification:		12599404-120122-S-MTK-WC-1	12599404-120622-S-MTK-WC-1	12599404-120122-S-MTK-WC-2	12599404-120622-S-MTK-WC-2
Sample Date:	Units	12/01/2022	12/06/2022	12/01/2022	12/06/2022
Parameters					
TCLP-Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	2370	--	29.8 J	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	1380	--	41.1 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	66.6	--	1.38 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	91.3	--	2.36 J	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	8.62 J	--	1.51 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	12.1 U	--	1.54 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.46 U	--	1.83 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	5.39 J	--	1.75 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	5.16 U	--	1.94 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	4.12 U	--	2.01 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.57 U	--	1.74 U	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	11.5 J	--	1.6 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	3.28 U	--	2.39 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.6 U	--	1.62 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	10.5 J	--	1.57 U	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	411	--	7.01	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	128	--	3.25 U	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	140 J	--	1.44 UJ	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	222 J	--	6.96 J	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	50.7 J	--	1.72 UJ	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	19.1 J	--	1.83 UJ	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	30.4 J	--	1.59 UJ	--

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-1	Grid-1	Grid-2	Grid-2
Sample Identification:		12599404-120122-S-MTK-WC-1	12599404-120622-S-MTK-WC-1	12599404-120122-S-MTK-WC-2	12599404-120622-S-MTK-WC-2
Sample Date:	Units	12/01/2022	12/06/2022	12/01/2022	12/06/2022
Parameters					
TCLP-Dioxins/Furans (Continued)					
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	3.28 UJ	--	2.39 UJ	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	790 J	--	7.01 J	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	139 J	--	3.25 UJ	--
Total WHO Dioxin TEQ					
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	176 J	--	0.734 J	--
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	179 J	--	4.46 J	--
TCLP-Metals					
Antimony	mg/L	0.0047 U	--	0.0047 U	--
Arsenic	mg/L	0.0028 U	--	0.0028 U	--
Barium	mg/L	0.70	--	0.79	--
Beryllium	mg/L	0.0021	--	0.00050 U	--
Cadmium	mg/L	0.0067	--	0.0010 U	--
Chromium	mg/L	0.0020 U	--	0.0020 U	--
Lead	mg/L	0.16	--	0.0018 U	--
Mercury	mg/L	0.000095 U	--	0.000095 U	--
Nickel	mg/L	0.030	--	0.048	--
Selenium	mg/L	0.0049 U	--	0.0049 U	--
Silver	mg/L	0.0019 U	--	0.0019 U	--
Vanadium	mg/L	0.0018 U	--	0.0018 U	--

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-1	Grid-1	Grid-2	Grid-2
Sample Identification:		**12599404-120122-S-MTK-WC-1**	**12599404-120622-S-MTK-WC-1**	**12599404-120122-S-MTK-WC-2**	**12599404-120622-S-MTK-WC-2**
Sample Date:	**Units**	**12/01/2022**	**12/06/2022**	**12/01/2022**	**12/06/2022**
Parameters					
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	--	20 UJ	--	17 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	--	20 UJ	--	17 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	--	20 UJ	--	17 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	--	20 UJ	--	17 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-3	Grid-4	Grid-5	Grid-6
Sample Identification:		12599404-120722-S-MTK-WC-3	12599404-120822-S-MTK-WC-4	12599404-120822-S-MTK-WC-5	12599404-120722-S-MTK-WC-6
Sample Date:	Units	12/07/2022	12/08/2022	12/08/2022	12/07/2022
Parameters					
TCLP-Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	11.5 J	8.32 J	7.88 J	4.2 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	31.1 J	84.8 J	89	18.9 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	1.24 U	7.88 J	1.26 U	1.52 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.9 U	10.4 J	2.94 U	2.15 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	1.35 U	2 U	1.59 U	1.8 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.91 U	1.92 U	2.12 U	2.06 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.33 U	3.38 U	2.89 U	2.79 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.66 U	1.83 U	1.94 U	2.05 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.39 U	3.44 U	2.77 U	2.74 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	2 U	1.97 U	2.19 U	2.36 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.19 U	2.61 U	2.55 U	2.54 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.45 U	2.99 U	2.58 U	2.55 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	3.64 U	4.07 U	4.44 U	3.36 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.95 U	2.04 U	2.18 U	2.49 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.17 U	2.73 U	2.4 U	2.39 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	12.6 J	7.39 J	8.11 U	9.91 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	6.52 U	6.11 U	6.2 U	6.99 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	1.29 UJ	7.88 J	1.42 UJ	1.65 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	2.53 J	19.3 J	5.82 J	2.15 UJ
Total hexachlorodibenzofuran (HxCDF)	pg/L	1.87 UJ	1.94 UJ	2.11 UJ	2.23 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.3 UJ	3.12 UJ	2.73 UJ	2.68 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	2.31 UJ	2.86 UJ	2.49 UJ	2.47 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-3	Grid-4	Grid-5	Grid-6
Sample Identification:		12599404-120722-S-MTK-WC-3	12599404-120822-S-MTK-WC-4	12599404-120822-S-MTK-WC-5	12599404-120722-S-MTK-WC-6
Sample Date:	Units	12/07/2022	12/08/2022	12/08/2022	12/07/2022
Parameters					
TCLP-Dioxins/Furans (Continued)					
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	3.64 UJ	4.07 UJ	4.44 UJ	3.36 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	12.6 J	7.39 J	8.11 UJ	9.91 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	6.52 UJ	6.11 UJ	6.2 UJ	6.99 UJ
Total WHO Dioxin TEQ					
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	1.27 J	0.950 J	0.0291 J	0.997 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	7.46 J	7.36 J	7.01 J	7.45 J
TCLP-Metals					
Antimony	mg/L	0.0047 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	0.59	0.63	0.21	0.36
Beryllium	mg/L	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.0046	0.0063	0.018	0.0056
Chromium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Mercury	mg/L	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	0.023	0.026 J	0.0017 U	0.029
Selenium	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-3	Grid-4	Grid-5	Grid-6
Sample Identification:		**12599404-120722-S-MTK-WC-3**	**12599404-120822-S-MTK-WC-4**	**12599404-120822-S-MTK-WC-5**	**12599404-120722-S-MTK-WC-6**
Sample Date:	**Units**	**12/07/2022**	**12/08/2022**	**12/08/2022**	**12/07/2022**
Parameters					
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	18 UJ	13 UJ	13 UJ	18 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	18 UJ	13 UJ	13 UJ	18 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	18 UJ	13 UJ	13 UJ	18 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	18 UJ	13 UJ	13 UJ	18 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-7	Grid-8	Grid-9	Grid-10
Sample Identification:		12599404-120822-S-MTK-WC-7	12599404-120822-S-MTK-WC-8	12599404-120722-S-MTK-WC-9	12599404-120822-S-MTK-WC-10
Sample Date:	Units	12/08/2022	12/08/2022	12/07/2022	12/08/2022
Parameters					
TCLP-Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	7.59 U	21.6 J	3.63 U	5.48 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	18.6 U	41.5 J	80.7	27.2 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	2.56 U	4.86 U	1.04 U	2.19 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	4.86 U	5.21 U	3.54 J	3.05 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	3.18 U	6.12 U	1.03 U	2.82 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.51 U	4.27 U	1.3 U	1.78 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	5.28 U	4.76 U	2.97 U	2.74 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.49 U	4.47 U	1.2 U	1.85 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.57 U	4.46 U	3.08 U	2.73 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	3.61 U	4.94 U	1.38 U	1.82 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.4 U	4.33 U	2.86 U	2.55 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	3.89 U	4.41 U	1.75 U	2.33 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	6.36 U	5.54 U	2.92 U	3.29 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	3.47 U	4.76 U	1.34 U	2.09 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	3.88 U	4.08 U	1.71 U	2.21 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	9.06 U	13.4 J	6.23 J	9.66
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	9.84 U	6.5 U	5.68 U	4.41 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	2.84 UJ	5.44 UJ	1.04 UJ	2.47 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	4.86 UJ	5.21 UJ	7.05 J	3.05 UJ
Total hexachlorodibenzofuran (HxCDF)	pg/L	3.52 UJ	4.6 UJ	1.3 UJ	1.89 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	4.73 UJ	4.51 UJ	2.96 UJ	2.66 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	3.88 UJ	4.24 UJ	1.73 UJ	2.27 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-7	Grid-8	Grid-9	Grid-10
Sample Identification:		12599404-120822-S-MTK-WC-7	12599404-120822-S-MTK-WC-8	12599404-120722-S-MTK-WC-9	12599404-120822-S-MTK-WC-10
Sample Date:	Units	12/08/2022	12/08/2022	12/07/2022	12/08/2022
Parameters					
TCLP-Dioxins/Furans (Continued)					
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	6.36 UJ	5.54 UJ	2.92 UJ	3.29 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	9.06 UJ	13.4 J	6.23 J	9.66 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	9.84 UJ	6.5 UJ	5.68 UJ	4.41 UJ
Total WHO Dioxin TEQ					
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	0	1.36 J	0.683 J	0.974 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	10.7 J	9.74 J	5.98 J	6.01 J
TCLP-Metals					
Antimony	mg/L	0.0047 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	0.47	0.56	1.2	0.44
Beryllium	mg/L	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.0063	0.0054	0.0010 U	0.018
Chromium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Mercury	mg/L	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	0.030 J	0.029 J	0.017	0.0017 U
Selenium	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-7	Grid-8	Grid-9	Grid-10
Sample Identification:		12599404-120822-S-MTK-WC-7	12599404-120822-S-MTK-WC-8	12599404-120722-S-MTK-WC-9	12599404-120822-S-MTK-WC-10
Sample Date:	Units	12/08/2022	12/08/2022	12/07/2022	12/08/2022
Parameters					
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	13 UJ	13 UJ	16 UJ	13 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	13 UJ	13 UJ	16 UJ	13 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	13 UJ	13 UJ	16 UJ	13 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	13 UJ	13 UJ	16 UJ	13 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-11	Grid-12	Grid-13	Grid-14
Sample Identification:		12599404-120722-S-MTK-WC-11	12599404-120722-S-MTK-WC-12	12599404-120622-S-MTK-WC-13	12599404-120622-S-MTK-WC-14
Sample Date:	Units	12/07/2022	12/07/2022	12/06/2022	12/06/2022
Parameters					
TCLP-Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	535	9.74 J	2.93 U	94.6 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	3000	140	38.9 J	158 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	56.1	0.897 U	1.67 U	6.96 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	129	4.87 J	3 U	16.4 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	11 J	1.07 U	1.73 U	2.09 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	90	1.37 U	2.11 U	3.99 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.19 U	2.29 U	4.25 U	3.67 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	25 J	1.38 U	1.89 U	1.91 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.14 U	2.29 U	3.95 U	3.76 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	2.42 U	1.48 U	2.34 U	2.12 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.08 U	2.02 U	3.33 U	3.2 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	37.3	2.14 U	2.53 U	3.09 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	4.97 U	3.08 U	3.52 U	3.49 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	2.75 U	1.36 U	2.12 U	2.31 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	23.9 J	2.12 U	2.71 U	2.97 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	456	17.3 J	7.46 U	51.1
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	128	4.99 U	6.82 U	11.4 J
Total heptachlorodibenzofuran (HpCDF)	pg/L	113 J	2.07 J	1.7 UJ	12.4 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	262 J	12.6 J	3 UJ	42.4 J
Total hexachlorodibenzofuran (HxCDF)	pg/L	148 J	1.4 UJ	2.11 UJ	3.99 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	27.9 J	2.19 UJ	3.82 UJ	3.53 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	92.1 J	2.13 UJ	2.62 UJ	3.03 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-11	Grid-12	Grid-13	Grid-14
Sample Identification:		12599404-120722-S-MTK-WC-11	12599404-120722-S-MTK-WC-12	12599404-120622-S-MTK-WC-13	12599404-120622-S-MTK-WC-14
Sample Date:	Units	12/07/2022	12/07/2022	12/06/2022	12/06/2022
Parameters					
TCLP-Dioxins/Furans (Continued)					
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	4.97 UJ	3.08 UJ	3.52 UJ	3.49 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	944 J	27 J	7.46 UJ	69.6 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	128 J	4.99 UJ	6.82 UJ	11.4 J
Total WHO Dioxin TEQ					
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	196 J	1.82 J	0.0117 J	17.2 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	199 J	6.83 J	7.03 J	20.3 J
TCLP-Metals					
Antimony	mg/L	0.0047 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	0.76	2.2	1.1	0.66
Beryllium	mg/L	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.0010 U	0.0055	0.0041	0.0050 U
Chromium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.024
Lead	mg/L	0.0018 U	0.0018 U	0.0018 U	0.16
Mercury	mg/L	0.000095 U	0.000095 U	0.000095 U	0.00046
Nickel	mg/L	0.032	0.064	0.091	0.065
Selenium	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-11	Grid-12	Grid-13	Grid-14
Sample Identification:		12599404-120722-S-MTK-WC-11	12599404-120722-S-MTK-WC-12	12599404-120622-S-MTK-WC-13	12599404-120622-S-MTK-WC-14
Sample Date:	Units	12/07/2022	12/07/2022	12/06/2022	12/06/2022
Parameters					
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	109 J	2040 J	82.8 J	16 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	135 J	613 J	17 UJ	16 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	159 J	79.6 J	17 UJ	16 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	402 J	2740 J	82.8 J	16 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-15	Grid-16	Grid-17	Grid-18
Sample Identification:		12599404-120622-S-MTK-WC-15	12599404-120622-S-MTK-WC-16	12599404-120522-S-MTK-WC-17	12599404-120522-S-MTK-WC-18
Sample Date:	Units	12/06/2022	12/06/2022	12/05/2022	12/05/2022
Parameters					
TCLP-Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	3.73 U	3.03 U	2.79 U	12.3 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	18.2 J	224	2.93 U	47.7 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	1.64 U	0.976 U	1.19 U	1.84 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	2.2 U	2.42 U	1.52 J	2.1 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	2.4 U	1.16 U	1.42 U	2.16 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	2.12 U	1.55 U	1.71 U	1.97 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.71 U	3.54 U	2.14 U	2.7 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.8 U	1.51 U	1.52 U	1.93 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.56 U	3.62 U	2.16 U	3.21 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	2.05 U	1.81 U	2.01 U	2.26 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.35 U	2.94 U	2.23 U	3.12 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.09 U	2.77 U	1.91 U	1.98 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	4.44 U	4.12 U	2.09 U	3.42 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.99 U	1.55 U	1.78 U	2.02 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2 U	2.76 U	1.8 U	1.9 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	8.53 U	7.36 U	4.06 J	28.4 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	6.4 U	6.14 U	3.34 U	6.63 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	1.98 UJ	1.06 UJ	1.3 UJ	1.98 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	2.2 UJ	2.42 UJ	1.52 J	5.52 J
Total hexachlorodibenzofuran (HxCDF)	pg/L	1.98 UJ	1.59 UJ	1.74 UJ	2.04 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	2.53 UJ	3.35 UJ	2.17 UJ	3 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	2.05 UJ	2.76 UJ	1.85 UJ	1.94 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-15	Grid-16	Grid-17	Grid-18
Sample Identification:		12599404-120622-S-MTK-WC-15	12599404-120622-S-MTK-WC-16	12599404-120522-S-MTK-WC-17	12599404-120522-S-MTK-WC-18
Sample Date:	Units	12/06/2022	12/06/2022	12/05/2022	12/05/2022
Parameters					
TCLP-Dioxins/Furans (Continued)					
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	4.44 UJ	4.12 UJ	2.09 UJ	3.42 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	8.53 UJ	7.36 UJ	4.06 J	40.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	6.4 UJ	6.14 UJ	3.34 UJ	6.63 UJ
Total WHO Dioxin TEQ					
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	0.00546 J	0.0672	0.421 J	2.86 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	6.99 J	6.87	4.13 J	9.09 J
TCLP-Metals					
Antimony	mg/L	0.024 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	0.014 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	0.21	0.75	1.1	1.0
Beryllium	mg/L	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.0050 U	0.016	0.012	0.0010 U
Chromium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	0.0090 U	0.0018 U	0.0018 U	0.0018 U
Mercury	mg/L	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	0.061	0.15	0.051	0.024
Selenium	mg/L	0.025 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	0.0095 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-15	Grid-16	Grid-17	Grid-18
Sample Identification:		12599404-120622-S-MTK-WC-15	12599404-120622-S-MTK-WC-16	12599404-120522-S-MTK-WC-17	12599404-120522-S-MTK-WC-18
Sample Date:	Units	12/06/2022	12/06/2022	12/05/2022	12/05/2022
Parameters					
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	44.5 J	237 J	12 UJ	12 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	51.1 J	98.3 J	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	17 UJ	17 UJ	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	95.6 J	336 J	12 UJ	12 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-19	Grid-20	Grid-21	Grid-22
Sample Identification:		12599404-120222-S-MTK-WC-19	12599404-120222-S-MTK-WC-20	12599404-120222-S-MTK-WC-21	12599404-120222-S-MTK-WC-22
Sample Date:	Units	12/02/2022	12/02/2022	12/02/2022	12/02/2022
Parameters					
TCLP-Dioxins/Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	3.37 J	7.16 J	9.58 J	1.67 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	43.5 U	44 U	27 U	11.3 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	0.803 U	1.85 J	2.88 U	0.837 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	2.51 J	3.2 J	2.21 U	1.16 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	0.965 U	1.49 U	3.7 U	0.904 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.02 U	1.08 U	2.03 U	1.07 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.15 U	1.32 U	2.46 U	1.37 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.02 U	1.02 U	1.94 U	1.17 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.25 U	1.32 U	2.52 U	1.48 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	1.18 U	1.37 U	2.71 U	1.43 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.22 U	1.38 U	2.51 U	1.47 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	0.908 U	0.99 U	1.62 U	0.968 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.18 U	1.47 U	1.82 U	1.25 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	0.984 U	1.05 U	2.13 U	1.26 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	0.872 U	1.04 U	1.65 U	0.911 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	3.67 J	18.8 J	10.9	11.2
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	1.57 U	7.81 J	4.76 J	2.88 J
Total heptachlorodibenzofuran (HpCDF)	pg/L	0.877 UJ	1.85 J	3.24 UJ	0.869 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	7.1 J	8.27 J	4.54 J	1.16 UJ
Total hexachlorodibenzofuran (HxCDF)	pg/L	1.05 UJ	1.12 UJ	2.18 UJ	1.23 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.2 UJ	1.34 UJ	2.49 UJ	1.44 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	0.89 UJ	1.01 UJ	1.63 UJ	0.94 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-19	Grid-20	Grid-21	Grid-22
Sample Identification:		12599404-120222-S-MTK-WC-19	12599404-120222-S-MTK-WC-20	12599404-120222-S-MTK-WC-21	12599404-120222-S-MTK-WC-22
Sample Date:	Units	12/02/2022	12/02/2022	12/02/2022	12/02/2022
Parameters					
TCLP-Dioxins/Furans (Continued)					
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.18 UJ	1.47 UJ	1.82 UJ	1.25 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	3.67 J	29 J	18.3 J	16.2 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	1.57 UJ	7.81 J	4.76 J	2.88 J
Total WHO Dioxin TEQ					
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	0.393 J	9.74 J	5.85 J	4.00 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	2.32 J	11.1 J	7.90 J	5.26 J
TCLP-Metals					
Antimony	mg/L	0.0047 U	0.0047 U	0.0047 U	0.0047 U
Arsenic	mg/L	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Barium	mg/L	1.2	0.71	1.0	0.80
Beryllium	mg/L	0.00050 U	0.00050 U	0.00050 U	0.00050 U
Cadmium	mg/L	0.0057	0.0054	0.0045	0.0010 U
Chromium	mg/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Lead	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Mercury	mg/L	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Nickel	mg/L	0.031	0.033	0.028	0.020
Selenium	mg/L	0.0049 U	0.0049 U	0.0049 U	0.0049 U
Silver	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U
Vanadium	mg/L	0.0018 U	0.0018 U	0.0018 U	0.0018 U

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-19	Grid-20	Grid-21	Grid-22
Sample Identification:		12599404-120222-S-MTK-WC-19	12599404-120222-S-MTK-WC-20	12599404-120222-S-MTK-WC-21	12599404-120222-S-MTK-WC-22
Sample Date:	Units	12/02/2022	12/02/2022	12/02/2022	12/02/2022
Parameters					
Total Petroleum Hydrocarbons (TPH)					
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	12 UJ	12 UJ	12 UJ	42.7 J
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	12 UJ	12 UJ	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	12 UJ	12 UJ	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	12 UJ	12 UJ	12 UJ	42.7 J

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-23	Grid-24	Grid-24
Sample Identification:		12599404-120222-S-MTK-WC-23	12599404-120122-S-MTK-WC-24	12599404-120522-S-MTK-WC-24
Sample Date:	Units	12/02/2022	12/01/2022	12/05/2022
Parameters				
TCLP-Dioxins/Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	6.07 J	3.54 U	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	17.4 U	53.2 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	1.15 U	2.15 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.44 U	4.44 J	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	1.43 U	2.45 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.01 U	2.62 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.58 U	3.67 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	0.946 U	2.42 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.56 U	3.96 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	1.09 U	3.16 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.66 U	3.6 U	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	1.48 U	2.59 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.65 U	2.53 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.04 U	2.49 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	1.49 U	2.4 U	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	20.1 J	7.45 U	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	7.04	6.7 U	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	1.28 UJ	2.29 UJ	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.44 UJ	11.9 J	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	1.02 UJ	2.66 UJ	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.6 UJ	3.73 UJ	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	1.49 UJ	2.5 UJ	--

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-23	Grid-24	Grid-24
Sample Identification:		12599404-120222-S-MTK-WC-23	12599404-120122-S-MTK-WC-24	12599404-120522-S-MTK-WC-24
Sample Date:	Units	12/02/2022	12/01/2022	12/05/2022
Parameters				
TCLP-Dioxins/Furans (Continued)				
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.65 UJ	2.53 UJ	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	34.8 J	7.45 UJ	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	7.04 J	6.7 UJ	--
Total WHO Dioxin TEQ				
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	9.05 J	0.0444 J	--
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	10.6 J	6.56 J	--
TCLP-Metals				
Antimony	mg/L	0.0047 U	0.0047 U	--
Arsenic	mg/L	0.0028 U	0.0028 U	--
Barium	mg/L	0.65	1.2	--
Beryllium	mg/L	0.00050 U	0.00050 U	--
Cadmium	mg/L	0.0066	0.0010 U	--
Chromium	mg/L	0.0020 U	0.0020 U	--
Lead	mg/L	0.0018 U	0.0018 U	--
Mercury	mg/L	0.000095 U	0.000095 U	--
Nickel	mg/L	0.024	0.023	--
Selenium	mg/L	0.0049 U	0.0049 U	--
Silver	mg/L	0.0019 U	0.0019 U	--
Vanadium	mg/L	0.0018 U	0.0018 U	--

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-23	Grid-24	Grid-24
Sample Identification:		12599404-120222-S-MTK-WC-23	12599404-120122-S-MTK-WC-24	12599404-120522-S-MTK-WC-24
Sample Date:	Units	12/02/2022	12/01/2022	12/05/2022
Parameters				
Total Petroleum Hydrocarbons (TPH)				
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	12 UJ	--	12 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	12 UJ	--	12 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	12 UJ	--	12 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	12 UJ	--	12 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		**Grid-25**	**Grid-25**	**Grid-26**
Sample Identification:		**12599404-120122-S-MTK-WC-25**	**12599404-120522-S-MTK-WC-25**	**12599404-120222-S-MTK-WC-26**
Sample Date:	**Units**	**12/01/2022**	**12/05/2022**	**12/02/2022**
Parameters				
TCLP-Dioxins/Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	5.93 U	--	1.57 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	37.6 U	--	38.3 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	6.4 J	--	1.19 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	4.58 J	--	2.09 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	2.86 U	--	1.44 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	6.07 U	--	0.943 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	3.76 U	--	1.43 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	2.64 U	--	0.928 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	3.98 U	--	1.46 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	3.46 U	--	1.21 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	3.98 U	--	1.5 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.48 U	--	0.948 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	3.14 U	--	1.26 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	2.64 U	--	0.988 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.22 U	--	0.926 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	24.2	--	27
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	13.3	--	7.55
Total heptachlorodibenzofuran (HpCDF)	pg/L	6.4 J	--	1.3 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	16.1 J	--	4.63 J
Total hexachlorodibenzofuran (HxCDF)	pg/L	9.8 J	--	1.01 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	3.9 UJ	--	1.46 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	2.35 UJ	--	0.937 UJ

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		Grid-25	Grid-25	Grid-26
Sample Identification:		12599404-120122-S-MTK-WC-25	12599404-120522-S-MTK-WC-25	12599404-120222-S-MTK-WC-26
Sample Date:	Units	12/01/2022	12/05/2022	12/02/2022
Parameters				
TCLP-Dioxins/Furans (Continued)				
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	3.14 UJ	--	1.26 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	35.9 J	--	39.7 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	13.3 J	--	7.55 J
Total WHO Dioxin TEQ				
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	15.8 J	--	10.3 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	19.1 J	--	11.5 J
TCLP-Metals				
Antimony	mg/L	0.0047 U	--	0.0047 U
Arsenic	mg/L	0.0028 U	--	0.0028 U
Barium	mg/L	0.97	--	0.81
Beryllium	mg/L	0.00050 U	--	0.00050 U
Cadmium	mg/L	0.0054	--	0.0047
Chromium	mg/L	0.0020 U	--	0.0020 U
Lead	mg/L	0.0018 U	--	0.0018 U
Mercury	mg/L	0.000095 U	--	0.000095 U
Nickel	mg/L	0.017	--	0.011
Selenium	mg/L	0.0049 U	--	0.0049 U
Silver	mg/L	0.0019 U	--	0.0019 U
Vanadium	mg/L	0.0018 U	--	0.0018 U

Table 2

Analytical Results Summary
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Sample Location:		**Grid-25**	**Grid-25**	**Grid-26**
Sample Identification:		**12599404-120122-S-MTK-WC-25**	**12599404-120522-S-MTK-WC-25**	**12599404-120222-S-MTK-WC-26**
Sample Date:	**Units**	**12/01/2022**	**12/05/2022**	**12/02/2022**
Parameters				
Total Petroleum Hydrocarbons (TPH)				
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	--	12 UJ	12 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	--	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	--	12 UJ	12 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	--	12 UJ	12 UJ

Notes:

"--"	- Not analyzed
J	- Estimated concentration
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated
TCLP	- Toxicity Characteristic Leaching Procedure
WHO	- World Health Organization
TEQ	- Toxic Equivalent

Table 3

Analytical Methods
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction or TCLP Extraction (Days)	Collection or Extraction to Analysis (Days)
Total Petroleum Hydrocarbons	TX 1005	Soil	Iced, 0-6° C	14	40
TCLP Metals	SW-846 1311/6010B	Leachate	Iced, 0-6° C	180	180
TCLP Mercury	SW-846 1311/7470A	Leachate	Iced, 0-6° C	28	28
PCDDs/PCDFs - TCLP	EPA 1613B	Leachate	Iced, 0-6° C	365	365

Notes:

Method References:

EPA - Environmental Protection Agency

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TCLP - Toxicity Characteristic Leaching Procedure

TX-1005 - TNRCC Method 1005 - Total Petroleum Hydrocarbons, Revision 03, June 1, 2001, Austin, TX

Table 4

Qualified Sample Data Due to Inadequate Sample Preservation
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
TPH	12599404-120222-S-MTK-WC-26	TPH (>C12-C28)	24 UJ	mg/kg
		TPH (>C28-C35)	24 UJ	mg/kg
		TPH (C6-C12)	24 UJ	mg/kg
		TPH (C6-C35)	24 UJ	mg/kg
TPH	12599404-120222-S-MTK-WC-23	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120222-S-MTK-WC-22	TPH (>C12-C28)	42.7 J	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	42.7 J	mg/kg
TPH	12599404-120222-S-MTK-WC-21	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120222-S-MTK-WC-20	TPH (>C12-C28)	24 UJ	mg/kg
		TPH (>C28-C35)	24 UJ	mg/kg
		TPH (C6-C12)	24 UJ	mg/kg
		TPH (C6-C35)	24 UJ	mg/kg
TPH	12599404-120222-S-MTK-WC-19	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg

Table 4

Qualified Sample Data Due to Inadequate Sample Preservation
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
TPH	12599404-120522-S-MTK-WC-18	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120522-S-MTK-WC-17	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120522-S-MTK-WC-25	TPH (>C12-C28)	24 UJ	mg/kg
		TPH (>C28-C35)	24 UJ	mg/kg
		TPH (C6-C12)	24 UJ	mg/kg
		TPH (C6-C35)	24 UJ	mg/kg
TPH	12599404-120522-S-MTK-WC-24	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120622-S-MTK-WC-1	TPH (>C12-C28)	40 UJ	mg/kg
		TPH (>C28-C35)	40 UJ	mg/kg
		TPH (C6-C12)	40 UJ	mg/kg
		TPH (C6-C35)	40 UJ	mg/kg
TPH	12599404-120622-S-MTK-WC-2	TPH (>C12-C28)	33 UJ	mg/kg
		TPH (>C28-C35)	33 UJ	mg/kg
		TPH (C6-C12)	33 UJ	mg/kg
		TPH (C6-C35)	33 UJ	mg/kg

Table 4

Qualified Sample Data Due to Inadequate Sample Preservation
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result		Units
TPH	12599404-120622-S-MTK-WC-16	TPH (>C12-C28)	237	J	mg/kg
		TPH (>C28-C35)	98.3	J	mg/kg
		TPH (C6-C12)	33	UJ	mg/kg
		TPH (C6-C35)	336	J	mg/kg
TPH	12599404-120622-S-MTK-WC-15	TPH (>C12-C28)	44.5	J	mg/kg
		TPH (>C28-C35)	51.1	J	mg/kg
		TPH (C6-C12)	34	UJ	mg/kg
		TPH (C6-C35)	95.6	J	mg/kg
TPH	12599404-120622-S-MTK-WC-14	TPH (>C12-C28)	32	UJ	mg/kg
		TPH (>C28-C35)	32	UJ	mg/kg
		TPH (C6-C12)	32	UJ	mg/kg
		TPH (C6-C35)	32	UJ	mg/kg
TPH	12599404-120622-S-MTK-WC-13	TPH (>C12-C28)	82.8	J	mg/kg
		TPH (>C28-C35)	34	UJ	mg/kg
		TPH (C6-C12)	34	UJ	mg/kg
		TPH (C6-C35)	82.8	J	mg/kg
TPH	12599404-120722-S-MTK-WC-12	TPH (>C12-C28)	2040	J	mg/kg
		TPH (>C28-C35)	613	J	mg/kg
		TPH (C6-C12)	79.6	J	mg/kg
		TPH (C6-C35)	2740	J	mg/kg
TPH	12599404-120722-S-MTK-WC-11	TPH (>C12-C28)	109	J	mg/kg
		TPH (>C28-C35)	135	J	mg/kg
		TPH (C6-C12)	159	J	mg/kg
		TPH (C6-C35)	402	J	mg/kg

Table 4

Qualified Sample Data Due to Inadequate Sample Preservation
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
TPH	12599404-120722-S-MTK-WC-9	TPH (>C12-C28)	33 UJ	mg/kg
		TPH (>C28-C35)	33 UJ	mg/kg
		TPH (C6-C12)	33 UJ	mg/kg
		TPH (C6-C35)	33 UJ	mg/kg
TPH	12599404-120722-S-MTK-WC-6	TPH (>C12-C28)	35 UJ	mg/kg
		TPH (>C28-C35)	35 UJ	mg/kg
		TPH (C6-C12)	35 UJ	mg/kg
		TPH (C6-C35)	35 UJ	mg/kg
TPH	12599404-120722-S-MTK-WC-3	TPH (>C12-C28)	36 UJ	mg/kg
		TPH (>C28-C35)	36 UJ	mg/kg
		TPH (C6-C12)	36 UJ	mg/kg
		TPH (C6-C35)	36 UJ	mg/kg
TPH	12599404-120822-S-MTK-WC-4	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120822-S-MTK-WC-5	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120822-S-MTK-WC-8	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg

Table 4

Qualified Sample Data Due to Inadequate Sample Preservation
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
TPH	12599404-120822-S-MTK-WC-10	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg
TPH	12599404-120822-S-MTK-WC-7	TPH (>C12-C28)	25 UJ	mg/kg
		TPH (>C28-C35)	25 UJ	mg/kg
		TPH (C6-C12)	25 UJ	mg/kg
		TPH (C6-C35)	25 UJ	mg/kg

Notes:

J - Estimated concentration
TPH - Total Petroleum Hydrocarbons
UJ - Not detected; associated reporting limit is estimated

Table 5

Qualified Sample Results Due to Analyte Concentrations in the TCLP Blanks
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Dioxins/Furans	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12/06/2022	31.7 J	12599404-120122-S-MTK-WC-24	53.2 J	53.2 U	pg/L
				12599404-120122-S-MTK-WC-25	37.6 J	37.6 U	pg/L
				12599404-120122-S-MTK-WC-2	41.1 J	41.1 U	pg/L
Dioxins/Furans	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	12/06/2022	8.04 J	12599404-120122-S-MTK-WC-25	6.07 J	6.07 U	pg/L
				12599404-120122-S-MTK-WC-1	12.1 J	12.1 U	pg/L
Dioxins/Furans	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12/07/2022	13.5 J	12599404-120222-S-MTK-WC-26	38.3 J	38.3 U	pg/L
				12599404-120222-S-MTK-WC-23	17.4 J	17.4 U	pg/L
				12599404-120222-S-MTK-WC-22	11.3 J	11.3 U	pg/L
				12599404-120222-S-MTK-WC-21	27 J	27 U	pg/L
				12599404-120222-S-MTK-WC-20	44 J	44 U	pg/L
				12599404-120222-S-MTK-WC-19	43.5 J	43.5 U	pg/L

Notes:

* - Blank result adjusted for sample factors where applicable
U - Not detected at the associated reporting limit
J - Estimated concentration
TCLP - Toxicity Characteristic Leaching Procedure

Table 6

Qualified Sample Data Due to Outlying ICP Serial Dilution Results
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Serial Dilution Sample ID	Analyte	%D	Associated Sample ID	Qualified Result	Units
Metals	12599404-120822-S-MTK-WC-4	Nickel	11.7	12599404-120822-S-MTK-WC-4	0.026 J	mg/L
				12599404-120822-S-MTK-WC-8	0.029 J	mg/L
				12599404-120822-S-MTK-WC-7	0.030 J	mg/L

Notes:

%D - Percent Difference
ICP - Inductively Coupled Plasma
J - Estimated concentration

Table 7

Qualified Sample Results Due to Outlying Identification Criteria
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxins/Furans	12599404-120122-S-MTK-WC-1	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	8.62 J	pg/L
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5.39 J	pg/L
Dioxins/Furans	12599404-120122-S-MTK-WC-2	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	2.36 J	pg/L
Dioxins/Furans	12599404-120122-S-MTK-WC-25	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	4.58 J	pg/L
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6.4 J	pg/L
Dioxins/Furans	12599404-120222-S-MTK-WC-19	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	3.67 J	pg/L
Dioxins/Furans	12599404-120222-S-MTK-WC-20	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	7.16 J	pg/L
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	3.2 J	pg/L
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	7.81 J	pg/L
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	18.8 J	pg/L
Dioxins/Furans	12599404-120222-S-MTK-WC-21	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9.58 J	pg/L
Dioxins/Furans	12599404-120222-S-MTK-WC-22	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	2.88 J	pg/L

Table 7

Qualified Sample Results Due to Outlying Identification Criteria
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxins/Furans	12599404-120222-S-MTK-WC-23	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	20.1 J	pg/L
Dioxins/Furans	12599404-120222-S-MTK-WC-26	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	2.09 J	pg/L
Dioxins/Furans	12599404-120522-S-MTK-WC-17	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	1.52 J	pg/L
Dioxins/Furans	12599404-120522-S-MTK-WC-18	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	12.3 J	pg/L
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	28.4 J	pg/L
Dioxins/Furans	12599404-120622-S-MTK-WC-13	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	38.9 J	pg/L
Dioxins/Furans	12599404-120622-S-MTK-WC-14	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	158 J	pg/L
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	94.6 J	pg/L
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6.96 J	pg/L
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	11.4 J	pg/L
Dioxins/Furans	12599404-120622-S-MTK-WC-15	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	18.2 J	pg/L
Dioxins/Furans	12599404-120722-S-MTK-WC-11	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	11 J	pg/L

Table 7

Qualified Sample Results Due to Outlying Identification Criteria
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxins/Furans	12599404-120722-S-MTK-WC-12	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9.74 J	pg/L
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	4.87 J	pg/L
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	17.3 J	pg/L
Dioxins/Furans	12599404-120722-S-MTK-WC-3	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	11.5 J	pg/L
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	12.6 J	pg/L
Dioxins/Furans	12599404-120722-S-MTK-WC-6	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9.91 J	pg/L
Dioxins/Furans	12599404-120722-S-MTK-WC-9	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	6.23 J	pg/L
Dioxins/Furans	12599404-120822-S-MTK-WC-10	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	27.2 J	pg/L
Dioxins/Furans	12599404-120822-S-MTK-WC-4	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	84.8 J	pg/L
		1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	8.32 J	pg/L
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	10.4 J	pg/L
		2,3,7,8-Tetrachlorodibenzofuran (TCDF)	7.39 J	pg/L
Dioxins/Furans	12599404-120822-S-MTK-WC-5	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	7.88 J	pg/L

Table 7

Qualified Sample Results Due to Outlying Identification Criteria
Waste Characterization Investigation
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
December 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxins/Furans	12599404-120822-S-MTK-WC-8	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	13.4 J	pg/L

Notes:

J - Estimated concentration

Technical Memorandum

16 February 2023

To	Wells Richard	**Tel**	860 747-8298
Copy to	File	**Email**	Kathleen.shaw@ghd.com, Marisa.Oriaku@ghd.com
From	Kathy Shaw/Marisa Oriaku/eew/2	**Ref. No.**	12599404
Subject	Analytical Results and Reduced Validation Fill Soil Sampling San Jacinto Southern Impoundment Channelview, Harris County, Texas November 2022		

1. Introduction

This document details a reduced validation of analytical results for soil samples collected in support of the Fill Soil Sampling at the San Jacinto Southern Impoundment site during November 2022. Samples were submitted to SGS North America Laboratories located in Dayton, New Jersey and Wilmington, North Carolina. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS), matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1) Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation", San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3, 2019
2) "National Functional Guidelines for Inorganic Superfund Methods Data Review", USEPA 542-R-20-006, November 2020.
3) "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020.
4) "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9240.1-65, EPA 542-R-20-007, November 2020

Items 2), 3) and 4) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

The samples summarized in Table 4 were qualified due to inadequate sample preservation. Texas Total Petroleum Hydrocarbons, (TX-1005) samples were collected in bulk; however, the method requires the samples to be collected in Terra Core® airtight sample collection samplers (or equivalent). The remaining samples were shipped and maintained in accordance with the sample preservation requirements.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, the laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Method Blank Analyses

Most method blank results were non-detect with the exception of a few blanks with low concentrations of Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furans (PCDDs/PCDFs) and 4,4'-DDT. Sample results with similar concentrations to those found in the method blanks were qualified as non-detect (U) as shown in Table 5. Note that method blanks were corrected for individual sample dilution factors and percent solids, where applicable.

Inorganic Analyses

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries – Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), Pesticides, Herbicides, and TX-1005 determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within the laboratory control limits.

5. Spiked C 13 Labeled PCDDs/PCDFs – Organic Analyses

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction. The labeled congeners are an internal standard for the

quantitation of native congeners and serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction and analysis.

Labeled congener recoveries were assessed against method control limits. All labeled PCDD/PCDF recoveries were within the method acceptance ranges.

6. Laboratory Control Sample Analyses

LCS and/or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

High LCS recoveries and/or RPDs do not impact any associated non-detect sample results.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS and/or LCS/LCSD contained all compounds of interest. Most LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision with the exception of a slightly high Aroclor-1016 LCS recovery. All associated sample results were non-detect and no qualification of the data was performed.

Inorganic Analyses

The LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries and RPDs were within the control limits, demonstrating acceptable analytical accuracy and precision.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. Most percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision with the exception slightly high RPD values for various herbicides. All associated results were non-detect and were not qualified.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision.

8. Target Compound Identification

To minimize erroneous compound identification during PCDD/PCDF analyses, qualitative criteria including compound retention time, ion abundance ratio, and chromatography were evaluated according to the identification criteria established by the methods. An erroneous identification can be either a false positive (reporting a target compound when it is not present in the sample) or false negative (not reporting a compound that is present in the sample).

Most compounds reported adhered to the method-specified identification criteria. Some sample results were reported as positive hits although the ion abundance ratios were not met. The associated results were qualified as the estimated maximum possible concentration. A summary of these qualified data is presented in Table 6.

9. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non detect data were reported down to the laboratory's sample specific MDL for each analyte.

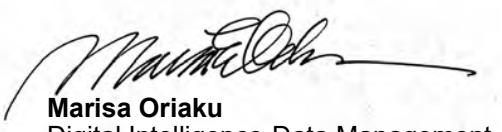
All soil results were reported on a dry weight basis.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Regards

Kathleen Shaw
Digital Intelligence-Data Management-Chemist



Marisa Oriaku
Digital Intelligence-Data Management-Chemist

Table 1

Sample Collection and Analysis Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Delivery Group	Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters										Comment
						Dioxins/Furans	Metals	Hexavalent Chromium	PCBs	Pesticides	Herbicides	VOC	SVOC	Cyanide	TX 1005	
B7330	12599404-112122-S-MTK-Source Aggregate-1	Source Aggregate-1	Soil	11/21/2022	10:50	X										
B7330	12599404-112122-S-MTK-Source Clay-1	Source Clay-1	Soil	11/21/2022	10:40	X										
B7330	12599404-112122-S-MTK-Source Sand-1	Source Sand-1	Soil	11/21/2022	11:00	X										
JD56110	12599404-112122-S-MTK-Source Aggregate-1	Source Aggregate-1	Soil	11/21/2022	11:30		X	X	X	X	X	X	X	X		
JD56110	12599404-112122-S-MTK-Source Clay-1	Source Clay-1	Soil	11/21/2022	12:00		X	X	X	X	X	X	X	X		MS/MSD/DUP
JD56110	12599404-112122-S-MTK-Source Sand-1	Source Sand-1	Soil	11/21/2022	12:30		X	X	X	X	X	X	X	X		MS/MSD (Herbicides only)
JD56110	12599404-112122-W-MTK-TRIP-BLANK-1	--	Water	11/21/2022	12:30							X				Trip Blank
JD56110LA	12599404-112122-S-MTK-Source Aggregate-1	Source Aggregate-1	Soil	11/21/2022	11:30										X	
JD56110LA	12599404-112122-S-MTK-Source Clay-1	Source Clay-1	Soil	11/21/2022	12:00										X	
JD56110LA	12599404-112122-S-MTK-Source Sand-1	Source Sand-1	Soil	11/21/2022	12:30										X	

Notes:

DUP - Laboratory Duplicate
MS/MSD - Matrix Spike/Matrix Spike Duplicate
PCB - Polychlorinated Biphenyls
SVOC - Semi-volatile Organic Compounds
TX-1005 - TNRCC Method 1005 - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Dioxins/Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.321 U	0.0912 U	0.3 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	5.81 U	303	23
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.11 U	0.0576 U	0.148 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.696 U	10.5	1.35 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.179 U	0.0779 U	0.183 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.165 U	0.0653 U	0.147 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.265 U	0.346 J	0.119 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.143 U	0.0606 U	0.147 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.276 U	0.226 J	0.119 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.196 U	0.0747 U	0.173 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.279 U	0.625 J	0.122 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.178 U	0.0744 U	0.105 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 U	0.11 U	0.173 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.173 U	0.0689 U	0.16 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.19 U	0.0695 U	0.101 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.176 U	0.0615 U	0.0663 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.326 U	0.115 U	0.104 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.137 UJ	0.0665 UJ	0.164 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.07 J	24.5 J	3.01 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.167 UJ	0.067 UJ	0.156 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.272 UJ	3.75 J	0.247 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.184 UJ	0.072 UJ	0.103 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.29 UJ	0.11 UJ	0.173 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.176 UJ	0.0615 UJ	0.0663 UJ
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.326 UJ	0.115 UJ	0.104 UJ
Total WHO Dioxin TEQ				
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0	0.3156 J	0.0204 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.429 J	0.457 J	0.230 J

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Herbicides				
2,4,5-T	mg/kg	0.0018 U	0.0020 U	0.0017 U
2,4,5-TP (Silvex)	mg/kg	0.0020 U	0.0022 U	0.0019 U
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/kg	0.0096 U	0.011 U	0.0090 U
Metals				
Aluminum	mg/kg	2060	11800	1520
Antimony	mg/kg	0.42 U	0.51 U	0.44 U
Arsenic	mg/kg	0.29 U	5.3	0.30 U
Barium	mg/kg	35.1	103	2.1 U
Beryllium	mg/kg	0.082 U	0.67	0.086 U
Cadmium	mg/kg	0.071 U	0.087 U	0.076 U
Calcium	mg/kg	270000	66400	11200
Chromium	mg/kg	5.0	15.1	2.6
Chromium VI (hexavalent)	mg/kg	0.35 U	0.38 U	0.34 U
Cobalt	mg/kg	0.29 U	6.7	0.30 U
Copper	mg/kg	0.86 U	7.5	0.91 U
Iron	mg/kg	1510	13700	2050
Lead	mg/kg	0.42 U	10.5	0.44 U
Magnesium	mg/kg	68000	2040	15 U
Manganese	mg/kg	67.8	429	36.1
Mercury	mg/kg	0.014 U	0.016 U	0.013 U
Nickel	mg/kg	0.36 U	14.6	0.38 U
Potassium	mg/kg	32 U	1540	34 U
Selenium	mg/kg	0.66 U	0.81 U	0.70 U
Silver	mg/kg	0.17 U	0.21 U	0.18 U
Sodium	mg/kg	79 U	97 U	84 U
Thallium	mg/kg	0.59 U	0.72 U	0.63 U
Vanadium	mg/kg	5.6	27.1	0.21 U
Zinc	mg/kg	2.3 U	45.2	8.1

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
PCBs				
Aroclor-1016 (PCB-1016)	mg/kg	0.015 U	0.017 U	0.016 U
Aroclor-1221 (PCB-1221)	mg/kg	0.020 U	0.023 U	0.022 U
Aroclor-1232 (PCB-1232)	mg/kg	0.021 U	0.023 U	0.022 U
Aroclor-1242 (PCB-1242)	mg/kg	0.013 U	0.015 U	0.014 U
Aroclor-1248 (PCB-1248)	mg/kg	0.029 U	0.032 U	0.031 U
Aroclor-1254 (PCB-1254)	mg/kg	0.018 U	0.020 U	0.019 U
Aroclor-1260 (PCB-1260)	mg/kg	0.014 U	0.015 U	0.015 U
Aroclor-1262 (PCB-1262)	mg/kg	0.021 U	0.024 U	0.023 U
Aroclor-1268 (PCB-1268)	mg/kg	0.014 U	0.015 U	0.015 U
Pesticides				
4,4'-DDD	mg/kg	0.00060 U	0.00067 U	0.00064 U
4,4'-DDE	mg/kg	0.00057 U	0.00064 U	0.00061 U
4,4'-DDT	mg/kg	0.0026 U	0.0029 U	0.0024 U
Aldrin	mg/kg	0.00054 U	0.00060 U	0.00057 U
alpha-BHC	mg/kg	0.00053 U	0.00059 U	0.00056 U
alpha-Chlordane	mg/kg	0.00053 U	0.00059 U	0.00056 U
beta-BHC	mg/kg	0.00059 U	0.00066 U	0.00063 U
delta-BHC	mg/kg	0.00063 U	0.00070 U	0.00067 U
Dieldrin	mg/kg	0.00045 U	0.00050 U	0.00048 U
Endosulfan I	mg/kg	0.00038 U	0.00042 U	0.00040 U
Endosulfan II	mg/kg	0.00041 U	0.00045 U	0.00043 U
Endosulfan sulfate	mg/kg	0.00051 U	0.00057 U	0.00054 U
Endrin	mg/kg	0.00051 U	0.00056 U	0.00054 U
Endrin aldehyde	mg/kg	0.00037 U	0.00041 U	0.00039 U
Endrin ketone	mg/kg	0.00047 U	0.00052 U	0.00050 U
gamma-BHC (lindane)	mg/kg	0.00048 U	0.00053 U	0.00051 U
gamma-Chlordane	mg/kg	0.00030 U	0.00033 U	0.00031 U
Heptachlor	mg/kg	0.00056 U	0.00063 U	0.00060 U
Heptachlor epoxide	mg/kg	0.00046 U	0.00051 U	0.00049 U
Methoxychlor	mg/kg	0.00052 U	0.00058 U	0.00055 U
Toxaphene	mg/kg	0.015 U	0.017 U	0.016 U

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Total Petroleum Hydrocarbons				
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	26 UJ	30 UJ	28 UJ
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	26 UJ	30 UJ	28 UJ
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	26 UJ	30 UJ	28 UJ
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	26 UJ	30 UJ	28 UJ
Semi-Volatile Organic Compounds				
1,2,4,5-Tetrachlorobenzene	mg/kg	0.0088 U	0.0096 U	0.0091 U
1,4-Dioxane	mg/kg	0.023 U	0.025 U	0.024 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.012 U	0.014 U	0.013 U
2,3,4,6-Tetrachlorophenol	mg/kg	0.023 U	0.025 U	0.024 U
2,4,5-Trichlorophenol	mg/kg	0.026 U	0.028 U	0.027 U
2,4,6-Trichlorophenol	mg/kg	0.021 U	0.023 U	0.021 U
2,4-Dichlorophenol	mg/kg	0.029 U	0.032 U	0.030 U
2,4-Dimethylphenol	mg/kg	0.061 U	0.067 U	0.063 U
2,4-Dinitrophenol	mg/kg	0.13 U	0.14 U	0.13 U
2,4-Dinitrotoluene	mg/kg	0.011 U	0.012 U	0.011 U
2,6-Dinitrotoluene	mg/kg	0.017 U	0.019 U	0.018 U
2-Chloronaphthalene	mg/kg	0.0082 U	0.0090 U	0.0085 U
2-Chlorophenol	mg/kg	0.017 U	0.019 U	0.018 U
2-Methylnaphthalene	mg/kg	0.0078 U	0.0086 U	0.0081 U
2-Methylphenol	mg/kg	0.022 U	0.024 U	0.023 U
2-Nitroaniline	mg/kg	0.0081 U	0.0089 U	0.0084 U
2-Nitrophenol	mg/kg	0.023 U	0.025 U	0.024 U
3&4-Methylphenol	mg/kg	0.028 U	0.031 U	0.029 U
3,3'-Dichlorobenzidine	mg/kg	0.029 U	0.032 U	0.030 U
3-Nitroaniline	mg/kg	0.0086 U	0.0095 U	0.0089 U
4,6-Dinitro-2-methylphenol	mg/kg	0.037 U	0.041 U	0.038 U
4-Bromophenyl phenyl ether	mg/kg	0.013 U	0.015 U	0.014 U
4-Chloro-3-methylphenol	mg/kg	0.021 U	0.023 U	0.022 U
4-Chloroaniline	mg/kg	0.012 U	0.014 U	0.013 U
4-Chlorophenyl phenyl ether	mg/kg	0.011 U	0.012 U	0.012 U

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Semi-Volatile Organic Compounds (Continued)				
4-Nitroaniline	mg/kg	0.0089 U	0.0098 U	0.0092 U
4-Nitrophenol	mg/kg	0.092 U	0.10 U	0.095 U
Acenaphthene	mg/kg	0.012 U	0.013 U	0.012 U
Acenaphthylene	mg/kg	0.018 U	0.019 U	0.018 U
Acetophenone	mg/kg	0.0074 U	0.0081 U	0.0077 U
Anthracene	mg/kg	0.021 U	0.0271 J	0.022 U
Atrazine	mg/kg	0.015 U	0.016 U	0.015 U
Benzaldehyde	mg/kg	0.0085 U	0.0094 U	0.0088 U
Benzo(a)anthracene	mg/kg	0.0098 U	0.011 U	0.010 U
Benzo(a)pyrene	mg/kg	0.016 U	0.017 U	0.016 U
Benzo(b)fluoranthene	mg/kg	0.015 U	0.017 U	0.016 U
Benzo(g,h,i)perylene	mg/kg	0.017 U	0.019 U	0.018 U
Benzo(k)fluoranthene	mg/kg	0.016 U	0.018 U	0.017 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.0047 U	0.0052 U	0.0049 U
bis(2-Chloroethoxy)methane	mg/kg	0.0074 U	0.0081 U	0.0076 U
bis(2-Chloroethyl)ether	mg/kg	0.015 U	0.016 U	0.015 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.0081 U	0.0089 U	0.0083 U
Butyl benzylphthalate (BBP)	mg/kg	0.0084 U	0.0092 U	0.0087 U
Caprolactam	mg/kg	0.014 U	0.015 U	0.014 U
Carbazole	mg/kg	0.0050 U	0.0055 U	0.0052 U
Chrysene	mg/kg	0.011 U	0.012 U	0.011 U
Dibenz(a,h)anthracene	mg/kg	0.015 U	0.017 U	0.016 U
Dibenzofuran	mg/kg	0.014 U	0.015 U	0.015 U
Diethyl phthalate	mg/kg	0.0073 U	0.0081 U	0.0076 U
Dimethyl phthalate	mg/kg	0.0061 U	0.0067 U	0.0063 U
Di-n-butylphthalate (DBP)	mg/kg	0.0056 U	0.0062 U	0.0058 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.0086 U	0.0094 U	0.0089 U
Fluoranthene	mg/kg	0.015 U	0.0306 J	0.016 U
Fluorene	mg/kg	0.016 U	0.017 U	0.016 U
Hexachlorobenzene	mg/kg	0.0087 U	0.0096 U	0.0090 U
Hexachlorobutadiene	mg/kg	0.014 U	0.015 U	0.014 U

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Semi-Volatile Organic Compounds (Continued)				
Hexachlorocyclopentadiene	mg/kg	0.014 U	0.015 U	0.014 U
Hexachloroethane	mg/kg	0.017 U	0.019 U	0.018 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.016 U	0.018 U	0.017 U
Isophorone	mg/kg	0.0074 U	0.0081 U	0.0076 U
Naphthalene	mg/kg	0.0097 U	0.011 U	0.010 U
Nitrobenzene	mg/kg	0.013 U	0.015 U	0.014 U
N-Nitrosodi-n-propylamine	mg/kg	0.010 U	0.011 U	0.010 U
N-Nitrosodiphenylamine	mg/kg	0.013 U	0.014 U	0.013 U
Pentachlorophenol	mg/kg	0.032 U	0.036 U	0.033 U
Phenanthrene	mg/kg	0.012 U	0.0758	0.012 U
Phenol	mg/kg	0.018 U	0.020 U	0.019 U
Pyrene	mg/kg	0.011 U	0.0202 J	0.011 U
Volatile Organic Compounds				
1,1,1-Trichloroethane	mg/kg	0.00042 U	0.00057 U	0.00060 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00053 U	0.00071 U	0.00074 U
1,1,2-Trichloroethane	mg/kg	0.00049 U	0.00066 U	0.00069 U
1,1-Dichloroethane	mg/kg	0.00043 U	0.00059 U	0.00062 U
1,1-Dichloroethene	mg/kg	0.00058 U	0.00078 U	0.00081 U
1,2,3-Trichlorobenzene	mg/kg	0.0022 U	0.0030 U	0.0031 U
1,2,4-Trichlorobenzene	mg/kg	0.0022 U	0.0030 U	0.0031 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.00061 U	0.00082 U	0.00086 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.00037 U	0.00050 U	0.00052 U
1,2-Dichlorobenzene	mg/kg	0.00048 U	0.00065 U	0.00068 U
1,2-Dichloroethane	mg/kg	0.00041 U	0.00056 U	0.00058 U
1,2-Dichloropropane	mg/kg	0.00042 U	0.00056 U	0.00059 U
1,3-Dichlorobenzene	mg/kg	0.00044 U	0.00059 U	0.00062 U
1,4-Dichlorobenzene	mg/kg	0.00043 U	0.00059 U	0.00061 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.0021 U	0.0029 U	0.0030 U
2-Hexanone	mg/kg	0.0019 U	0.0025 U	0.0026 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	0.0020 U	0.0027 U	0.0028 U

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Volatile Organic Compounds (Continued)				
Acetone	mg/kg	0.0036 U	0.0049 U	0.0051 U
Benzene	mg/kg	0.00040 U	0.00054 U	0.00057 U
Bromodichloromethane	mg/kg	0.00038 U	0.00051 U	0.00053 U
Bromoform	mg/kg	0.0012 U	0.0016 U	0.0017 U
Bromomethane (Methyl bromide)	mg/kg	0.00067 U	0.00091 U	0.00095 U
Carbon disulfide	mg/kg	0.00047 U	0.00064 U	0.00067 U
Carbon tetrachloride	mg/kg	0.00054 U	0.00073 U	0.00077 U
Chlorobenzene	mg/kg	0.00040 U	0.00055 U	0.00057 U
Chlorobromomethane	mg/kg	0.00049 U	0.00067 U	0.00070 U
Chloroethane	mg/kg	0.00052 U	0.00070 U	0.00073 U
Chloroform (Trichloromethane)	mg/kg	0.00046 U	0.00062 U	0.00065 U
Chloromethane (Methyl chloride)	mg/kg	0.0017 U	0.0023 U	0.0024 U
cis-1,2-Dichloroethene	mg/kg	0.00074 U	0.0010 U	0.0010 U
cis-1,3-Dichloropropene	mg/kg	0.00042 U	0.00056 U	0.00059 U
Cyclohexane	mg/kg	0.00058 U	0.00078 U	0.00082 U
Dibromochloromethane	mg/kg	0.00049 U	0.00067 U	0.00070 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.00064 U	0.00086 U	0.00090 U
Ethylbenzene	mg/kg	0.00040 U	0.00071 J	0.00056 U
Isopropyl benzene	mg/kg	0.0012 U	0.0017 U	0.0018 U
m&p-Xylenes	mg/kg	0.00079 U	0.0015	0.0011 U
Methyl acetate	mg/kg	0.0012 U	0.0017 U	0.0017 U
Methyl cyclohexane	mg/kg	0.00077 U	0.0010 U	0.0011 U
Methyl tert butyl ether (MTBE)	mg/kg	0.00041 U	0.00056 U	0.00058 U
Methylene chloride	mg/kg	0.0023 U	0.0031 U	0.0032 U
o-Xylene	mg/kg	0.00040 U	0.00056 J	0.00057 U
Styrene	mg/kg	0.00035 U	0.00048 U	0.00050 U
Tetrachloroethene	mg/kg	0.00051 U	0.00069 U	0.00072 U
Toluene	mg/kg	0.00046 U	0.00066 J	0.00065 U
trans-1,2-Dichloroethene	mg/kg	0.00054 U	0.00073 U	0.00076 U
trans-1,3-Dichloropropene	mg/kg	0.00040 U	0.00054 U	0.00057 U
Trichloroethene	mg/kg	0.00067 U	0.00091 U	0.00095 U

Table 2

Analytical Results Summary
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Sample Location		Aggregate Source Pit	Clay Source Pit	Sand Source Pit
Sample Identification		12599404-112122-S-MTK-Source Aggregate-1	12599404-112122-S-MTK-Source Clay-1	12599404-112122-S-MTK-Source Sand-1
Sample Date		11/21/2022	11/21/2022	11/21/2022
Parameters	**Units**			
Volatile Organic Compounds (Continued)				
Trichlorofluoromethane (CFC-11)	mg/kg	0.00060 U	0.00081 U	0.00085 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.0023 U	0.0032 U	0.0033 U
Vinyl chloride	mg/kg	0.00042 U	0.00057 U	0.00060 U
Xylenes (total)	mg/kg	0.00040 U	0.0021	0.00057 U
General Chemistry				
Cyanide (total)	mg/kg	0.30	0.14 U	0.15 U

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
WHO - World Health Organization
TEQ - Toxic Equivalent
PCB - Polychlorinated Biphenyls

Table 3

Analytical Methods
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Volatile Organic Compounds	SW-846 8260B	Water	pH < 2 and Iced, 0-6° C	-	14
		Soil	Iced, 0-6° C	-	14
Semi-Volatile Organic Compounds	SW-846 8270C	Soil	Iced, 0-6° C	14	40
Total Petroleum Hydrocarbons	TX 1005	Soil	Iced, 0-6° C	14	40
Polychlorinated Biphenyls	SW-846 8082	Soil	Iced, 0-6° C	14	40
Dioxins and Furans	EPA 1613B	Soil	Iced, 0-6° C	365	365
Metals	SW-846 6010B	Soil	Iced, 0-6° C	-	180
Mercury	SW-846 7471A	Soil	Iced, 0-6° C	-	28
Chlorinated Herbicides	SW-846 8151A	Soil	Iced, 0-6° C	14	40

Table 3

Analytical Methods
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Cyanide	SW-846 9012	Soil	Iced, 0-6° C	-	14
Hexavalent Chromium	SW-846 7196	Soil	Iced, 0-6° C	28	7

Notes:

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TX-1005 - TNRCC Method 1005 - Total Petroleum Hydrocarbons, Revision 03, June 1, 2001, Austin, TX

EPA - Environmental Protection Agency

Table 4

Qualified Sample Data Due to Inadequate Sample Preservation
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
TPH	12599404-112122-S-MTK-Source Sand-1	Total Petroleum Hydrocarbons (>C12-C28)	28 UJ	mg/kg
		Total Petroleum Hydrocarbons (>C28-C35)	28 UJ	mg/kg
		Total Petroleum Hydrocarbons (C6-C12)	28 UJ	mg/kg
		Total Petroleum Hydrocarbons (C6-C35)	28 UJ	mg/kg
TPH	12599404-112122-S-MTK-Source Clay-1	Total Petroleum Hydrocarbons (>C12-C28)	30 UJ	mg/kg
		Total Petroleum Hydrocarbons (>C28-C35)	30 UJ	mg/kg
		Total Petroleum Hydrocarbons (C6-C12)	30 UJ	mg/kg
		Total Petroleum Hydrocarbons (C6-C35)	30 UJ	mg/kg
TPH	12599404-112122-S-MTK-Source Aggregate-1	Total Petroleum Hydrocarbons (>C12-C28)	26 UJ	mg/kg
		Total Petroleum Hydrocarbons (>C28-C35)	26 UJ	mg/kg
		Total Petroleum Hydrocarbons (C6-C12)	26 UJ	mg/kg
		Total Petroleum Hydrocarbons (C6-C35)	26 UJ	mg/kg

Notes:

UJ - Not detected; associated reporting limit is estimated
TPH - Total Petroleum Hydrocarbons

Table 5

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Dioxins/Furans	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	11/28/2022	2.11J	12599404-112122-S-MTK-Source Aggregate-1	5.81 J	5.81 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	11/28/2022	0.51J	12599404-112122-S-MTK-Source Aggregate-1	0.696 J	0.696 U	pg/g
Pesticides	4,4'-DDT	11/30/2022	0.0014	12599404-112122-S-MTK-Source Sand-1	0.0024	0.0024 U	mg/kg
				12599404-112122-S-MTK-Source Clay-1	0.0029	0.0029 U	mg/kg
				12599404-112122-S-MTK-Source Aggregate-1	0.0026	0.0026 U	mg/kg

Notes:

* - Blank result adjusted for sample factors where applicable

U - Not detected at the associated reporting limit

J - Estimated concentration

Table 6

Qualified Sample Results Due to Outlying Identification Criteria
Fill Soil Sampling
San Jacinto Southern Impoundment
Channelview, Harris County, Texas
November 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxins/Furans	12599404-112122-S-MTK-Source Clay-1	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.346 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.226 J	pg/g

Notes:

J - Estimated concentration

Data Verification Report

24 June 2024

To	Sarah Proulx; Willie Beal	**Contact No.**	561-688-9008
Copy to	Deborah Brennan	**Email**	Marisa.Oriaku@ghd.com
From	Marisa Oriaku/cs/3-NF	**Project No.**	12599404
Project Name	San Jacinto River Waste Pits - Southern Impoundment		
Subject	Analytical Results and Data Verification Release Area Sampling San Jacinto River Waste Pits - Southern Impoundment Channelview, Harris County, Texas April 2023		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for soil samples collected in support of the Release Area Sampling at the San Jacinto Southern Impoundment site during April 2023. Samples were submitted to Eurofins Lancaster Laboratories Environment Testing, LLC located in Lancaster, Pennsylvania. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, and recovery data from labeled spikes/laboratory control samples (LCS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

1. Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation", San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3, 2019
2. "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9240.1-65, EPA 542-R-20-007, November 2020

Item 2 will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criterion and sample preservation requirements for the analysis are summarized in Table 3. The sample chain of custody document and analytical report was used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

All method blank results were non detect, indicating that laboratory contamination was not a factor for this investigation.

4. Labeled Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furans (PCDD/PCDF) Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDD/PCDF are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction.

Labeled congener recoveries were assessed against method control limits. All recoveries met the method criteria, demonstrating acceptable analytical efficiency.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of one per analytical batch.

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Analyte Reporting

The laboratory reported detected results down to the laboratory's estimated detection limit (EDL) for each analyte. No positive analyte detections less than the RL but greater than the EDL were reported. Non-detect results were presented as non-detect at the EDL in Table 2.

All soil results were reported on a dry weight basis.

7. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Regards,

Marisa Oriaku
Digital Intelligence-Data Management-Data Validator

Table 1

Sample Collection and Analysis Summary
Release Area Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April 2023

Sample Delivery Group	Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters
						PCDDs/PCDFs
4101264581	12599404-042423-S-NE-Release-1	NE Release Area Sample 1	Soil	04/24/2023	11:20	X
	12599404-042423-S-NE-Release-2	NE Release Area Sample 2	Soil	04/24/2023	14:20	X
	12599404-042423-S-NE-Release-3	NE Release Area Sample 3	Soil	04/24/2023	16:50	X

Notes:

PCDDs - Polychlorinated Dibenzodioxins
PCDFs - Polychlorinated Dibenzofurans

Table 2

Analytical Results Summary
Release Area Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April 2023

Location ID:		**NE Release Area Sample 1**	**NE Release Area Sample 2**	**NE Release Area Sample 3**
Sample Name:		**12599404-042423-S-NE-Release-1**	**12599404-042423-S-NE-Release-2**	**12599404-042423-S-NE-Release-3**
Sample Date:		**04/24/2023**	**04/24/2023**	**04/24/2023**
Parameters	**Unit**			
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans				
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	ng/kg	6700	7500	4600
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	ng/kg	19	19	16
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	ng/kg	76	80	64
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	ng/kg	12	6.1	5.2
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	ng/kg	2.3	2.8	1.8
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	ng/kg	10	11	8.5
Total heptachlorodibenzo-p-dioxin (HpCDD)	ng/kg	270 J	290 J	250 J
Total heptachlorodibenzofuran (HpCDF)	ng/kg	25 J	16 J	14 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	32 J	29 J	27 J
Total hexachlorodibenzofuran (HxCDF)	ng/kg	12 J	85 J	8.9 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	ng/kg	6.9 J	5.0 J	4.8 J
Total pentachlorodibenzofuran (PeCDF)	ng/kg	9.6 J	5.7 J	3.7 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	ng/kg	3.3 J	4.1 J	2.4 J
Total tetrachlorodibenzofuran (TCDF)	ng/kg	21 J	28 J	17 J
Total PCDD	ng/kg	6900 J	8100 J	4600 J
Total PCDF	ng/kg	87 J	150 J	60 J
Total PCDD/PCDFs	ng/kg	7000 J	8300 J	4700 J

Table 2

Analytical Results Summary
Release Area Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April 2023

	Location ID:	**NE Release Area Sample 1**	**NE Release Area Sample 2**	**NE Release Area Sample 3**
	Sample Name:	**12599404-042423-S-NE-Release-1**	**12599404-042423-S-NE-Release-2**	**12599404-042423-S-NE-Release-3**
	Sample Date:	**04/24/2023**	**04/24/2023**	**04/24/2023**
Parameters	**Unit**			
Total WHO Dioxin TEQ				
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	ng/kg	6.2	7.0	4.7
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	ng/kg	8.2	9.1	6.8

Notes:

U - Not detected at the associated reporting limit
J - Estimated concentration.
WHO - World Health Organization
TEQ - Toxic Equivalent
PCDDs - Polychlorinated Dibenzodioxins
PCDFs - Polychlorinated Dibenzofurans

Table 3

Analytical Methods
Release Area Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April 2023

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Extraction to Analysis (Days)
Dioxins/Furans	EPA 1613B	Soil	Iced, 0-6° C	365	365

Notes:

EPA - Environmental Protection Agency

Data Verification Report

02 July 2024

To	Sarah Proulx; Willie Beal	**Contact No.**	561-688-9008
Copy to	Deborah Brennan	**Email**	Marisa.Oriaku@ghd.com
From	Marisa Oriaku/cs/4-NF	**Project No.**	12599404
Project Name	San Jacinto River Waste Pits - Southern Impoundment		
Subject	Analytical Results and Data Verification Water Treatment Discharge Sampling San Jacinto River Waste Pits - Southern Impoundment Channelview, Harris County, Texas April - November 2023		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for water samples collected in support of the Water Treatment Discharge Sampling at the San Jacinto Southern Impoundment site during April – November 2023. Samples were submitted to ALS Environmental located in Houston, Texas, and SGS North America, Inc. located in Scott, Louisiana, Wilmington, North Carolina, and Dayton, New Jersey. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from chain of custody forms, finished report forms, method blank data, laboratory duplicate, recovery data from surrogate spikes/labeled spikes/laboratory control samples (LCS)/matrix spikes (MS) and field (QA/QC) samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation",
   San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3, 2019
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review",
   United States Environmental Protection Agency (USEPA) 542-R-20-006, November 2020
3. "National Functional Guidelines for High Resolution Superfund Methods Data Review",
   OLEM 9240.1-65, EPA 542-R-20-007, November 2020
4. "National Functional Guidelines for Organic Superfund Methods Data Review",
   USEPA 540-R-20-005, November 2020

Item 2, 3, and 4 will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. Most samples were prepared and analyzed within the required holding times with the exception of sample 12599404-071523-W-MTK-WTS-4-TSS analyzed for total suspended solids. Due to the holding time exceedance, the sample result was rejected as presented in Table 4.

All samples were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

Most method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of a low concentration of antimony detected in one method blank. The associated sample result was non-detect and was not impacted by the potential contamination.

4. Labeled Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furans (PCDDs/PCDFs) Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction.

Labeled congener recoveries were assessed against method control limits. All recoveries met the method criteria demonstrating acceptable analytical efficiency.

5. Laboratory Control Sample Analyses

LCS or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of one per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The LCS and/or LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines" using the laboratory control limits. All LCS recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

If the original sample concentration is significantly greater than the spike concentration (> four times), the recovery is not assessed.

If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines" using the laboratory control limits. All percent recoveries and RPD values were within the control limits or adhered to the above criteria, demonstrating acceptable analytical accuracy and precision.

7. Duplicate Sample Analyses – Inorganic Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory for total suspended solids as specified in Table 1. The duplicate results were evaluated per the "Guidelines" using the laboratory control limits.

All duplicate analyses performed met the above criteria demonstrating acceptable analytical precision.

8. Field QA/QC Samples

The field QA/QC consisted of one field duplicate sample set.

To assess the analytical and sampling protocol precision, one field duplicate sample set was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with this duplicate sample set must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

Most field duplicate results showed adequate reproducibility, indicating satisfactory sampling and laboratory precision. The total suspended solids (TSS) results for sample 12599404-110723-W-MTK-WTS-5 and its field duplicate did show some variability. The original and duplicate sample results were qualified as estimated (see Table 5).

9. Analyte Reporting

For metals and TSS results, the laboratory reported detected results down to the laboratory's sample-specific method detection limit (MDL) or RL for each analyte. Positive analyte detections less than the RL but greater than the sample-specific MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this report. Non-detect results were presented as non-detect at the RL or sample specific MDL in Table 2.

For PCDD/PCDF results, the laboratory reported detected results down to the laboratory's estimated detection limit (EDL) or RL for each analyte. Positive analyte detections less than the RL but greater than the EDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this report. Non-detect results were presented as non-detect at the EDL or RL in Table 2.

One PCDD/PCDF sample result was reported as a positive hit although the ion abundance ratio was not met. The associated sample result was qualified as the estimated maximum possible concentration (see Table 6).

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the qualifications and exception noted herein.

Regards,

Marisa Oriaku
Digital Intelligence-Data Management-Data Validator

Table 1

Sample Collection and Analysis Summary
Water Treatment Discharge Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April - November 2023

						Analysis/Parameters				
Sample Delivery Group	Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Dioxins/Furans	TSS	Metals	Mercury	Comments
B7864	12599404-042723-W-MTK-WTS-1	WTS Compliance Point	Water	04/27/2023	15:05	X				
JD64698	12599404-042723-W-MTK-WTS-1	WTS Compliance Point	Water	04/27/2023	15:05		X	X	X	
	12599404-042723-W-MTK-WTS-1-TSS	WTS Compliance Point	Water	04/27/2023	13:55		X			
JD66784	12599404-053023-W-MTK-WTS-2-TSS	WTS Compliance Point	Water	05/30/2023	07:30		X			
	12599404-060123-W-MTK-WTS-2	WTS Compliance Point	Water	06/01/2023	12:10		X	X	X	DUP-PP
B7990	12599404-060123-W-MTK-WTS-2-Total	WTS Compliance Point	Water	06/01/2023	12:10	X				
B8037	12599404-061423-W-MTK-WTS-3-Total	WTS Compliance Point	Water	06/14/2023	14:00	X				
JD67607	12599404-061423-W-MTK-WTS-3	WTS Compliance Point	Water	06/14/2023	14:00		X	X	X	
	12599404-061423-W-MTK-WTS-3-TSS	WTS Compliance Point	Water	06/14/2023	10:00		X			
JD69734	12599404-071523-W-MTK-WTS-4-TSS	WTS Compliance Point	Water	07/15/2023	14:40		X			
	12599404-072023-W-MTK-WTS-4	WTS Compliance Point	Water	07/20/2023	14:45		X	X	X	
B8187	12599404-072023-W-MTK-WTS-4-Total	WTS Compliance Point	Water	07/20/2023	14:00	X				
HS23071774	12599404-072723-W-WTS-4-TSS	WTS Compliance Point	Water	07/27/2023	16:45		X			
HS23081322	12599404-081723-Test-1	WTS Compliance Point	Water	08/17/2023	09:30			X	X	
	12599404-081723-Test-2	WTS Compliance Point	Water	08/17/2023	09:35			X	X	
HS23110149	12599404-110223-W-MTK-WTS-5-TSS	WTS Compliance Point	Water	11/02/2023	15:00		X			
B8747	12599404-110723-W-MTK-WTS-5	WTS Compliance Point	Water	11/07/2023	10:30	X				
	12599404-110723-W-MTK-DUP-1	WTS Compliance Point	Water	11/07/2023	--	X	X	X	X	FD (12599404-110723-W-MTK-WTS-5)
HS23110479R	12599404-110723-W-MTK-WTS-5	WTS Compliance Point	Water	11/07/2023	10:30		X	X	X	MS/MSD/DUP-PP
B8802	12599404-111623-W-MTK-WTS-6	WTS Compliance Point	Water	11/16/2023	13:30	X				
HS23111101	12599404-111623-W-MTK-WTS-6	WTS Compliance Point	Water	11/16/2023	13:30		X	X	X	MS/MSD/DUP-PP

Notes:

FD	- Field duplicate of sample in parenthesis
TSS	- Total Suspended Solids
--	- Not applicable
MS/MSD	- Matrix Spike/Matrix Spike Duplicate
DUP	- Laboratory duplicate
PP	- Partial parameters

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

	Sample Location	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
	Sample Identification	12599404-042723-W-MTK-WTS-1	12599404-042723-W-MTK-WTS-1-TSS	12599404-053023-W-MTK-WTS-2-TSS	12599404-060123-W-MTK-WTS-2
	Sample Date	4/27/2023	4/27/2023	5/30/2023	6/1/2023
Parameters	**Units**				
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	3.35 U	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	6.09 U	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	1.43 U	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.96 U	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	1.79 U	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.58 U	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.87 U	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.48 U	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.78 U	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	1.84 U	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.84 U	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.35 U	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.99 U	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	1.57 U	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	2.4 U	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	2.08 U	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	2 U	--	--	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	1.59 UJ	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	1.96 UJ	--	--	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	1.61 UJ	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	1.83 UJ	--	--	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	2.37 UJ	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	1.99 UJ	--	--	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	194 J	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	2 UJ	--	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-042723-W-MTK-WTS-1	12599404-042723-W-MTK-WTS-1-TSS	12599404-053023-W-MTK-WTS-2-TSS	12599404-060123-W-MTK-WTS-2
Sample Date		4/27/2023	4/27/2023	5/30/2023	6/1/2023
Parameters	**Units**				
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans (dissolved)					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) (dissolved)	pg/L	2.82 U	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) (dissolved)	pg/L	6.26 U	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	1.88 J	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	1.82 U	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	1.43 U	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.29 U	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	2.77 U	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.41 U	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	2.98 U	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.9 U	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	3.16 U	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	2.22 U	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	9.36 U	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.43 U	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	2.22 U	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	2.39 U	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	10.5 U	--	--	--
Total heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	1.88 J	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	1.82 UJ	--	--	--
Total hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	1.5 UJ	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	2.97 UJ	--	--	--
Total pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	2.22 UJ	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	9.36 UJ	--	--	--
Total tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	14.1 J	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	10.5 UJ	--	--	--
Metals					
Antimony	mg/L	0.0047 U	--	--	0.006 U
Arsenic	mg/L	0.0028 U	--	--	0.003 U
Barium	mg/L	0.217	--	--	0.2 U
Cadmium	mg/L	0.001 U	--	--	0.003 U
Chromium	mg/L	0.002 U	--	--	0.01 U
Copper	mg/L	0.0059 U	--	--	0.01 U
Lead	mg/L	0.0018 U	--	--	0.003 U
Mercury	mg/L	0.00022	--	--	0.0002 U
Nickel	mg/L	0.0017 U	--	--	0.01 U
Selenium	mg/L	0.0049 U	--	--	0.01 U
Silver	mg/L	0.0061 U	--	--	0.01 U
Thallium	mg/L	0.0018 U	--	--	0.01 U
Zinc	mg/L	0.0069 U	--	--	0.02 U

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

	Sample Location	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
	Sample Identification	12599404-042723-W-MTK-WTS-1	12599404-042723-W-MTK-WTS-1-TSS	12599404-053023-W-MTK-WTS-2-TSS	12599404-060123-W-MTK-WTS-2
	Sample Date	4/27/2023	4/27/2023	5/30/2023	6/1/2023
Parameters	**Units**				
Metals (dissolved)					
Antimony (dissolved)	mg/L	0.0047 U	--	--	0.006 U
Arsenic (dissolved)	mg/L	0.0032	--	--	0.003 U
Barium (dissolved)	mg/L	0.222	--	--	0.2 U
Cadmium (dissolved)	mg/L	0.001 U	--	--	0.003 U
Chromium (dissolved)	mg/L	0.002 U	--	--	0.01 U
Copper (dissolved)	mg/L	0.0059 U	--	--	0.01 U
Lead (dissolved)	mg/L	0.0018 U	--	--	0.003 U
Mercury (dissolved)	mg/L	0.00027	--	--	0.0002 U
Nickel (dissolved)	mg/L	0.0017 U	--	--	0.01 U
Selenium (dissolved)	mg/L	0.0049 U	--	--	0.01 U
Silver (dissolved)	mg/L	0.0061 U	--	--	0.01 U
Thallium (dissolved)	mg/L	0.0018 U	--	--	0.01 U
Zinc (dissolved)	mg/L	0.0069 U	--	--	0.02 U
General Chemistry					
Total suspended solids (TSS)	mg/L	1.5 U	1.5 U	4.0 U	4.0 U

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-060123-W-MTK-WTS-2-Total	12599404-061423-W-MTK-WTS-3	12599404-061423-W-MTK-WTS-3-Total	12599404-061423-W-MTK-WTS-3-TSS
Sample Date		6/1/2023	6/14/2023	6/14/2023	6/14/2023
Parameters	**Units**				
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	100 U	--	100 U	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	100 U	--	100 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	50 U	--	50 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	50 U	--	50 U	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	50 U	--	50 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50 U	--	50 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50 U	--	50 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50 U	--	50 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50 U	--	50 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	50 U	--	50 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	50 U	--	50 U	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	50 U	--	50 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	50 U	--	50 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	50 U	--	50 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	50 U	--	50 U	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	10 U	--	10 U	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	10 U	--	10 U	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	--	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	--	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	--	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	--	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	--	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-060123-W-MTK-WTS-2-Total	12599404-061423-W-MTK-WTS-3	12599404-061423-W-MTK-WTS-3-Total	12599404-061423-W-MTK-WTS-3-TSS
Sample Date		6/1/2023	6/14/2023	6/14/2023	6/14/2023
Parameters	**Units**				
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans (dissolved)					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--	--
Total heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--	--
Total hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
Total pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--	--
Total tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--	--
Metals					
Antimony	mg/L	--	0.006 U	--	--
Arsenic	mg/L	--	0.003 U	--	--
Barium	mg/L	--	0.2 U	--	--
Cadmium	mg/L	--	0.003 U	--	--
Chromium	mg/L	--	0.01 U	--	--
Copper	mg/L	--	0.01 U	--	--
Lead	mg/L	--	0.003 U	--	--
Mercury	mg/L	--	0.0002 U	--	--
Nickel	mg/L	--	0.01 U	--	--
Selenium	mg/L	--	0.01 U	--	--
Silver	mg/L	--	0.01 U	--	--
Thallium	mg/L	--	0.01 U	--	--
Zinc	mg/L	--	0.0288	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

	Sample Location	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
	Sample Identification	12599404-060123-W-MTK-WTS-2-Total	12599404-061423-W-MTK-WTS-3	12599404-061423-W-MTK-WTS-3-Total	12599404-061423-W-MTK-WTS-3-TSS
	Sample Date	6/1/2023	6/14/2023	6/14/2023	6/14/2023
Parameters	**Units**				
Metals (dissolved)					
Antimony (dissolved)	mg/L	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--
General Chemistry					
Total suspended solids (TSS)	mg/L	--	4.0 U	--	4.0 U

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-071523-W-MTK-WTS-4-TSS	12599404-072023-W-MTK-WTS-4	12599404-072023-W-MTK-WTS-4-Total	12599404-072723-W-WTS-4-TSS
Sample Date		7/15/2023	7/20/2023	7/20/2023	7/27/2023
Parameters	**Units**				
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	--	--	100 U	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	--	--	100 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	--	--	50 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	50 U	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	--	--	50 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	50 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	50 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	50 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	50 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	50 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	50 U	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	--	--	50 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	50 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	50 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	--	--	50 U	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	--	--	10 U	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	10 U	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	--	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	--	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	--	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	--	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	--	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-071523-W-MTK-WTS-4-TSS	12599404-072023-W-MTK-WTS-4	12599404-072023-W-MTK-WTS-4-Total	12599404-072723-W-WTS-4-TSS
Sample Date		7/15/2023	7/20/2023	7/20/2023	7/27/2023
Parameters	**Units**				
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans (dissolved)					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--	--
Total heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--	--
Total hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--	--
Total pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--	--
Total tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--	--
Metals					
Antimony	mg/L	--	0.006 U	--	--
Arsenic	mg/L	--	0.003 U	--	--
Barium	mg/L	--	0.2 U	--	--
Cadmium	mg/L	--	0.003 U	--	--
Chromium	mg/L	--	0.01 U	--	--
Copper	mg/L	--	0.01 U	--	--
Lead	mg/L	--	0.003 U	--	--
Mercury	mg/L	--	0.0002 U	--	--
Nickel	mg/L	--	0.01 U	--	--
Selenium	mg/L	--	0.01 U	--	--
Silver	mg/L	--	0.01 U	--	--
Thallium	mg/L	--	0.01 U	--	--
Zinc	mg/L	--	0.049	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

	Sample Location	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
	Sample Identification	12599404-071523-W-MTK-WTS-4-TSS	12599404-072023-W-MTK-WTS-4	12599404-072023-W-MTK-WTS-4-Total	12599404-072723-W-WTS-4-TSS
	Sample Date	7/15/2023	7/20/2023	7/20/2023	7/27/2023
Parameters	**Units**				
Metals (dissolved)					
Antimony (dissolved)	mg/L	--	--	--	--
Arsenic (dissolved)	mg/L	--	--	--	--
Barium (dissolved)	mg/L	--	--	--	--
Cadmium (dissolved)	mg/L	--	--	--	--
Chromium (dissolved)	mg/L	--	--	--	--
Copper (dissolved)	mg/L	--	--	--	--
Lead (dissolved)	mg/L	--	--	--	--
Mercury (dissolved)	mg/L	--	--	--	--
Nickel (dissolved)	mg/L	--	--	--	--
Selenium (dissolved)	mg/L	--	--	--	--
Silver (dissolved)	mg/L	--	--	--	--
Thallium (dissolved)	mg/L	--	--	--	--
Zinc (dissolved)	mg/L	--	--	--	--
General Chemistry					
Total suspended solids (TSS)	mg/L	R	4.0 U	--	4.67

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

	Sample Location	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
	Sample Identification	12599404-081723-Test-1	12599404-081723-Test-2	12599404-110223-W-MTK-WTS-5-TSS
	Sample Date	8/17/2023	8/17/2023	11/2/2023
Parameters	**Units**			
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	--
Total heptachlorodibenzofuran (HpCDF)	pg/L	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		**WTS Compliance Point**	**WTS Compliance Point**	**WTS Compliance Point**
Sample Identification		**12599404-081723-Test-1**	**12599404-081723-Test-2**	**12599404-110223-W-MTK-WTS-5-TSS**
Sample Date		**8/17/2023**	**8/17/2023**	**11/2/2023**
Parameters	**Units**			
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans (dissolved)				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) (dissolved)	pg/L	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--
Total heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--
Total hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
Total pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--
Total tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--
Metals				
Antimony	mg/L	0.0263	0.0265	--
Arsenic	mg/L	0.0364	0.0419	--
Barium	mg/L	0.105	0.122	--
Cadmium	mg/L	0.000200 U	0.000200 U	--
Chromium	mg/L	0.00100 J	0.000610 J	--
Copper	mg/L	0.0770	0.0188	--
Lead	mg/L	0.00717	0.00369	--
Mercury	mg/L	0.0000300 U	0.0000300 U	--
Nickel	mg/L	0.0128	0.00499	--
Selenium	mg/L	0.00479	0.00628	--
Silver	mg/L	0.000200 U	0.000200 U	--
Thallium	mg/L	0.000200 U	0.000200 U	--
Zinc	mg/L	0.457	0.214	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		**WTS Compliance Point**	**WTS Compliance Point**	**WTS Compliance Point**
Sample Identification		**12599404-081723-Test-1**	**12599404-081723-Test-2**	**12599404-110223-W-MTK-WTS-5-TSS**
Sample Date		**8/17/2023**	**8/17/2023**	**11/2/2023**
Parameters	**Units**			
Metals (dissolved)				
Antimony (dissolved)	mg/L	--	--	--
Arsenic (dissolved)	mg/L	--	--	--
Barium (dissolved)	mg/L	--	--	--
Cadmium (dissolved)	mg/L	--	--	--
Chromium (dissolved)	mg/L	--	--	--
Copper (dissolved)	mg/L	--	--	--
Lead (dissolved)	mg/L	--	--	--
Mercury (dissolved)	mg/L	--	--	--
Nickel (dissolved)	mg/L	--	--	--
Selenium (dissolved)	mg/L	--	--	--
Silver (dissolved)	mg/L	--	--	--
Thallium (dissolved)	mg/L	--	--	--
Zinc (dissolved)	mg/L	--	--	--
General Chemistry				
Total suspended solids (TSS)	mg/L	--	--	17.0

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-110723-W-MTK-WTS-5	12599404-110723-W-MTK-DUP-1	12599404-111623-W-MTK-WTS-6
Sample Date		11/7/2023	11/7/2023	11/16/2023
			Duplicate	
Parameters	**Units**			
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	50 U	50 U	50 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	50 U	50 U	50 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	25 U	25 U	25 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	25 U	25 U	25 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	25 U	25 U	25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	25 U	25 U	25 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	25 U	25 U	25 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	25 U	25 U	25 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	25 U	25 U	25 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	25 U	25 U	25 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	25 U	25 U	25 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	25 U	25 U	25 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	25 U	25 U	25 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	25 U	25 U	25 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	25 U	25 U	25 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	10 U	10 U	10 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	10 U	10 U	10 U
Total heptachlorodibenzofuran (HpCDF)	pg/L	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	--
Total hexachlorodibenzofuran (HxCDF)	pg/L	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	--
Total pentachlorodibenzofuran (PeCDF)	pg/L	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	--
Total tetrachlorodibenzofuran (TCDF)	pg/L	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	--

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

Sample Location		WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
Sample Identification		12599404-110723-W-MTK-WTS-5	12599404-110723-W-MTK-DUP-1	12599404-111623-W-MTK-WTS-6
Sample Date		11/7/2023	11/7/2023	11/16/2023
			Duplicate	
Parameters	**Units**			
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans (dissolved)				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) (dissolved)	pg/L	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--
Total heptachlorodibenzofuran (HpCDF) (dissolved)	pg/L	--	--	--
Total heptachlorodibenzo-p-dioxin (HpCDD) (dissolved)	pg/L	--	--	--
Total hexachlorodibenzofuran (HxCDF) (dissolved)	pg/L	--	--	--
Total hexachlorodibenzo-p-dioxin (HxCDD) (dissolved)	pg/L	--	--	--
Total pentachlorodibenzofuran (PeCDF) (dissolved)	pg/L	--	--	--
Total pentachlorodibenzo-p-dioxin (PeCDD) (dissolved)	pg/L	--	--	--
Total tetrachlorodibenzofuran (TCDF) (dissolved)	pg/L	--	--	--
Total tetrachlorodibenzo-p-dioxin (TCDD) (dissolved)	pg/L	--	--	--
Metals				
Antimony	mg/L	0.0100 U	0.0100 U	0.00200 U
Arsenic	mg/L	0.0100 U	0.0100 U	0.00254
Barium	mg/L	0.533	0.376	0.254
Cadmium	mg/L	0.0100 U	0.0100 U	0.00200 U
Chromium	mg/L	0.0200 U	0.0200 U	0.00400 U
Copper	mg/L	0.0100 U	0.0100 U	0.00200 U
Lead	mg/L	0.0100 U	0.0100 U	0.00200 U
Mercury	mg/L	0.000200 U	0.000200 U	0.000200 U
Nickel	mg/L	0.0100 U	0.0100 U	0.00647
Selenium	mg/L	0.0100 U	0.0100 U	0.00200 U
Silver	mg/L	0.0100 U	0.0100 U	0.00200 U
Thallium	mg/L	0.0100 U	0.0100 U	0.00200 U
Zinc	mg/L	0.121	0.0876	0.0169

Table 2

Analytical Results Summary
Water Treatment Discharge Sampling
Channelview, Harris County, Texas
April-November 2023

	Sample Location	WTS Compliance Point	WTS Compliance Point	WTS Compliance Point
	Sample Identification	12599404-110723-W-MTK-WTS-5	12599404-110723-W-MTK-DUP-1	12599404-111623-W-MTK-WTS-6
	Sample Date	11/7/2023	11/7/2023	11/16/2023
			Duplicate	
Parameters	**Units**			
Metals (dissolved)				
Antimony (dissolved)	mg/L	--	--	--
Arsenic (dissolved)	mg/L	--	--	--
Barium (dissolved)	mg/L	--	--	--
Cadmium (dissolved)	mg/L	--	--	--
Chromium (dissolved)	mg/L	--	--	--
Copper (dissolved)	mg/L	--	--	--
Lead (dissolved)	mg/L	--	--	--
Mercury (dissolved)	mg/L	--	--	--
Nickel (dissolved)	mg/L	--	--	--
Selenium (dissolved)	mg/L	--	--	--
Silver (dissolved)	mg/L	--	--	--
Thallium (dissolved)	mg/L	--	--	--
Zinc (dissolved)	mg/L	--	--	--
General Chemistry				
Total suspended solids (TSS)	mg/L	21.3 J	8.40 J	5.60

Notes:

U	- Not detected at the associated reporting limit
J	- Estimated concentration
UJ	- Not detected; associated reporting limit is estimated
R	- Rejected

Table 3

Analytical Methods and Holding Times
Water Treatment Discharge Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April - November 2023

Parameter	Method	Matrix	Preservation	Holding Times	
				Collection to Extraction (Days)	Extraction to Analysis (Days)
Dioxins/Furans	EPA 1613B	Water	Iced, 0-6° C	365	365
Metals	SW-846 6010/6020	Water	Iced, 0-6° C	--	180
	SW-846 7470	Water	Iced, 0-6° C	--	28
Total Suspended Solids (TSS)	SM 2540	Water	Iced, 0-6° C	--	7

Notes:

EPA - Environmental Protection Agency

Method References:

EPA - U.S. Environmental protection Agency. Analytical Methodology (October, 1994)
SM - "Standard Methods for the Examination of Water and Wastewater," 21st Edition.
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 (with all subsequent revisions).

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Water Treatment Discharge Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April - November 2023

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results
General Chemistry	12599404-071523-W-MTK-WTS-4-TSS	9	7	Total suspended solids (TSS)	R

Note:

R - Rejected

Table 5

Qualified Sample Data Due to Variability in Field Duplicate Results
Water Treatment Discharge Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April - November 2023

Parameter	Analyte	RPD	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
General Chemistry	Total suspended solids (TSS)	174	12599404-110723-W-MTK-WTS-5	21.3 J	12599404-110723-W-MTK-DUP-1	8.40 J	mg/L

Notes:

RPD - Relative Percent Difference
J - Estimated concentration

Table 6

Qualified Sample Results Due to Outlying Identification Criteria
Water Treatment Discharge Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
April - November 2023

Parameter	Analyte	Associated Sample ID	Qualified Result	Units
Dioxins/Furans	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) (dissolved)	12599404-042723-W-MTK-WTS-1	1.88 J	pg/L

Notes:

J - Estimated concentration

Data Verification Report

July 9, 2024

To	Sarah Proulx; Willie Beal	**Contact No.**	561-688-9008
Copy to	Deborah Brennan	**Email**	Marisa.Oriaku@ghd.com
From	Marisa Oriaku/cs/5-NF	**Project No.**	12599404
Project Name	San Jacinto River Waste Pits - Southern Impoundment		
Subject	Analytical Results and Data Verification Fill Material Sampling San Jacinto River Waste Pits - Southern Impoundment Channelview, Harris County, Texas February - July 2023		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for soil samples collected in support of the Fill Material Sampling event at the San Jacinto River Waste Pits - Southern Impoundment site during February - July 2023. Samples were submitted to ALS Environmental located in Houston, Texas, and SGS North America, Inc. located in Scott, Louisiana, Wilmington, North Carolina, and Dayton, New Jersey. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from chain of custody forms, finished report forms, method blank data, laboratory duplicates, and recovery data from surrogate spikes/labeled spikes/laboratory control samples (LCS)/matrix spikes (MS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation",
   San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3, 2019
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review",
   United States Environmental Protection Agency (USEPA) 542-R-20-006, November 2020
3. "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9240.1-65,
   EPA 542-R-20-007, November 2020
4. "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005,
   November 2020

Item 2, 3, and 4 will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. Most samples were prepared and analyzed within the required holding times with the exception of sample 12599404-070723-S-MTK-Source Topsoil-1 analyzed for pH. Due to the holding time exceedance, the sample result was qualified as estimated in Table 4.

Most samples were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C). The cooler for sample 12599404-070723-S-MTK-Source Topsoil-1 was received at the laboratory with a temperature above the required limit, and all associated sample results were qualified as estimated (see Table 5).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

Most method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of some low concentrations of metals. Associated sample results with significantly greater concentrations than the blank values were not impacted by the potential contamination. One sample result with a similar concentration to the blank value was qualified as non-detect (see Table 6).

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for total petroleum hydrocarbon (TPH), volatile organic compound (VOC), semi-volatile organic compound (SVOC), pesticide, herbicide, and polychlorinated biphenyl (PCB) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

High surrogate recoveries do not impact any associated non-detect sample results.

Each individual surrogate compound is expected to meet the laboratory control limits. For SVOC analyses, it is generally acceptable for there to be one outlying surrogate in the base/neutral or acid fraction provided that the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. Most surrogate recoveries were within the laboratory control limits with the exception of one high surrogate for the analysis of herbicides. The associated positive sample result was qualified as estimated as shown in Table 7.

5. Labeled Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furans (PCDDs/PCDFs) Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction.

Labeled congener recoveries were assessed against method control limits. All recoveries met the method criteria demonstrating acceptable analytical efficiency.

6. Laboratory Control Sample Analyses

LCS or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

High LCS recoveries and/or RPD values do not impact any associated non-detect sample results.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of one per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPD values were within the laboratory control limits or adhered to the above criteria, demonstrating acceptable analytical accuracy and precision (where applicable).

Inorganic Analyses

The LCS and/or LCS/LCSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines" using the laboratory control limits. All LCS recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses – Inorganic Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

If the original sample concentration is significantly greater than the spike concentration (> four times), the recovery is not assessed.

If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines" using the laboratory control limits. Most percent recoveries and RPD values were within the control limits or adhered to the above criteria, demonstrating acceptable analytical accuracy and precision. Outlying recoveries and RPD values were observed for some samples and the associated sample results were qualified as estimated (see Table 8).

8. Duplicate Sample Analyses – Inorganic Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory for total suspended solids as specified in Table 1. The duplicate results were evaluated per the "Guidelines" using the laboratory control limits.

All duplicate analyses performed met the above criteria demonstrating acceptable analytical precision.

9. Analyte Reporting

For all sample results, except PCDDs/PCDFs results, the laboratory reported detected results down to the laboratory's sample-specific method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the sample-specific MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this report. Non-detect results were presented as non-detect at the RL in Table 2.

For PCDD/PCDF sample results, the laboratory reported detected results down to the laboratory's sample specific estimated detection limit (EDL). Positive analyte detections less than the RL but greater than the sample-specific EDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this report. Non-detect results were presented as non-detect at the EDL.

Some PCDD/PCDF sample results were reported as a positive hits although the ion abundance ratio was not met. The associated sample results were qualified as the estimated maximum possible concentration (see Table 9).

All soil results were reported on a dry weight basis.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the qualifications noted herein.

Regards,

Marisa Oriaku
Digital Intelligence-Data Management-Data Validator

Table 1

Sample Collection and Analysis Summary
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters														Comments
								Dioxins/Furans	Phosphorus	Metals	Mercury	Hexavalent Chromium	Pesticides	PCBs	Herbicides	VOCs	SVOCs	Total Cyanide	pH	TPH		
JD60799	12599404-022323-S-MTK-FILL-1	FILL-1	Soil	--	--	02/23/2023	13:07			X	X											MS/MSD-PP
	12599404-022323-S-MTK-FILL-2	FILL-2	Soil	--	--	02/23/2023	13:08			X	X											
	12599404-022323-S-MTK-FILL-3	FILL-3	Soil	--	--	02/23/2023	13:09			X	X											
	12599404-022323-S-MTK-FILL-4	FILL-4	Soil	--	--	02/23/2023	13:10			X	X											
	12599404-022323-S-MTK-FILL-5	FILL-5	Soil	--	--	02/23/2023	13:20			X	X											
	12599404-022323-S-MTK-FILL-6	FILL-6	Soil	--	--	02/23/2023	13:21			X	X											
	12599404-022323-S-MTK-FILL-7	FILL-7	Soil	--	--	02/23/2023	13:22			X	X											
	12599404-022323-S-MTK-FILL-8	FILL-8	Soil	--	--	02/23/2023	13:23			X	X											
	12599404-022323-S-MTK-FILL-9	FILL-9	Soil	--	--	02/23/2023	13:30			X	X											
	12599404-022323-S-MTK-FILL-10	FILL-10	Soil	--	--	02/23/2023	13:31			X	X											
	12599404-022323-S-MTK-FILL-11	FILL-11	Soil	--	--	02/23/2023	13:32			X	X											
	12599404-022323-S-MTK-FILL-12	FILL-12	Soil	--	--	02/23/2023	13:33			X	X											
	12599404-022323-S-MTK-FILL-13	FILL-13	Soil	--	--	02/23/2023	14:00			X	X											
	12599404-022323-S-MTK-FILL-14	FILL-14	Soil	--	--	02/23/2023	14:01			X	X											
	12599404-022323-S-MTK-FILL-15	FILL-15	Soil	--	--	02/23/2023	14:02			X	X											
	12599404-022323-S-MTK-FILL-16	FILL-16	Soil	--	--	02/23/2023	14:03			X	X											
	12599404-022323-S-MTK-FILL-17	FILL-17	Soil	--	--	02/23/2023	14:10			X	X											MS-PP
	12599404-022323-S-MTK-FILL-18	FILL-18	Soil	--	--	02/23/2023	14:11			X	X											
	12599404-022323-S-MTK-FILL-19	FILL-19	Soil	--	--	02/23/2023	14:12			X	X											
	12599404-022323-S-MTK-FILL-20	FILL-20	Soil	--	--	02/23/2023	14:13			X	X											
	12599404-022323-S-MTK-FILL-21	FILL-21	Soil	--	--	02/23/2023	14:20			X	X											MS-PP
	12599404-022323-S-MTK-FILL-22	FILL-22	Soil	--	--	02/23/2023	14:21			X	X											
	12599404-022323-S-MTK-FILL-23	FILL-23	Soil	--	--	02/23/2023	14:22			X	X											
	12599404-022323-S-MTK-FILL-24	FILL-24	Soil	--	--	02/23/2023	14:33			X	X											MS-PP

Table 1

Sample Collection and Analysis Summary
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

								Analysis/Parameters														
Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Dioxins/Furans	Phosphorus	Metals	Mercury	Hexavalent Chromium	Pesticides	PCBs	Herbicides	VOCs	SVOCs	Total Cyanide	pH	TPH	Comments
JD61207	12599404-030123-S-MTK-BACKFILL-1 (6-8)	Backfill-1	Soil	6	8	03/01/2023	13:30			X	X	X									MS/DUP-PP
	12599404-030123-S-MTK-BACKFILL-2 (4-6)	Backfill-2	Soil	4	6	03/01/2023	13:32			X	X	X									
	12599404-030123-S-MTK-BACKFILL-3 (2-4)	Backfill-3	Soil	2	4	03/01/2023	13:35			X	X	X									
	12599404-030123-S-MTK-BACKFILL-4 (6-8)	Backfill-4	Soil	6	8	03/01/2023	13:39			X	X	X									
	12599404-030123-S-MTK-BACKFILL-5 (4-6)	Backfill-5	Soil	4	6	03/01/2023	13:41			X	X	X									
	12599404-030123-S-MTK-BACKFILL-6 (2-4)	Backfill-6	Soil	2	4	03/01/2023	13:44			X	X	X									
	12599404-030123-S-MTK-BACKFILL-7 (6-8)	Backfill-7	Soil	6	8	03/01/2023	13:48			X	X	X									
	12599404-030123-S-MTK-BACKFILL-8 (4-6)	Backfill-8	Soil	4	6	03/01/2023	13:51			X	X	X									
	12599404-030123-S-MTK-BACKFILL-9 (2-4)	Backfill-9	Soil	2	4	03/01/2023	13:55			X	X	X									
	12599404-030123-S-MTK-BACKFILL-10 (6-8)	Backfill-10	Soil	6	8	03/01/2023	13:59			X	X	X									
	12599404-030123-S-MTK-BACKFILL-11 (4-6)	Backfill-11	Soil	4	6	03/01/2023	14:02			X	X	X									
	12599404-030123-S-MTK-BACKFILL-12 (2-4)	Backfill-12	Soil	2	4	03/01/2023	14:05			X	X	X									MS-PP
	12599404-030123-S-MTK-BACKFILL-13 (2-4)	Backfill-13	Soil	2	4	03/01/2023	13:23			X	X	X									
	12599404-030123-S-MTK-BACKFILL-14 (6-8)	Backfill-14	Soil	6	8	03/01/2023	13:20			X	X	X									
	12599404-030123-S-MTK-BACKFILL-15 (4-6)	Backfill-15	Soil	4	6	03/01/2023	13:18			X	X	X									
	12599404-030123-S-MTK-BACKFILL-16 (2-4)	Backfill-16	Soil	2	4	03/01/2023	13:16			X	X	X									
	12599404-030123-S-MTK-BACKFILL-17 (6-8)	Backfill-17	Soil	6	8	03/01/2023	13:14			X	X	X									
	12599404-030123-S-MTK-BACKFILL-18 (4-6)	Backfill-18	Soil	4	6	03/01/2023	13:11			X	X	X									
	12599404-030123-S-MTK-BACKFILL-19 (2-4)	Backfill-19	Soil	2	4	03/01/2023	13:07			X	X	X									
	12599404-030123-S-MTK-BACKFILL-20 (6-8)	Backfill-20	Soil	6	8	03/01/2023	13:04			X	X	X									MS-PP
	12599404-030123-S-MTK-BACKFILL-21 (4-6)	Backfill-21	Soil	4	6	03/01/2023	13:01			X	X	X									MS/DUP-PP
	12599404-030123-S-MTK-BACKFILL-22 (2-4)	Backfill-22	Soil	2	4	03/01/2023	12:57			X	X	X									
	12599404-030123-S-MTK-BACKFILL-23 (6-8)	Backfill-23	Soil	6	8	03/01/2023	12:55			X	X	X									
	12599404-030123-S-MTK-BACKFILL-24 (4-6)	Backfill-24	Soil	4	6	03/01/2023	12:53			X	X	X									
	12599404-030123-S-MTK-BACKFILL-25 (4-6)	Backfill-25	Soil	4	6	03/01/2023	10:57			X	X	X									
	12599404-030123-S-MTK-BACKFILL-26 (2-4)	Backfill-26	Soil	2	4	03/01/2023	11:00			X	X	X									
	12599404-030123-S-MTK-BACKFILL-27 (6-8)	Backfill-27	Soil	6	8	03/01/2023	11:03			X	X	X									
	12599404-030123-S-MTK-BACKFILL-28 (4-6)	Backfill-28	Soil	4	6	03/01/2023	11:05			X	X	X									
	12599404-030123-S-MTK-BACKFILL-29 (2-4)	Backfill-29	Soil	2	4	03/01/2023	11:08			X	X	X									
	12599404-030123-S-MTK-BACKFILL-30 (6-8)	Backfill-30	Soil	6	8	03/01/2023	11:10			X	X	X									
	12599404-030123-S-MTK-BACKFILL-31 (4-6)	Backfill-31	Soil	4	6	03/01/2023	12:25			X	X	X									

Table 1

Sample Collection and Analysis Summary
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

								Analysis/Parameters															
Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Dioxins/Furans	Phosphorus	Metals	Mercury	Hexavalent Chromium	Pesticides	PCBs	Herbicides	VOCs	SVOCs	Total Cyanide	pH	TPH	Comments
JD61207	12599404-030123-S-MTK-BACKFILL-32 (2-4)	Backfill-32	Soil	2	4	03/01/2023	12:28			X	X	X									MS-PP
	12599404-030123-S-MTK-BACKFILL-33 (6-8)	Backfill-33	Soil	6	8	03/01/2023	12:31			X	X	X									
	12599404-030123-S-MTK-BACKFILL-34 (4-6)	Backfill-34	Soil	4	6	03/01/2023	12:34			X	X	X									
	12599404-030123-S-MTK-BACKFILL-35 (2-4)	Backfill-35	Soil	2	4	03/01/2023	12:36			X	X	X									
	12599404-030123-S-MTK-BACKFILL-36 (6-8)	Backfill-36	Soil	6	8	03/01/2023	12:39			X	X	X									
	12599404-030123-S-MTK-BACKFILL-37 (6-8)	Backfill-37	Soil	6	8	03/01/2023	10:54			X	X	X									
	12599404-030123-S-MTK-BACKFILL-38 (4-6)	Backfill-38	Soil	4	6	03/01/2023	10:53			X	X	X									
	12599404-030123-S-MTK-BACKFILL-39 (2-4)	Backfill-39	Soil	2	4	03/01/2023	10:50			X	X	X									
	12599404-030123-S-MTK-BACKFILL-40 (6-8)	Backfill-40	Soil	6	8	03/01/2023	10:48			X	X	X									
	12599404-030123-S-MTK-BACKFILL-41 (4-6)	Backfill-41	Soil	4	6	03/01/2023	10:46			X	X	X									MS/DUP-PP
	12599404-030123-S-MTK-BACKFILL-42 (2-4)	Backfill-42	Soil	2	4	03/01/2023	10:45			X	X	X									
	12599404-030123-S-MTK-BACKFILL-43 (6-8)	Backfill-43	Soil	6	8	03/01/2023	10:42			X	X	X									
	12599404-030123-S-MTK-BACKFILL-44 (4-6)	Backfill-44	Soil	4	6	03/01/2023	10:41			X	X	X									
	12599404-030123-S-MTK-BACKFILL-45 (2-4)	Backfill-45	Soil	2	4	03/01/2023	10:39			X	X	X									
	12599404-030123-S-MTK-BACKFILL-46 (6-8)	Backfill-46	Soil	6	8	03/01/2023	10:35			X	X	X									
	12599404-030123-S-MTK-BACKFILL-47 (4-6)	Backfill-47	Soil	4	6	03/01/2023	10:30			X	X	X									
	12599404-030123-S-MTK-BACKFILL-48 (2-4)	Backfill-48	Soil	2	4	03/01/2023	10:27			X	X	X									
	12599404-030123-S-MTK-BACKFILL-49 (2-4)	Backfill-49	Soil	2	4	03/01/2023	09:45			X	X	X									
	12599404-030123-S-MTK-BACKFILL-50 (6-8)	Backfill-50	Soil	6	8	03/01/2023	09:47			X	X	X									
	12599404-030123-S-MTK-BACKFILL-51 (4-6)	Backfill-51	Soil	4	6	03/01/2023	09:50			X	X	X									
	12599404-030123-S-MTK-BACKFILL-52 (2-4)	Backfill-52	Soil	2	4	03/01/2023	09:53			X	X	X									MS-PP
	12599404-030123-S-MTK-BACKFILL-53 (6-8)	Backfill-53	Soil	6	8	03/01/2023	09:56			X	X	X									
	12599404-030123-S-MTK-BACKFILL-54 (4-6)	Backfill-54	Soil	4	6	03/01/2023	09:59			X	X	X									
	12599404-030123-S-MTK-BACKFILL-55 (2-4)	Backfill-55	Soil	2	4	03/01/2023	10:06			X	X	X									
	12599404-030123-S-MTK-BACKFILL-56 (6-8)	Backfill-56	Soil	6	8	03/01/2023	10:11			X	X	X									
	12599404-030123-S-MTK-BACKFILL-57 (4-6)	Backfill-57	Soil	4	6	03/01/2023	10:16			X	X	X									
	12599404-030123-S-MTK-BACKFILL-58 (2-4)	Backfill-58	Soil	2	4	03/01/2023	10:20			X	X	X									
	12599404-030123-S-MTK-BACKFILL-59 (6-8)	Backfill-59	Soil	6	8	03/01/2023	10:22			X	X	X									
	12599404-030123-S-MTK-BACKFILL-60 (4-6)	Backfill-60	Soil	4	6	03/01/2023	10:25			X	X	X									MS-PP

Table 1

Sample Collection and Analysis Summary
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

								Analysis/Parameters														
Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Dioxins/Furans	Phosphorus	Metals	Mercury	Hexavalent Chromium	Pesticides	PCBs	Herbicides	VOCs	SVOCs	Total Cyanide	pH	TPH	Comments
HS23030369	12599404-030723-S-MTK-Backfill-61 (0-2)	Backfill-61	Soil	0	2	03/07/2023	11:18			X	X	X									MS/MSD
	12599404-030723-S-MTK-Backfill-62 (8-10)	Backfill-62	Soil	8	10	03/07/2023	11:29			X	X	X									
	12599404-030723-S-MTK-Backfill-63 (0-2)	Backfill-63	Soil	0	2	03/07/2023	11:36			X	X	X									
	12599404-030723-S-MTK-Backfill-64 (10-12)	Backfill-64	Soil	10	12	03/07/2023	11:45			X	X	X									
	12599404-030723-S-MTK-Backfill-65 (8-10)	Backfill-65	Soil	8	10	03/07/2023	12:25			X	X	X									
	12599404-030723-S-MTK-Backfill-66 (0-2)	Backfill-66	Soil	0	2	03/07/2023	12:16			X	X	X									
	12599404-030723-S-MTK-Backfill-67 (10-12)	Backfill-67	Soil	10	12	03/07/2023	12:08			X	X	X									
	12599404-030723-S-MTK-Backfill-68 (0-2)	Backfill-68	Soil	0	2	03/07/2023	11:59			X	X	X									
	12599404-030723-S-MTK-Backfill-69 (0-2)	Backfill-69	Soil	0	2	03/07/2023	12:31			X	X	X									
	12599404-030723-S-MTK-Backfill-70 (0-2)	Backfill-70	Soil	0	2	03/07/2023	12:36			X	X	X									
	12599404-030723-S-MTK-Backfill-71 (8-10)	Backfill-71	Soil	8	10	03/07/2023	12:43			X	X	X									
	12599404-030723-S-MTK-Backfill-72 (10-12)	Backfill-72	Soil	10	12	03/07/2023	12:50			X	X	X									
	12599404-030723-S-MTK-Backfill-73 (10-12)	Backfill-73	Soil	10	12	03/07/2023	13:41			X	X	X									
	12599404-030723-S-MTK-Backfill-74 (0-2)	Backfill-74	Soil	0	2	03/07/2023	13:33			X	X	X									
	12599404-030723-S-MTK-Backfill-75 (0-2)	Backfill-75	Soil	0	2	03/07/2023	13:29			X	X	X									
	12599404-030723-S-MTK-Backfill-76 (8-10)	Backfill-76	Soil	8	10	03/07/2023	13:21			X	X	X									
	12599404-030723-S-MTK-Backfill-77 (0-2)	Backfill-77	Soil	0	2	03/07/2023	13:48			X	X	X									
	12599404-030723-S-MTK-Backfill-78 (10-12)	Backfill-78	Soil	10	12	03/07/2023	14:00			X	X	X									
	12599404-030723-S-MTK-Backfill-79 (8-10)	Backfill-79	Soil	8	10	03/07/2023	14:06			X	X	X									
	12599404-030723-S-MTK-Backfill-80 (0-2)	Backfill-80	Soil	0	2	03/07/2023	14:17			X	X	X									

Table 1

Sample Collection and Analysis Summary
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters													Comments
								Dioxins/Furans	Phosphorus	Metals	Mercury	Hexavalent Chromium	Pesticides	PCBs	Herbicides	VOCs	SVOCs	Total Cyanide	pH	TPH	
B8138	12599404-070723-S-MTK-Source Topsoil-1	Top Soil	Soil	--	--	07/07/2023	10:00	X													
JD68986	12599404-070723-S-MTK-Source Topsoil-1	Top Soil	Soil	--	--	07/07/2023	10:00		X	X	X	X	X	X	X	X	X	X	X		MS/DUP-PP
LA92088	12599404-070723-S-MTK-Source Topsoil-1	Top Soil	Soil	--	--	07/07/2023	10:00													X	

Notes:

TPH	- Total Petroleum Hydrocarbons
PCBs	- Polychlorinated Biphenyls
VOCs	- Volatile Organic Compounds
SVOCs	- Semivolatile Organic Compounds
MS	- Matrix Spike
MSD	- Matrix Spike Duplicate
DUP	- Laboratory duplicate
PP	- Partial parameters
--	- Not applicable
ft. bgs.	- Feet below ground surface

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	FILL-1	FILL-2	FILL-3	FILL-4	FILL-5	FILL-6	FILL-7
	Sample Name:	12599404-022323-S-MTK-FILL-1	12599404-022323-S-MTK-FILL-2	12599404-022323-S-MTK-FILL-3	12599404-022323-S-MTK-FILL-4	12599404-022323-S-MTK-FILL-5	12599404-022323-S-MTK-FILL-6	12599404-022323-S-MTK-FILL-7
	Sample Date:	02/23/2023	02/23/2023	02/23/2023	02/23/2023	02/23/2023	02/23/2023	02/23/2023
	Depth:	--	--	--	--	--	--	--
Parameters	**Unit**							
Metals								
Aluminum	mg/kg	5810 J+	7550 J+	9150 J+	5430 J+	4740 J+	4100 J+	10200 J+
Antimony	mg/kg	2.3 UJ	2.5 UJ	2.6 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ
Arsenic	mg/kg	3.2 J-	5.2 J-	4.4 J-	3.5 J-	2.6 J-	2.6 J-	4.7 J-
Barium	mg/kg	42.1 J-	68.7 J-	53.2 J-	33.1 J-	31.5 J-	26.7 J-	74.9 J-
Beryllium	mg/kg	0.46 J-	0.57 J-	0.65 J-	0.46 J-	0.39 J-	0.35 J-	0.70 J-
Cadmium	mg/kg	0.59 UJ	0.62 UJ	0.64 UJ	0.58 UJ	0.58 UJ	0.59 UJ	0.57 UJ
Calcium	mg/kg	17200	29300	17600	23300	24300	26400	35200
Chromium	mg/kg	6.9 J-	9.1 J-	10.3 J-	7.0 J-	6.5 J-	4.8 J-	11.7 J-
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--
Cobalt	mg/kg	5.9 UJ	6.2 UJ	6.4 UJ	5.8 UJ	5.8 UJ	5.9 UJ	5.7 UJ
Copper	mg/kg	4.3 J-	6.1 J-	6.3 J-	4.2 J-	4.0 J-	3.0 UJ	7.8 J-
Iron	mg/kg	7000 J-	10100 J-	11000 J-	6810 J-	6220 J-	4840 J-	10900 J-
Lead	mg/kg	4.3 J-	6.2 J-	7.3 J-	3.9 J-	3.4 J-	3.0 J-	6.5 J-
Magnesium	mg/kg	886 J-	1210 J-	1290 J-	913 J-	802 J-	636 J-	1560 J-
Manganese	mg/kg	138 J-	202 J-	93.6 J-	119 J-	119 J-	73.2 J-	186 J-
Mercury	mg/kg	0.033 U	0.033 U	0.034 U	0.039 U	0.035 U	0.032 U	0.033 U
Nickel	mg/kg	6.4 J-	8.7 J-	8.7 J-	6.4 J-	5.3 J-	4.7 UJ	9.3 J-
Potassium	mg/kg	1200 UJ	1200 UJ	1300 UJ	1200 UJ	1200 UJ	1200 UJ	1100 UJ
Selenium	mg/kg	2.3 UJ	2.5 UJ	2.6 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ
Silver	mg/kg	0.59 UJ	0.62 UJ	0.64 UJ	0.58 UJ	0.58 UJ	0.59 UJ	0.57 UJ
Sodium	mg/kg	1200 UJ	1200 UJ	1300 UJ	1200 UJ	1200 UJ	1200 UJ	1100 UJ
Thallium	mg/kg	1.2 UJ	1.2 UJ	1.3 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.1 UJ
Vanadium	mg/kg	12.8 J-	18.4 J-	18.5 J-	12.4 J-	11.4 J-	10.2 J-	20.5 J-
Zinc	mg/kg	14.9 J-	20.8 J-	20.9 J-	16.4 J-	13.5 J-	9.6 J-	27.0 J-

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**FILL-8**	**FILL-9**	**FILL-10**	**FILL-11**	**FILL-12**	**FILL-13**	**FILL-14**
Sample Name:		**12599404-022323-S-MTK-FILL-8**	**12599404-022323-S-MTK-FILL-9**	**12599404-022323-S-MTK-FILL-10**	**12599404-022323-S-MTK-FILL-11**	**12599404-022323-S-MTK-FILL-12**	**12599404-022323-S-MTK-FILL-13**	**12599404-022323-S-MTK-FILL-14**
Sample Date:		**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**
Depth:		**--**	**--**	**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**							
Metals								
Aluminum	mg/kg	12900 J+	8800 J+	8690 J+	9840 J+	9270 J+	6150 J+	8990 J+
Antimony	mg/kg	2.4 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ	2.3 UJ
Arsenic	mg/kg	4.9 J-	4.6 J-	4.4 J-	3.7 J-	4.9 J-	3.0 J-	6.0 J-
Barium	mg/kg	111 J-	70.3 J-	73.0 J-	60.8 J-	69.5 J-	51.4 J-	83.2 J-
Beryllium	mg/kg	0.84 J-	0.65 J-	0.61 J-	0.67 J-	0.64 J-	0.48 J-	0.73 J-
Cadmium	mg/kg	0.59 UJ	0.57 UJ	0.57 UJ	0.59 UJ	0.61 UJ	0.56 UJ	0.58 UJ
Calcium	mg/kg	39700	39000	34400	32900	15300	32400	33600
Chromium	mg/kg	14.6 J-	10.1 J-	10.2 J-	10.9 J-	11.3 J-	8.0 J-	11.2 J-
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--
Cobalt	mg/kg	5.9 UJ	5.7 UJ	5.7 UJ	5.9 UJ	6.1 UJ	5.6 UJ	10.6 J-
Copper	mg/kg	7.6 J-	6.0 J-	5.9 J-	5.1 J-	6.8 J-	4.7 J-	8.6 J-
Iron	mg/kg	13500 J-	10500 J-	10200 J-	10000 J-	11900 J-	8150 J-	12300 J-
Lead	mg/kg	8.8 J-	6.0 J-	5.8 J-	5.4 J-	6.3 J-	4.5 J-	8.5 J-
Magnesium	mg/kg	1960 J-	1360 J-	1370 J-	1370 J-	1390 J-	1040 J-	1470 J-
Manganese	mg/kg	312 J-	213 J-	269 J-	146 J-	150 J-	174 J-	363 J-
Mercury	mg/kg	0.036 U	0.039 U	0.032 U	0.036 U	0.033 U	0.032 U	0.035 U
Nickel	mg/kg	11.1 J-	9.5 J-	9.2 J-	8.8 J-	9.8 J-	7.6 J-	13.2 J-
Potassium	mg/kg	1400 J-	1100 UJ	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ
Selenium	mg/kg	2.4 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.4 UJ	2.3 UJ	2.3 UJ
Silver	mg/kg	0.59 UJ	0.57 UJ	0.57 UJ	0.59 UJ	0.61 UJ	0.56 UJ	0.58 UJ
Sodium	mg/kg	1200 UJ	1100 UJ	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ
Thallium	mg/kg	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 UJ	1.2 UJ
Vanadium	mg/kg	25.7 J-	18.9 J-	18.7 J-	19.1 J-	17.7 J-	14.0 J-	21.8 J-
Zinc	mg/kg	29.0 J-	23.0 J-	22.1 J-	20.2 J-	27.8 J-	19.3 J-	38.1 J-

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Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**FILL-15**	**FILL-16**	**FILL-17**	**FILL-18**	**FILL-19**	**FILL-20**	**FILL-21**
Sample Name:		**12599404-022323-S-MTK-FILL-15**	**12599404-022323-S-MTK-FILL-16**	**12599404-022323-S-MTK-FILL-17**	**12599404-022323-S-MTK-FILL-18**	**12599404-022323-S-MTK-FILL-19**	**12599404-022323-S-MTK-FILL-20**	**12599404-022323-S-MTK-FILL-21**
Sample Date:		**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**	**02/23/2023**
Depth:		**--**	**--**	**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**							
Metals								
Aluminum	mg/kg	9560 J+	8320 J+	9250 J+	10300 J+	8550 J+	9930 J+	12700 J+
Antimony	mg/kg	2.5 UJ	2.2 UJ	2.4 UJ	2.5 UJ	2.3 UJ	2.3 UJ	13 UJ
Arsenic	mg/kg	3.8 J-	3.9 J-	3.6 J-	3.0 J-	8.8 J-	3.9 J-	38.1
Barium	mg/kg	83.8 J-	53.5 J-	63.3 J-	52.7 J-	99.9 J-	86.6 J-	168
Beryllium	mg/kg	0.68 J-	0.64 J-	0.63 J-	0.67 J-	0.84 J-	0.80 J-	1.9
Cadmium	mg/kg	0.63 UJ	0.56 UJ	0.59 UJ	0.62 UJ	0.57 UJ	0.58 UJ	3.4 U
Calcium	mg/kg	21600	23200	31300	8230	4690	9140	17700
Chromium	mg/kg	11.9 J-	10 J-	10.8 J-	10.5 J-	9.3 J-	10.1 J-	20.0
Chromium VI (hexavalent)	mg/kg	--	--	--	--	--	--	--
Cobalt	mg/kg	6.3 UJ	5.6 UJ	5.9 UJ	6.2 UJ	76.7 J-	14.6 J-	20.0
Copper	mg/kg	7.8 J-	6.1 J-	5.6 J-	5.0 J-	8.9 J-	5.9 J-	29.5
Iron	mg/kg	11400 J-	9430 J-	9260 J-	10600 J-	18600 J-	11600 J-	49100
Lead	mg/kg	7.6 J-	6.7 J-	5.9 J-	5.7 J-	26.7 J-	13.2 J-	28.7
Magnesium	mg/kg	1560 J-	1260 J-	1390 J-	1260 J-	1080 J-	1300 J-	2250
Manganese	mg/kg	151 J-	133 J-	183 J-	37.6 J-	715 J-	316 J-	724
Mercury	mg/kg	0.033 U	0.032 U	0.032 U	0.031 U	0.036 U	0.031 U	0.034 U
Nickel	mg/kg	9.6 J-	8.7 J-	8.8 J-	7.9 J-	11.8 J-	11.4 J-	42.7
Potassium	mg/kg	1300 UJ	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ	1300 U
Selenium	mg/kg	2.5 UJ	2.2 UJ	2.4 UJ	2.5 UJ	2.3 UJ	2.3 UJ	13 U
Silver	mg/kg	0.63 UJ	0.56 UJ	0.59 UJ	0.62 UJ	0.64 J-	0.58 UJ	3.4 U
Sodium	mg/kg	1300 UJ	1100 UJ	1200 UJ	1200 UJ	1100 UJ	1200 UJ	1300 U
Thallium	mg/kg	1.3 UJ	1.1 UJ	1.2 UJ	1.2 UJ	1.1 J-	1.2 UJ	6.7 U
Vanadium	mg/kg	16.2 J-	15.4 J-	16.9 J-	15.0 J-	28.0 J-	16.4 J-	74.7
Zinc	mg/kg	29.9 J-	27.8 J-	22.4 J-	17.8 J-	16.7 J-	21.0 J-	57.3

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	**FILL-22**	**FILL-23**	**FILL-24**	**Backfill-1**	**Backfill-2**	**Backfill-3**
	Sample Name:	**12599404-022323-S-MTK-FILL-22**	**12599404-022323-S-MTK-FILL-23**	**12599404-022323-S-MTK-FILL-24**	**12599404-030123-S-MTK-BACKFILL-1 (6-8)**	**12599404-030123-S-MTK-BACKFILL-2 (4-6)**	**12599404-030123-S-MTK-BACKFILL-3 (2-4)**
	Sample Date:	**02/23/2023**	**02/23/2023**	**02/23/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
	Depth:	**--**	**--**	**--**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**
Parameters	**Unit**						
Metals							
Aluminum	mg/kg	17600 J+	8660 J+	10800 J+	14600	13400	10600
Antimony	mg/kg	2.4 UJ	2.3 UJ	2.4 UJ	2.4 UJ	2.3 UJ	2.4 UJ
Arsenic	mg/kg	5.4	5.1	7.6	7.7	5.6	2.5
Barium	mg/kg	116	60.2	108	78.8	107	37.7
Beryllium	mg/kg	1.6	0.68	0.91	0.96	0.86	0.61
Cadmium	mg/kg	0.61 U	0.57 U	0.60 U	0.60 U	0.59 U	0.61 U
Calcium	mg/kg	78400	52600	29000	18600	69400	3720
Chromium	mg/kg	23.0	10.8	12.6	16.8	13.8	10.4
Chromium VI (hexavalent)	mg/kg	--	--	--	0.49 U	0.48 U	0.49 U
Cobalt	mg/kg	8.2	5.7 U	6.0 U	6.0 U	5.9 U	6.1 U
Copper	mg/kg	12.8	6.2	7.4	8.4	5.6	4.4
Iron	mg/kg	19400	11200	16800	20500	14500	7970
Lead	mg/kg	11.2	6.8	11.3	7.7	6.4	8.3
Magnesium	mg/kg	3130	1650	1610	2160 J+	1740 J+	1130 J+
Manganese	mg/kg	536	175	250	143 J+	166 J+	19.6 J+
Mercury	mg/kg	0.037 U	0.030 U	0.032 U	0.039 U	0.039 U	0.037 U
Nickel	mg/kg	20.8	11.0	12.3	16.7	14.7	5.2
Potassium	mg/kg	2590 J+	1100 U	1200 U	1200 U	1200 U	1200 U
Selenium	mg/kg	2.4 U	2.3 U	2.4 U	2.4 U	2.3 U	2.4 U
Silver	mg/kg	0.61 U	0.57 U	0.60 U	0.60 U	0.59 U	0.61 U
Sodium	mg/kg	1200 U	1100 U	1200 U	1200 U	1200 U	1200 U
Thallium	mg/kg	2.0	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U
Vanadium	mg/kg	38.4	19.1	36.9	28.3	23.6	16.3
Zinc	mg/kg	47.0	23.7	24.7	35.2	22.5	16.2

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-4**	**Backfill-5**	**Backfill-6**	**Backfill-7**	**Backfill-8**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-4 (6-8)**	**12599404-030123-S-MTK-BACKFILL-5 (4-6)**	**12599404-030123-S-MTK-BACKFILL-6 (2-4)**	**12599404-030123-S-MTK-BACKFILL-7 (6-8)**	**12599404-030123-S-MTK-BACKFILL-8 (4-6)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	9240	16000	7020	10100	14300
Antimony	mg/kg	2.4 UJ	2.4 UJ	2.2 UJ	2.4 UJ	2.4 UJ
Arsenic	mg/kg	2.4 U	10.7	2.6	3.0	3.4
Barium	mg/kg	73.5	136	201	64.3	129
Beryllium	mg/kg	0.41	1.4	0.42	0.52	0.77
Cadmium	mg/kg	0.60 U	0.60 U	0.55 U	0.59 U	0.59 U
Calcium	mg/kg	3050	39900	53800	122000	41200
Chromium	mg/kg	10.9	15.8	6.7	10.5	14.6
Chromium VI (hexavalent)	mg/kg	0.48 U	0.49 U	0.44 U	0.48 U	0.47 U
Cobalt	mg/kg	6.0 U	156	5.5 U	5.9 U	5.9 U
Copper	mg/kg	3.8	6.1	2.8 U	3.9	3.2
Iron	mg/kg	8080	16800	5160	8200	12300
Lead	mg/kg	4.4	96.6	5.8	5.3	6.4
Magnesium	mg/kg	1450 J+	1970 J+	964 J+	1600 J+	2320 J+
Manganese	mg/kg	177 J+	714 J+	288 J+	148 J+	84.7 J+
Mercury	mg/kg	0.038 U	0.039 U	0.029 U	0.038 U	0.036 U
Nickel	mg/kg	7.6	28.1	12.1	7.4	8.4
Potassium	mg/kg	1200 U	1200 U	1100 U	1200 U	1200 U
Selenium	mg/kg	2.4 U	2.4 U	2.2 U	2.4 U	2.4 U
Silver	mg/kg	0.60 U	0.60 U	0.55 U	0.59 U	0.59 U
Sodium	mg/kg	1200 U	1200 U	1100 U	1200 U	1200 U
Thallium	mg/kg	1.2 U	6.0 U	1.1 U	1.2 U	1.2 U
Vanadium	mg/kg	11.9	41.4	12.0	13.7	23.3
Zinc	mg/kg	19.6	22.5	9.2	19.0	23.1

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	**Backfill-9**	**Backfill-10**	**Backfill-11**	**Backfill-12**	**Backfill-13**
	Sample Name:	**12599404-030123-S-MTK-BACKFILL-9 (2-4)**	**12599404-030123-S-MTK-BACKFILL-10 (6-8)**	**12599404-030123-S-MTK-BACKFILL-11 (4-6)**	**12599404-030123-S-MTK-BACKFILL-12 (2-4)**	**12599404-030123-S-MTK-BACKFILL-13 (2-4)**
	Sample Date:	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
	Depth:	**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**2-4 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	13900	15400	13500	14700	10800
Antimony	mg/kg	2.2 UJ	2.5 UJ	2.4 UJ	2.4 UJ	2.2 UJ
Arsenic	mg/kg	2.2 U	8.8	9.4	3.4	3.2
Barium	mg/kg	128	228	106	98.8	55.0
Beryllium	mg/kg	0.59	0.94	0.98	0.71	0.51
Cadmium	mg/kg	0.56 U	0.61 U	0.60 U	0.60 U	0.56 U
Calcium	mg/kg	47000	48800	27400	4150	25800
Chromium	mg/kg	13.5	17.2	14.2	13.7	10.5
Chromium VI (hexavalent)	mg/kg	0.46 U	0.48 U	0.47 U	0.49 U	0.48 U
Cobalt	mg/kg	5.6 U	15.8	11.5	6.0 U	5.6 U
Copper	mg/kg	5.7	10.4	11.9	5.2	3.1
Iron	mg/kg	9750	18900	18800	11500	10100
Lead	mg/kg	5.4	14.7	10.6	9.4	6.2
Magnesium	mg/kg	2060 J+	2480 J+	2000 J+	1480 J+	1240 J+
Manganese	mg/kg	35.9 J+	1210 J+	383 J+	44.9 J+	14.6 J+
Mercury	mg/kg	0.031 U	0.038 U	0.039 U	0.072 U	0.072 U
Nickel	mg/kg	6.2	28.4	15.0	7.6	5.6
Potassium	mg/kg	1100 U	1430	1200 U	1200 U	1100 U
Selenium	mg/kg	2.2 U	2.5 U	2.4 U	2.4 U	2.2 U
Silver	mg/kg	0.56 U	0.61 U	0.60 U	0.60 U	0.56 U
Sodium	mg/kg	1100 U	1200 U	1200 U	1200 U	1100 U
Thallium	mg/kg	1.1 U	1.2 U	1.2 U	1.2 U	1.1 U
Vanadium	mg/kg	20.1	32.5	30.3	22.1	19.0
Zinc	mg/kg	20.0	34.9	24.9	19.6	13.9

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-14**	**Backfill-15**	**Backfill-16**	**Backfill-17**	**Backfill-18**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-14 (6-8)**	**12599404-030123-S-MTK-BACKFILL-15 (4-6)**	**12599404-030123-S-MTK-BACKFILL-16 (2-4)**	**12599404-030123-S-MTK-BACKFILL-17 (6-8)**	**12599404-030123-S-MTK-BACKFILL-18 (4-6)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	14200	9260	10600	12500	12600
Antimony	mg/kg	2.5 UJ	2.4 UJ	2.3 UJ	2.4 UJ	2.4 UJ
Arsenic	mg/kg	7.7	2.4 U	2.3 U	3.0	9.4
Barium	mg/kg	222	61.4	91.9	33.2	160
Beryllium	mg/kg	1.1	0.59	0.48	0.68	0.93
Cadmium	mg/kg	0.63 U	0.59 U	0.57 U	0.60 U	0.60 U
Calcium	mg/kg	9250	2850	29700	4730	4060
Chromium	mg/kg	16.1	9.2	10.0	12.1	12.9
Chromium VI (hexavalent)	mg/kg	0.49 U	0.47 U	1.7	0.61	0.48 U
Cobalt	mg/kg	21.1	5.9 U	5.7 U	6.0 U	7.5
Copper	mg/kg	10.0	2.9 U	3.1	5.7	7.7
Iron	mg/kg	18400	8100	8370	11200	15600
Lead	mg/kg	15.9	7.4	6.1	7.7	10.1
Magnesium	mg/kg	2450 J+	1060 J+	1180 J+	1440 J+	1580 J+
Manganese	mg/kg	939 J+	16.9 J+	26.0 J+	52.8 J+	597 J+
Mercury	mg/kg	0.075 U	0.064 U	0.076 U	0.064 U	0.072 U
Nickel	mg/kg	36.4	5.0	4.6 U	8.2	19.3
Potassium	mg/kg	1300 U	1200 U	1100 U	1200 U	1200 U
Selenium	mg/kg	2.5 U	2.4 U	2.3 U	2.4 U	2.4 U
Silver	mg/kg	0.63 U	0.59 U	0.57 U	0.60 U	0.60 U
Sodium	mg/kg	1300 U	1200 U	1100 U	1200 U	1200 U
Thallium	mg/kg	1.3 U	1.2 U	1.1 U	1.2 U	1.2 U
Vanadium	mg/kg	25.6	14.3	15.8	19.8	25.6
Zinc	mg/kg	35.8	13.8	13.8	18.4	22.4

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-19**	**Backfill-20**	**Backfill-21**	**Backfill-22**	**Backfill-23**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-19 (2-4)**	**12599404-030123-S-MTK-BACKFILL-20 (6-8)**	**12599404-030123-S-MTK-BACKFILL-21 (4-6)**	**12599404-030123-S-MTK-BACKFILL-22 (2-4)**	**12599404-030123-S-MTK-BACKFILL-23 (6-8)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	12400	11800	11400	9880	15400
Antimony	mg/kg	2.5 UJ	2.5 UJ	2.6 UJ	2.5 UJ	2.4 UJ
Arsenic	mg/kg	2.9	6.8	4.4	2.5 U	3.3
Barium	mg/kg	136	54.9	58.2	90.2	81.7
Beryllium	mg/kg	0.74	1.1	1.2	0.86	0.81
Cadmium	mg/kg	0.64 U	0.61 U	0.64 U	0.63 U	0.61 U
Calcium	mg/kg	14900	4390	7250 J+	4500 J+	45200 J+
Chromium	mg/kg	12.9	12.5	11.5	9.0	15.5
Chromium VI (hexavalent)	mg/kg	0.95	0.48 U	0.48 U	0.50 U	0.47 U
Cobalt	mg/kg	6.4 U	6.1 U	6.4 U	6.3 U	6.1 U
Copper	mg/kg	6.7	7.3	5.9	4.9	6.8
Iron	mg/kg	10400	16000	13000	7920	13300
Lead	mg/kg	9.5	7.4	7.4	10.9	7.9
Magnesium	mg/kg	1410 J+	1470 J+	1290	861	1750
Manganese	mg/kg	88.2 J+	132 J+	36.3 J+	31.2 J+	105 J+
Mercury	mg/kg	0.068 U	0.072 U	0.064 U	0.068 U	0.064 U
Nickel	mg/kg	7.2	16.8	14.2	8.4	10.1
Potassium	mg/kg	1300 U	1200 U	1300 U	1300 U	1200 U
Selenium	mg/kg	2.5 U	2.5 U	2.6 U	2.5 U	2.4 U
Silver	mg/kg	0.64 U	0.61 U	0.64 U	0.63 U	0.61 U
Sodium	mg/kg	1300 U	1200 U	1300 U	1300 U	1200 U
Thallium	mg/kg	1.3 U	1.2 U	1.3 U	1.3 U	1.2 U
Vanadium	mg/kg	21.1	24.4	17.5	12.6	20.3
Zinc	mg/kg	22.5	22.9	18.4	15.1	25.4

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-24**	**Backfill-25**	**Backfill-26**	**Backfill-27**	**Backfill-28**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-24 (4-6)**	**12599404-030123-S-MTK-BACKFILL-25 (4-6)**	**12599404-030123-S-MTK-BACKFILL-26 (2-4)**	**12599404-030123-S-MTK-BACKFILL-27 (6-8)**	**12599404-030123-S-MTK-BACKFILL-28 (4-6)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**4-6 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	7150	12100	11400	10500	13200
Antimony	mg/kg	2.5 UJ	2.6 UJ	2.2 UJ	2.4 UJ	2.4 UJ
Arsenic	mg/kg	2.5 U	3.2	6.2	8.0	6.6
Barium	mg/kg	72.1	51.8	70.6	61.3	276
Beryllium	mg/kg	0.62	0.83	0.67	0.75	1.3
Cadmium	mg/kg	0.63 U	0.64 U	0.56 U	0.61 U	0.60 U
Calcium	mg/kg	74100 J+	4990 J+	5340 J+	3360 J+	4160 J+
Chromium	mg/kg	6.9	12.5	12.0	12.1	13.7
Chromium VI (hexavalent)	mg/kg	0.49 U	0.49 U	0.60	0.50 U	0.56
Cobalt	mg/kg	6.3 U	6.4 U	5.6 U	6.1 U	22.0
Copper	mg/kg	3.2 U	5.3	5.9	6.4	9.2
Iron	mg/kg	6140	11300	14100	16700	15700
Lead	mg/kg	4.8	8.4	9.5	8.8	14.8
Magnesium	mg/kg	1110	1400	1310	1590	1870
Manganese	mg/kg	44.0 J+	47.2 J+	27.4 J+	108 J+	1840 J+
Mercury	mg/kg	0.072 U	0.074 U	0.072 U	0.074 U	0.080 U
Nickel	mg/kg	5.1 U	9.1	7.9	12.3	39.8
Potassium	mg/kg	1300 U	1300 U	1100 U	1200 U	1200 U
Selenium	mg/kg	2.5 U	2.6 U	2.2 U	2.4 U	2.4 U
Silver	mg/kg	0.63 U	0.64 U	0.56 U	0.61 U	0.64
Sodium	mg/kg	1300 U	1300 U	1100 U	1200 U	1200 U
Thallium	mg/kg	1.3 U	1.3 U	1.1 U	1.2 U	6.0 U
Vanadium	mg/kg	11.4	16.4	28.2	21.3	22.3
Zinc	mg/kg	12.5	18.5	16.4	25.3	26.1

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Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
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	Location ID:	**Backfill-29**	**Backfill-30**	**Backfill-31**	**Backfill-32**	**Backfill-33**
	Sample Name:	**12599404-030123-S-MTK-BACKFILL-29 (2-4)**	**12599404-030123-S-MTK-BACKFILL-30 (6-8)**	**12599404-030123-S-MTK-BACKFILL-31 (4-6)**	**12599404-030123-S-MTK-BACKFILL-32 (2-4)**	**12599404-030123-S-MTK-BACKFILL-33 (6-8)**
	Sample Date:	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
	Depth:	**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	11500	11700	12800	14500	11200
Antimony	mg/kg	2.3 UJ	2.5 UJ	2.4 UJ	2.5 UJ	2.5 UJ
Arsenic	mg/kg	3.1	2.5 U	5.1	4.3	2.5 U
Barium	mg/kg	76.7	63.5	170	121	63.0
Beryllium	mg/kg	0.57	0.53	0.81	0.64	0.50
Cadmium	mg/kg	0.57 U	0.64 U	0.59 U	0.62 U	0.62 U
Calcium	mg/kg	48200 J+	6490 J+	19600 J+	37600 J+	22700 J+
Chromium	mg/kg	11.8	11.9	12.4	13.5	10.7
Chromium VI (hexavalent)	mg/kg	0.48 U	0.50 U	0.48 U	0.48 U	0.51 U
Cobalt	mg/kg	7.2	6.4 U	14.8	6.2 U	6.2 U
Copper	mg/kg	4.4	3.2 U	6.7	5.3	4.2
Iron	mg/kg	10000	9340	12300	12300	8910
Lead	mg/kg	8.9	5.0	14.9	8.3	6.6
Magnesium	mg/kg	1570	1580	1670	2140	1640
Manganese	mg/kg	194 J+	46.2 J+	833 J+	28.2 J+	15.9 J+
Mercury	mg/kg	0.068 U	0.068 U	0.068 U	0.060 U	0.074 U
Nickel	mg/kg	10.6	5.7	18.2	5.7	5.0 U
Potassium	mg/kg	1100 U	1300 U	1200 U	1200 U	1200 U
Selenium	mg/kg	2.3 U	2.5 U	2.4 U	2.5 U	2.5 U
Silver	mg/kg	0.57 U	0.64 U	0.59 U	0.62 U	0.62 U
Sodium	mg/kg	1100 U	1300 U	1200 U	1720	1510
Thallium	mg/kg	1.1 U	1.3 U	1.2 U	1.2 U	1.2 U
Vanadium	mg/kg	18.4	9.8	21.7	28.0	16.7
Zinc	mg/kg	16.7	20.3	21.8	19.8	16.1

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-34**	**Backfill-35**	**Backfill-36**	**Backfill-37**	**Backfill-38**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-34 (4-6)**	**12599404-030123-S-MTK-BACKFILL-35 (2-4)**	**12599404-030123-S-MTK-BACKFILL-36 (6-8)**	**12599404-030123-S-MTK-BACKFILL-37 (6-8)**	**12599404-030123-S-MTK-BACKFILL-38 (4-6)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	11000	14600	9810	11500	12700
Antimony	mg/kg	2.3 UJ	2.4 UJ	2.3 UJ	2.3 UJ	2.4 UJ
Arsenic	mg/kg	3.3	2.4 U	4.0	6.6	5.3
Barium	mg/kg	68.4	94.2	101	50.8	112
Beryllium	mg/kg	0.79	0.58	0.47	0.75	0.83
Cadmium	mg/kg	0.57 U	0.59 U	0.58 U	0.58 U	0.60 U
Calcium	mg/kg	8750 J+	9760 J+	92400 J+	4600 J+	11600 J+
Chromium	mg/kg	11.0	13.9	10.6	13.1	13.6
Chromium VI (hexavalent)	mg/kg	0.47 U	0.47 U	0.50 U	0.47 U	0.48 U
Cobalt	mg/kg	5.7 U	5.9 U	5.9	5.8 U	6.0 U
Copper	mg/kg	4.6	5.2	3.6	6.6	5.9
Iron	mg/kg	12400	10400	8480	14100	12900
Lead	mg/kg	7.7	6.5	6.5	6.7	7.0
Magnesium	mg/kg	1580	1660	1470	1780	1710
Manganese	mg/kg	66.5 J+	16.6 J+	323 J+	215 J+	157 J+
Mercury	mg/kg	0.064 U	0.064 U	0.080 U	0.076 U	0.066 U
Nickel	mg/kg	9.0	5.3	8.4	14.5	13.4
Potassium	mg/kg	1100 U	1200 U	1200 U	1200 U	1200 U
Selenium	mg/kg	2.3 U	2.4 U	2.3 U	2.3 U	2.4 U
Silver	mg/kg	0.57 U	0.59 U	0.58 U	0.58 U	0.60 U
Sodium	mg/kg	1230	1470	1200 U	1200 U	1200 U
Thallium	mg/kg	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U
Vanadium	mg/kg	14.2	19.5	19.8	21.8	23.4
Zinc	mg/kg	22.4	18.9	17.2	26.0	20.2

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Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-39**	**Backfill-40**	**Backfill-41**	**Backfill-42**	**Backfill-43**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-39 (2-4)**	**12599404-030123-S-MTK-BACKFILL-40 (6-8)**	**12599404-030123-S-MTK-BACKFILL-41 (4-6)**	**12599404-030123-S-MTK-BACKFILL-42 (2-4)**	**12599404-030123-S-MTK-BACKFILL-43 (6-8)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	14300	12000	14500	11900	13300
Antimony	mg/kg	2.5 UJ	2.4 UJ	2.4 UJ	2.3 UJ	2.3 UJ
Arsenic	mg/kg	3.3	5.7	3.8	2.6	4.4
Barium	mg/kg	68.3	37.0	47.6	73.3	105
Beryllium	mg/kg	0.77	0.85	0.75	0.46	0.76
Cadmium	mg/kg	0.63 U	0.59 U	0.60 U	0.59 U	0.57 U
Calcium	mg/kg	3510 J+	3560 J+	8460 J+	28800 J+	23300 J+
Chromium	mg/kg	13.4	13.2	14.8	11.6	14.3
Chromium VI (hexavalent)	mg/kg	0.51 U	0.47 U	0.47 U	0.47 U	0.47 U
Cobalt	mg/kg	6.3 U	5.9 U	6.0 U	5.9 U	5.7 U
Copper	mg/kg	4.6	5.1	6.7	3.6	7.1
Iron	mg/kg	11500	14100	13500	8530	12700
Lead	mg/kg	9.6	10.3	6.5	5.8	7.5
Magnesium	mg/kg	1450	1770	1980	1750	2290
Manganese	mg/kg	15.9 J+	127 J+	80.5	97.4	245
Mercury	mg/kg	0.080 U	0.076 U	0.062 U	0.068 U	0.062 U
Nickel	mg/kg	6.6	11.6	9.2	5.3	11.7
Potassium	mg/kg	1300 U	1200 U	1200 U	1200 U	1100 U
Selenium	mg/kg	2.5 U	2.4 U	2.4 U	2.3 U	2.3 U
Silver	mg/kg	0.63 U	0.59 U	0.60 U	0.59 U	0.57 U
Sodium	mg/kg	1300 U	1200 U	1200 U	1200 U	1100 U
Thallium	mg/kg	1.3 U	1.2 U	1.2 U	1.2 U	1.1 U
Vanadium	mg/kg	21.5	22.2	22.7	19.9	22.7
Zinc	mg/kg	20.0	27.6	22.5	17.5	23.9

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-44**	**Backfill-45**	**Backfill-46**	**Backfill-47**	**Backfill-48**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-44 (4-6)**	**12599404-030123-S-MTK-BACKFILL-45 (2-4)**	**12599404-030123-S-MTK-BACKFILL-46 (6-8)**	**12599404-030123-S-MTK-BACKFILL-47 (4-6)**	**12599404-030123-S-MTK-BACKFILL-48 (2-4)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	15700	19900	13100	15200	12800
Antimony	mg/kg	2.5 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ
Arsenic	mg/kg	3.6	3.9	3.9	2.9	2.6
Barium	mg/kg	55.7	57.1	75.7	50.9	144
Beryllium	mg/kg	1.0	0.98	0.72	0.93	0.97
Cadmium	mg/kg	0.61 U	0.59 U	0.60 U	0.59 U	0.60 U
Calcium	mg/kg	3470 J+	11900 J+	21400 J+	7650 J+	5210 J+
Chromium	mg/kg	15.9	19.4	14.0	14.8	12.0
Chromium VI (hexavalent)	mg/kg	0.50 U	0.47 U	0.47 U	0.47 U	0.70
Cobalt	mg/kg	6.1 U	5.9 U	6.0 U	5.9 U	6.0 U
Copper	mg/kg	5.0	6.5	6.2	4.2	7.5
Iron	mg/kg	13000	13600	12200	10800	8600
Lead	mg/kg	6.4	8.1	6.2	9.3	8.7
Magnesium	mg/kg	2270	2620	1900	1510	1610
Manganese	mg/kg	79.3	27.8	111	38.9	17.0
Mercury	mg/kg	0.076 U	0.070 U	0.074 U	0.078 U	0.066 U
Nickel	mg/kg	12.9	8.7	8.6	7.0	6.0
Potassium	mg/kg	1200 U	1200 U	1200 U	1200 U	1200 U
Selenium	mg/kg	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U
Silver	mg/kg	0.61 U	0.59 U	0.60 U	0.59 U	0.60 U
Sodium	mg/kg	1200 U	1200 U	1200 U	1200 U	1200 U
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Vanadium	mg/kg	23.1	33.9	22.2	23.4	15.3
Zinc	mg/kg	26.0	27.8	24.3	22.4	21.7

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-49**	**Backfill-50**	**Backfill-51**	**Backfill-52**	**Backfill-53**
Sample Name:		**12599404-030123-S-MTK-BACKFILL-49 (2-4)**	**12599404-030123-S-MTK-BACKFILL-50 (6-8)**	**12599404-030123-S-MTK-BACKFILL-51 (4-6)**	**12599404-030123-S-MTK-BACKFILL-52 (2-4)**	**12599404-030123-S-MTK-BACKFILL-53 (6-8)**
Sample Date:		**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**	**03/01/2023**
Depth:		**2-4 ft BGS**	**6-8 ft BGS**	**4-6 ft BGS**	**2-4 ft BGS**	**6-8 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	13700	14800	17200	17800	16100
Antimony	mg/kg	2.4 UJ	2.4 UJ	2.4 UJ	2.5 UJ	2.4 UJ
Arsenic	mg/kg	3.5	4.3	2.4 U	2.5	5.0
Barium	mg/kg	117	86.9	53.8	90.8	233
Beryllium	mg/kg	1.1	0.76	0.85	0.72	1.3
Cadmium	mg/kg	0.61 U	0.60 U	0.60 U	0.62 U	0.61 U
Calcium	mg/kg	18600 J+	13300 J+	6480 J+	5050 J+	5410 J+
Chromium	mg/kg	14.4	17.0	15.8	16.4	18.5
Chromium VI (hexavalent)	mg/kg	0.49 U	0.48 U	0.48 U	0.55	0.49 U
Cobalt	mg/kg	6.1 U	6.0 U	6.0 U	6.2 U	7.7
Copper	mg/kg	4.8	5.7	6.3	5.4	9.6
Iron	mg/kg	11000	14000	10900	11300	16500
Lead	mg/kg	5.3	6.2	10.1	10	9.6
Magnesium	mg/kg	1760	2410	2010	1940	2820
Manganese	mg/kg	73.3	267	19.4	30.6	1050
Mercury	mg/kg	0.040	0.062 U	0.042	0.066 UJ	0.070 UJ
Nickel	mg/kg	8.9	12.1	7.5	6.4	28.4
Potassium	mg/kg	1200 U	1270	1200 U	1200 U	1200 U
Selenium	mg/kg	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U
Silver	mg/kg	0.61 U	0.60	0.60 U	0.62 U	0.82
Sodium	mg/kg	1200 U	1200 U	1760	1200 U	1200 U
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	2.4 U
Vanadium	mg/kg	23.8	21.0	22.9	23.6	26.0
Zinc	mg/kg	22.4	31.6	25.6	24.4	32.4

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Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	Backfill-54	Backfill-55	Backfill-56	Backfill-57	Backfill-58
	Sample Name:	12599404-030123-S-MTK-BACKFILL-54 (4-6)	12599404-030123-S-MTK-BACKFILL-55 (2-4)	12599404-030123-S-MTK-BACKFILL-56 (6-8)	12599404-030123-S-MTK-BACKFILL-57 (4-6)	12599404-030123-S-MTK-BACKFILL-58 (2-4)
	Sample Date:	03/01/2023	03/01/2023	03/01/2023	03/01/2023	03/01/2023
	Depth:	4-6 ft BGS	2-4 ft BGS	6-8 ft BGS	4-6 ft BGS	2-4 ft BGS
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	14800	14500	10700	12300	14500
Antimony	mg/kg	2.4 UJ	2.3 UJ	2.4 UJ	2.4 UJ	2.3 UJ
Arsenic	mg/kg	10.1	4.7	2.4 U	2.4 U	2.3 U
Barium	mg/kg	62.5	46.6	43.7	52.3	55.2
Beryllium	mg/kg	0.93	0.81	0.74	0.81	0.60
Cadmium	mg/kg	0.61 U	0.58 U	0.59 U	0.59 U	0.59 U
Calcium	mg/kg	2370 J+	2350 J+	3570 J+	3620 J+	32400 J+
Chromium	mg/kg	14.0	12.7	9.4	10.9	13.9
Chromium VI (hexavalent)	mg/kg	0.48 U	0.47 U	0.48 U	0.50 U	0.46 U
Cobalt	mg/kg	6.1 U	16.2	5.9 U	5.9 U	5.9 U
Copper	mg/kg	6.9	5.7	4.2	4.1	4.7
Iron	mg/kg	14500	12400	10100	9780	9980
Lead	mg/kg	11.8	19.0	6.5	7.2	7.1
Magnesium	mg/kg	1670	1690	1440	1240	1400
Manganese	mg/kg	50.6	431	37.5	13.6	17.8
Mercury	mg/kg	0.064 UJ	0.064 UJ	0.068 UJ	0.066 UJ	0.064 UJ
Nickel	mg/kg	7.9	13.2	7.3	6.9	6.0
Potassium	mg/kg	1200 U	1200 U	1200 U	1200 U	1200 U
Selenium	mg/kg	2.4 U	2.3 U	2.4 U	2.4 U	2.3 U
Silver	mg/kg	0.69	0.58 U	0.59 U	0.59 U	0.59 U
Sodium	mg/kg	1200 U	1810	1200 U	1200 U	1200 U
Thallium	mg/kg	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Vanadium	mg/kg	52.2	27.5	13.2	14.8	20.9
Zinc	mg/kg	19.9	21.1	15.9	18.2	21.2

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	**Backfill-59**	**Backfill-60**	**Backfill-61**	**Backfill-62**	**Backfill-63**
	Sample Name:	**12599404-030123-S-MTK-BACKFILL-59 (6-8)**	**12599404-030123-S-MTK-BACKFILL-60 (4-6)**	**12599404-030723-S-MTK-Backfill-61 (0-2)**	**12599404-030723-S-MTK-Backfill-62 (8-10)**	**12599404-030723-S-MTK-Backfill-63 (0-2)**
	Sample Date:	**03/01/2023**	**03/01/2023**	**03/07/2023**	**03/07/2023**	**03/07/2023**
	Depth:	**6-8 ft BGS**	**4-6 ft BGS**	**0-2 ft BGS**	**8-10 ft BGS**	**0-2 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	11800	14300	14500	10300	12000
Antimony	mg/kg	2.3 UJ	2.4 UJ	0.0767 UJ	0.126 J-	0.0718 UJ
Arsenic	mg/kg	4.3	3.0	2.72	12.0	3.00
Barium	mg/kg	87.2	77.7	20.2	89.5	197
Beryllium	mg/kg	1.0	0.66	1.10	0.915	0.709
Cadmium	mg/kg	0.57 U	0.60 U	0.0319 U	0.0903 J	0.106 J
Calcium	mg/kg	4200 J+	9150 J+	5710	86000	101000
Chromium	mg/kg	12.4	13.9	14.1	15.3	11.1
Chromium VI (hexavalent)	mg/kg	0.49 U	0.60	0.365 U	0.374 U	0.348 U
Cobalt	mg/kg	5.7 U	6.0 U	2.63	6.69	7.49
Copper	mg/kg	5.3	4.5	7.64	13.2	3.65
Iron	mg/kg	12400	11700	12200	24000	9790
Lead	mg/kg	7.6	7.1	8.24	9.92	7.99
Magnesium	mg/kg	1480	1580	1930	2280	3150
Manganese	mg/kg	239	34.3	27.0 J	263 J	290 J
Mercury	mg/kg	0.064 UJ	0.074 UJ	0.0161	0.00924	0.0190
Nickel	mg/kg	13.8	5.9	9.96	22.4	8.10
Potassium	mg/kg	1100 U	1200 U	560	1180	581
Selenium	mg/kg	2.3 U	2.4 U	1.16	1.35	0.797
Silver	mg/kg	0.57	0.60 U	0.0611 J	0.0182 U	0.442 J
Sodium	mg/kg	1100 U	1200 U	1050	345	142
Thallium	mg/kg	1.1 U	1.2 U	0.263 U	0.271 U	0.246 U
Vanadium	mg/kg	17.9	21.8	24.5	36.7	20.2
Zinc	mg/kg	22.3	23.0	23.5	43.4	18.6

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-64**	**Backfill-65**	**Backfill-66**	**Backfill-67**	**Backfill-68**
Sample Name:		**12599404-030723-S-MTK-Backfill-64 (10-12)**	**12599404-030723-S-MTK-Backfill-65 (8-10)**	**12599404-030723-S-MTK-Backfill-66 (0-2)**	**12599404-030723-S-MTK-Backfill-67 (10-12)**	**12599404-030723-S-MTK-Backfill-68 (0-2)**
Sample Date:		**03/07/2023**	**03/07/2023**	**03/07/2023**	**03/07/2023**	**03/07/2023**
Depth:		**10-12 ft BGS**	**8-10 ft BGS**	**0-2 ft BGS**	**10-12 ft BGS**	**0-2 ft BGS**
Parameters	**Unit**					
Metals						
Aluminum	mg/kg	7510	8020	13100	8910	10400
Antimony	mg/kg	0.0752 UJ	0.0767 UJ	0.0757 UJ	0.0899 J-	0.0763 UJ
Arsenic	mg/kg	2.09	2.99	6.39	15.4	1.55
Barium	mg/kg	71.6	36.6	70.3	66.6	137
Beryllium	mg/kg	0.517 J	0.625	1.37	0.917	0.850
Cadmium	mg/kg	0.0312 U	0.0318 U	0.0314 U	0.0315 U	0.0317 U
Calcium	mg/kg	11800	2700	3900	17600	4920
Chromium	mg/kg	10.4	9.54	12.4	12.3	9.31
Chromium VI (hexavalent)	mg/kg	0.370 U	0.367 U	0.360 U	0.368 U	0.372 U
Cobalt	mg/kg	2.74	1.72	10.1	4.02	2.85
Copper	mg/kg	5.11	4.27	7.61	16.1	5.51
Iron	mg/kg	9200	9940	25700	19800	9230
Lead	mg/kg	6.67	6.52	64.1	10.6	9.03
Magnesium	mg/kg	1440	1260	1460	1630	911
Manganese	mg/kg	52.4 J	20.1 J	171 J	91.1 J	32.5 J
Mercury	mg/kg	0.0320	0.0163	0.0185	0.00609	0.0117
Nickel	mg/kg	6.93	9.41	8.09	19.8	6.71
Potassium	mg/kg	876	713	349	992	377
Selenium	mg/kg	0.822	1.27	1.62	1.02	1.22
Silver	mg/kg	0.0174 U	0.202 J	0.0539 J	0.0175 U	0.0533 J
Sodium	mg/kg	330	328	586	354	290
Thallium	mg/kg	0.258 U	0.263 U	0.260 U	0.261 U	0.262 U
Vanadium	mg/kg	14.1	15.5	38.4	37.6	16.0
Zinc	mg/kg	22.8	19.5	14.1	36.9	14.5

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Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-69**	**Backfill-70**	**Backfill-71**	**Backfill-72**
Sample Name:		**12599404-030723-S-MTK-Backfill-69 (0-2)**	**12599404-030723-S-MTK-Backfill-70 (0-2)**	**12599404-030723-S-MTK-Backfill-71 (8-10)**	**12599404-030723-S-MTK-Backfill-72 (10-12)**
Sample Date:		**03/07/2023**	**03/07/2023**	**03/07/2023**	**03/07/2023**
Depth:		**0-2 ft BGS**	**0-2 ft BGS**	**8-10 ft BGS**	**10-12 ft BGS**
Parameters	**Unit**				
Metals					
Aluminum	mg/kg	12000	13300	12100	13900
Antimony	mg/kg	0.0740 UJ	0.0733 UJ	0.0817 J-	0.124 J-
Arsenic	mg/kg	2.62	3.40	8.80	14.1
Barium	mg/kg	424	174	578	306
Beryllium	mg/kg	0.919	0.955	1.44	1.09
Cadmium	mg/kg	0.0308 U	0.0305 U	0.580 J	0.213 J
Calcium	mg/kg	3540	8730	5260	88800
Chromium	mg/kg	10.3	12.3	15.3	17.8
Chromium VI (hexavalent)	mg/kg	0.357 U	0.362 U	0.374 U	0.374 U
Cobalt	mg/kg	2.58	1.71	52.4	25.1
Copper	mg/kg	5.22	6.08	16.4	15.3
Iron	mg/kg	10500	11700	25400	26800
Lead	mg/kg	10.3	7.82	23.0	17.7
Magnesium	mg/kg	1530	1800	2280	2760
Manganese	mg/kg	10.6 J	16.9 J	2620 J	1570 J
Mercury	mg/kg	0.0237	0.0214	0.0318	0.00527
Nickel	mg/kg	6.04	9.31	56.9	31.1
Potassium	mg/kg	344	474	1210	1500
Selenium	mg/kg	0.950	1.17	3.15	1.62
Silver	mg/kg	0.0211 J	0.0343 J	0.0177 U	0.0179 U
Sodium	mg/kg	614	526	510	333
Thallium	mg/kg	0.254 U	0.252 U	0.281 J	0.271 J
Vanadium	mg/kg	22.1	25.2	33.7	41.7
Zinc	mg/kg	14.7	17.1	48.3	47.4

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-73**	**Backfill-74**	**Backfill-75**	**Backfill-76**
Sample Name:		**12599404-030723-S-MTK-Backfill-73 (10-12)**	**12599404-030723-S-MTK-Backfill-74 (0-2)**	**12599404-030723-S-MTK-Backfill-75 (0-2)**	**12599404-030723-S-MTK-Backfill-76 (8-10)**
Sample Date:		**03/07/2023**	**03/07/2023**	**03/07/2023**	**03/07/2023**
Depth:		**10-12 ft BGS**	**0-2 ft BGS**	**0-2 ft BGS**	**8-10 ft BGS**
Parameters	**Unit**				
Metals					
Aluminum	mg/kg	10600	10800	13200	9830
Antimony	mg/kg	0.0772 UJ	0.0717 UJ	0.0754 UJ	0.0876 J-
Arsenic	mg/kg	3.84	1.94	2.31	6.61
Barium	mg/kg	69.6	43.3	62.3	129
Beryllium	mg/kg	0.829	0.682	0.832	0.712
Cadmium	mg/kg	0.0551 J	0.0298 U	0.0313 U	0.0409 J
Calcium	mg/kg	3460	4160	14900	35100
Chromium	mg/kg	12.8	9.16	11.1	12.7
Chromium VI (hexavalent)	mg/kg	0.361 U	0.356 U	0.360 U	0.363 U
Cobalt	mg/kg	5.89	1.09	3.45	7.58
Copper	mg/kg	6.47	6.45	4.71	8.96
Iron	mg/kg	12400	8500	9390	16000
Lead	mg/kg	9.44	8.26	7.43	8.08
Magnesium	mg/kg	1660	1350	2030	2070
Manganese	mg/kg	325 J	11.5 J	45.1 J	420 J
Mercury	mg/kg	0.0156	0.0190	0.0198	0.0120
Nickel	mg/kg	16.2	5.25	8.03	15.0
Potassium	mg/kg	953	319	445	980
Selenium	mg/kg	1.26	0.749	0.842	1.15
Silver	mg/kg	0.0178 U	0.0550 J	0.0372 J	0.0168 U
Sodium	mg/kg	519	452	2790	311
Thallium	mg/kg	0.265 U	0.246 U	0.259 U	0.249 U
Vanadium	mg/kg	18.1	20.8	18.9	24.5
Zinc	mg/kg	28.4	15.2	18.0	33.7

Table 2A

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:		**Backfill-77**	**Backfill-78**	**Backfill-79**	**Backfill-80**
Sample Name:		**12599404-030723-S-MTK-Backfill-77 (0-2)**	**12599404-030723-S-MTK-Backfill-78 (10-12)**	**12599404-030723-S-MTK-Backfill-79 (8-10)**	**12599404-030723-S-MTK-Backfill-80 (0-2)**
Sample Date:		**03/07/2023**	**03/07/2023**	**03/07/2023**	**03/07/2023**
Depth:		**0-2 ft BGS**	**10-12 ft BGS**	**8-10 ft BGS**	**0-2 ft BGS**
Parameters	**Unit**				
Metals					
Aluminum	mg/kg	14000	10800	14000	11600
Antimony	mg/kg	0.0722 UJ	0.0773 UJ	0.167 J-	0.0731 UJ
Arsenic	mg/kg	1.45	2.66	17.3	1.78
Barium	mg/kg	152	62.3	137	110
Beryllium	mg/kg	0.822	0.671	1.37	0.629
Cadmium	mg/kg	0.0300 U	0.0321 U	0.107 J	0.0304 U
Calcium	mg/kg	2590	21000	60600	7300
Chromium	mg/kg	12.9	13.1	19.9	12.2
Chromium VI (hexavalent)	mg/kg	0.352 U	0.371 U	0.387 U	0.354 U
Cobalt	mg/kg	1.76	2.66	10.6	1.23
Copper	mg/kg	3.58	7.10	20.6	4.40
Iron	mg/kg	9150	12000	34800	10100
Lead	mg/kg	7.86	8.38	15.6	7.33
Magnesium	mg/kg	1560	2170	2580	1360
Manganese	mg/kg	13.1 J	57.4 J	471 J	15.6 J
Mercury	mg/kg	0.0254	0.0265	0.00352 U	0.0160
Nickel	mg/kg	5.96	9.69	29.9	4.60
Potassium	mg/kg	421	1120	1530	400
Selenium	mg/kg	0.911	1.14	1.94	0.614
Silver	mg/kg	0.0470 J	0.0178 U	0.0178 U	0.0425 J
Sodium	mg/kg	1830	257	812	607
Thallium	mg/kg	0.248 U	0.265 U	0.265 U	0.251 U
Vanadium	mg/kg	20.1	17.9	51.0	19.4
Zinc	mg/kg	18.1	28.1	60.9	19.4

Notes:

U	- Not Detected
UJ	- Not detected; associated reporting limit is estimated
J	- Estimated concentration
J-	- Estimated concentration, result may be biased low
J+	- Estimated concentration, result may be biased high
ft BGS	- Feet below ground surface
--	- Not applicable

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:	**Top Soil**
Sample Name:	**12599404-070723-S-MTK-Source Topsoil-1**
Sample Date:	**07/07/2023**

Parameters	**Unit**	
Volatile Organic Compounds		
1,1,1-Trichloroethane	mg/kg	0.00075 U
1,1,2,2-Tetrachloroethane	mg/kg	0.00093 U
1,1,2-Trichloroethane	mg/kg	0.00086 U
1,1-Dichloroethane	mg/kg	0.00076 U
1,1-Dichloroethene	mg/kg	0.0010 U
1,2,3-Trichlorobenzene	mg/kg	0.0039 U
1,2,4-Trichlorobenzene	mg/kg	0.0039 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	0.0011 U
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	0.00065 U
1,2-Dichlorobenzene	mg/kg	0.00084 U
1,2-Dichloroethane	mg/kg	0.00073 U
1,2-Dichloropropane	mg/kg	0.00073 U
1,3-Dichlorobenzene	mg/kg	0.00077 U
1,4-Dichlorobenzene	mg/kg	0.00076 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	0.0038 U
2-Hexanone	mg/kg	0.0033 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	0.0035 U
Acetone	mg/kg	0.0064 U
Benzene	mg/kg	0.00070 U
Bromodichloromethane	mg/kg	0.00066 U
Bromoform	mg/kg	0.0021 U
Bromomethane (Methyl bromide)	mg/kg	0.0012 U
Carbon disulfide	mg/kg	0.00083 U
Carbon tetrachloride	mg/kg	0.00095 U
Chlorobenzene	mg/kg	0.00071 U
Chlorobromomethane	mg/kg	0.00087 U
Chloroethane	mg/kg	0.00091 U
Chloroform (Trichloromethane)	mg/kg	0.00080 U
Chloromethane (Methyl chloride)	mg/kg	0.0030 U
cis-1,2-Dichloroethene	mg/kg	0.0013 U
cis-1,3-Dichloropropene	mg/kg	0.00073 U
Cyclohexane	mg/kg	0.0010 U
Dibromochloromethane	mg/kg	0.00087 U
Dichlorodifluoromethane (CFC-12)	mg/kg	0.0011 U
Ethylbenzene	mg/kg	0.00070 U
Isopropyl benzene	mg/kg	0.0022 U
m&p-Xylenes	mg/kg	0.0014 U
Methyl acetate	mg/kg	0.0021 U
Methyl cyclohexane	mg/kg	0.0014 U
Methyl tert butyl ether (MTBE)	mg/kg	0.00072 U
Methylene chloride	mg/kg	0.0040 U
o-Xylene	mg/kg	0.00071 U

Table 2B

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:	**Top Soil**
Sample Name:	**12599404-070723-S-MTK-Source Topsoil-1**
Sample Date:	**07/07/2023**

Parameters	**Unit**	
Volatile Organic Compounds		
Styrene	mg/kg	0.00062 U
Tetrachloroethene	mg/kg	0.00090 U
Toluene	mg/kg	0.00081 U
trans-1,2-Dichloroethene	mg/kg	0.00094 U
trans-1,3-Dichloropropene	mg/kg	0.00071 U
Trichloroethene	mg/kg	0.0012 U
Trichlorofluoromethane (CFC-11)	mg/kg	0.0011 U
Trifluorotrichloroethane (CFC-113)	mg/kg	0.0041 U
Vinyl chloride	mg/kg	0.00074 U
Xylenes (total)	mg/kg	0.00071 U
Semivolatile Organic Compounds		
1,2,4,5-Tetrachlorobenzene	mg/kg	0.0091 U
1,4-Dioxane	mg/kg	0.024 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	0.013 U
2,3,4,6-Tetrachlorophenol	mg/kg	0.024 U
2,4,5-Trichlorophenol	mg/kg	0.027 U
2,4,6-Trichlorophenol	mg/kg	0.021 U
2,4-Dichlorophenol	mg/kg	0.031 U
2,4-Dimethylphenol	mg/kg	0.064 U
2,4-Dinitrophenol	mg/kg	0.13 U
2,4-Dinitrotoluene	mg/kg	0.011 U
2,6-Dinitrotoluene	mg/kg	0.018 U
2-Chloronaphthalene	mg/kg	0.0085 U
2-Chlorophenol	mg/kg	0.018 U
2-Methylnaphthalene	mg/kg	0.0081 U
2-Methylphenol	mg/kg	0.023 U
2-Nitroaniline	mg/kg	0.0084 U
2-Nitrophenol	mg/kg	0.024 U
3&4-Methylphenol	mg/kg	0.029 U
3,3'-Dichlorobenzidine	mg/kg	0.030 U
3-Nitroaniline	mg/kg	0.0089 U
4,6-Dinitro-2-methylphenol	mg/kg	0.038 U
4-Bromophenyl phenyl ether	mg/kg	0.014 U
4-Chloro-3-methylphenol	mg/kg	0.022 U
4-Chloroaniline	mg/kg	0.013 U
4-Chlorophenyl phenyl ether	mg/kg	0.012 U
4-Nitroaniline	mg/kg	0.0093 U
4-Nitrophenol	mg/kg	0.095 U
Acenaphthene	mg/kg	0.012 U
Acenaphthylene	mg/kg	0.018 U
Acetophenone	mg/kg	0.0077 U
Anthracene	mg/kg	0.022 U
Atrazine	mg/kg	0.015 U

Table 2B

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	**Top Soil**
	Sample Name:	**12599404-070723-S-MTK-Source Topsoil-1**
	Sample Date:	**07/07/2023**
Parameters	**Unit**	
Semivolatile Organic Compounds		
Benzaldehyde	mg/kg	0.0089 U
Benzo(a)anthracene	mg/kg	0.010 U
Benzo(a)pyrene	mg/kg	0.016 U
Benzo(b)fluoranthene	mg/kg	0.016 U
Benzo(g,h,i)perylene	mg/kg	0.018 U
Benzo(k)fluoranthene	mg/kg	0.017 U
Biphenyl (1,1-Biphenyl)	mg/kg	0.0049 U
bis(2-Chloroethoxy)methane	mg/kg	0.0077 U
bis(2-Chloroethyl)ether	mg/kg	0.015 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	0.0084 U
Butyl benzylphthalate (BBP)	mg/kg	0.0087 U
Caprolactam	mg/kg	0.014 U
Carbazole	mg/kg	0.0052 U
Chrysene	mg/kg	0.011 U
Di-n-butylphthalate (DBP)	mg/kg	0.0058 U
Di-n-octyl phthalate (DnOP)	mg/kg	0.0089 U
Dibenz(a,h)anthracene	mg/kg	0.016 U
Dibenzofuran	mg/kg	0.015 U
Diethyl phthalate	mg/kg	0.0076 U
Dimethyl phthalate	mg/kg	0.0064 U
Fluoranthene	mg/kg	0.016 U
Fluorene	mg/kg	0.016 U
Hexachlorobenzene	mg/kg	0.0090 U
Hexachlorobutadiene	mg/kg	0.014 U
Hexachlorocyclopentadiene	mg/kg	0.014 U
Hexachloroethane	mg/kg	0.018 U
Indeno(1,2,3-cd)pyrene	mg/kg	0.017 U
Isophorone	mg/kg	0.0077 U
N-Nitrosodi-n-propylamine	mg/kg	0.010 U
N-Nitrosodiphenylamine	mg/kg	0.013 U
Naphthalene	mg/kg	0.010 U
Nitrobenzene	mg/kg	0.014 U
Pentachlorophenol	mg/kg	0.034 U
Phenanthrene	mg/kg	0.0159 J
Phenol	mg/kg	0.019 U
Pyrene	mg/kg	0.011 U
Herbicides		
2,4,5-T	mg/kg	0.0018 U
2,4,5-TP (Silvex)	mg/kg	0.0020 J+
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/kg	0.0097 U

Table 2B

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

	Location ID:	**Top Soil**
	Sample Name:	**12599404-070723-S-MTK-Source Topsoil-1**
	Sample Date:	**07/07/2023**
Parameters	**Unit**	
PCBs		
Aroclor-1016 (PCB-1016)	mg/kg	0.017 U
Aroclor-1221 (PCB-1221)	mg/kg	0.022 U
Aroclor-1232 (PCB-1232)	mg/kg	0.023 U
Aroclor-1242 (PCB-1242)	mg/kg	0.015 U
Aroclor-1248 (PCB-1248)	mg/kg	0.032 U
Aroclor-1254 (PCB-1254)	mg/kg	0.019 U
Aroclor-1260 (PCB-1260)	mg/kg	0.015 U
Aroclor-1262 (PCB-1262)	mg/kg	0.023 U
Aroclor-1268 (PCB-1268)	mg/kg	0.015 U
Pesticides		
4,4'-DDD	mg/kg	0.00066 U
4,4'-DDE	mg/kg	0.00063 U
4,4'-DDT	mg/kg	0.00064 U
Aldrin	mg/kg	0.00059 U
alpha-BHC	mg/kg	0.00058 U
alpha-Chlordane	mg/kg	0.00058 U
beta-BHC	mg/kg	0.00065 U
delta-BHC	mg/kg	0.00069 U
Dieldrin	mg/kg	0.00049 U
Endosulfan I	mg/kg	0.00041 U
Endosulfan II	mg/kg	0.00045 U
Endosulfan sulfate	mg/kg	0.00056 U
Endrin	mg/kg	0.00056 U
Endrin aldehyde	mg/kg	0.00041 U
Endrin ketone	mg/kg	0.00052 U
gamma-BHC (lindane)	mg/kg	0.00053 U
gamma-Chlordane	mg/kg	0.00033 U
Heptachlor	mg/kg	0.00062 U
Heptachlor epoxide	mg/kg	0.00050 U
Methoxychlor	mg/kg	0.00057 U
Toxaphene	mg/kg	0.017 U

Table 2B

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:	**Top Soil**
Sample Name:	**12599404-070723-S-MTK-Source Topsoil-1**
Sample Date:	**07/07/2023**

Parameters	**Unit**	
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans		
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	118 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.685 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5.31 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.242 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.0902 UJ
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.377 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.0995 UJ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.357 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.103 UJ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.508 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.109 UJ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.246 UJ
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.11 UJ
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.106 UJ
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.0974 UJ
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.208 UJ
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.109 UJ
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	13.3 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.242 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.47 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.104 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.246 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.104 UJ
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.208 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.498 J
Total WHO Dioxin TEQ		
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/g	0.215 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/g	0.485 J

Table 2B

Analytical Results Summary
Fill Material Sampling
San Jacinto River Waste Pits-Southern Impoundment
Channelview, Harris County, Texas
February-July 2023

Location ID:	**Top Soil**
Sample Name:	**12599404-070723-S-MTK-Source Topsoil-1**
Sample Date:	**07/07/2023**

Parameters	**Unit**	
Metals		
Aluminum	mg/kg	11200
Antimony	mg/kg	0.46 U
Arsenic	mg/kg	2.9
Barium	mg/kg	102
Beryllium	mg/kg	0.62
Cadmium	mg/kg	0.078 U
Calcium	mg/kg	4700
Chromium	mg/kg	11.1
Chromium VI (hexavalent)	mg/kg	0.35 U
Cobalt	mg/kg	0.31 U
Copper	mg/kg	4.5
Iron	mg/kg	8740
Lead	mg/kg	12.0
Magnesium	mg/kg	1180
Manganese	mg/kg	147
Mercury	mg/kg	0.014 U
Nickel	mg/kg	6.1
Potassium	mg/kg	35 U
Selenium	mg/kg	0.72 U
Silver	mg/kg	0.19 U
Sodium	mg/kg	87 U
Thallium	mg/kg	0.65 U
Vanadium	mg/kg	24.3
Zinc	mg/kg	18.9
Total Petroleum Hydrocarbons		
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	25 U
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	25 U
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	25 U
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	25 U
General Chemistry		
Cyanide (total)	mg/kg	0.12 U
Phosphorus	mg/kg	47.2
pH	s.u.	7.98 J

Notes:

U	- Not Detected.
UJ	- Not detected; associated reporting limit is estimated.
J	- Estimated concentration
J+	- Estimated concentration, result may be biased high
s.u.	- Standard Units

Table 3

Analytical Methods and Holding Times
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Method	Matrix	Preservation	Holding Times	
				Collection to Extraction (Days)	Extraction to Analysis (Days)
Dioxins/Furans	EPA 1613B	Soil	Iced, 0-6° C	365	365
Metals	SW-846 6010/6020	Soil	Iced, 0-6° C	--	180
	SW-846 7471	Soil	Iced, 0-6° C	--	28
Phosphorus	EPA 365.3	Soil	Iced, 0-6° C	--	28
Hexavalent Chromium	SW-846 7196	Soil	Iced, 0-6° C	--	21
Pesticides	SW-846 8081	Soil	Iced, 0-6° C	14	40
Polychlorinated Biphenyls (PCBs)	SW-846 8082	Soil	Iced, 0-6° C	14	40
Herbicides	SW-846 8151	Soil	Iced, 0-6° C	14	40
Volatile Organic Compounds (VOCs)	SW-846 8260	Soil	Iced, 0-6° C	--	14
Semivolatile Organic Compounds (SVOCs)	SW-846 8270	Soil	Iced, 0-6° C	14	40
Total Petroleum Hydrocarbons (TPH)	TX 1005	Soil	Iced, 0-6° C	14	14
Total Cyanide	SW-846 9012	Soil	Iced, 0-6° C	--	14
pH	SW-846 9045	Soil	Iced, 0-6° C	--	Immediately

Notes:

EPA - Environmental Protection Agency
-- - Not applicable

Method References:

EPA - U.S. Environmental protection Agency. Analytical Methodology (October, 1994)
SM - "Standard Methods for the Examination of Water and Wastewater," 21st Edition.
TX 1005 - "Total Petroleum Hydrocarbons," Texas Natural Resource Conservation Commission Method 1005, Revision 03, June 1, 2001
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd Edition, September 1986 (with all subsequent revisions)

Table 4

Qualified Sample Results Due to Holding Time Exceedance
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
General Chemistry	12599404-070723-S-MTK-Source Topsoil-1	3	Immediately	pH	7.98 J	s.u.

Notes:

J - Estimated concentration
s.u. - Standard Units

Table 5

Qualified Sample Data Due to Insufficient Sample Preservation - Temperature
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Sample ID	Temp. Upon Receipt at Laboratory (°C)	Required Temperature (°C)	Analyte	Qualified Result	Units
Dioxins/Furans	12599404-070723-S-MTK-Source Topsoil-1	16.2	0-6	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.685 J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	118 J	pg/g
				1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.242 J	pg/g
				1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5.31 J	pg/g
				1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.0902 UJ	pg/g
				1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.0995 UJ	pg/g
				1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.377 J	pg/g
				1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.103 UJ	pg/g
				1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.357 J	pg/g
				1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.109 UJ	pg/g
				1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.508 J	pg/g
				1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.11 UJ	pg/g
				1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.246 UJ	pg/g
				2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.106 UJ	pg/g
				2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.0974 UJ	pg/g
				2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.109 UJ	pg/g
				2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.208 UJ	pg/g

Notes:

J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated

Table 6

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Metals	Mercury	03/09/2023	0.000733 J	12599404-030723-S-MTK-Backfill-79 (8-10)	0.00352 J	0.00352 U	mg/kg

Notes:

* - Blank result adjusted for sample factors where applicable
U - Not detected at the associated reporting limit
J - Estimated concentration

Table 7

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result		Units
Herbicides	12599404-070723-S-MTK-Source Topsoil-1	2,4-Dichlorophenylacetic acid	164	10-138	2,4,5-TP (Silvex)	0.0020	J+	mg/kg

Notes:

J+ - Estimated concentration, result may be biased high

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	12599404-030123-S-MTK-BACKFILL-20 (6-8)	Antimony	40.1	42.4	5.5	75-125	20	12599404-030123-S-MTK-BACKFILL-1 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-10 (6-8)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-11 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-12 (2-4)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-13 (2-4)	2.2 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-14 (6-8)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-15 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-16 (2-4)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-17 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-18 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-19 (2-4)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-2 (4-6)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-20 (6-8)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-3 (2-4)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-4 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-5 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-6 (2-4)	2.2 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-7 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-8 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-9 (2-4)	2.2 UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-030123-S-MTK-BACKFILL-20 (6-8)	Magnesium	134	126	4.0	75-125	20	12599404-030123-S-MTK-BACKFILL-1 (6-8)	2160	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-10 (6-8)	2480	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-11 (4-6)	2000	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-12 (2-4)	1480	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-13 (2-4)	1240	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-14 (6-8)	2450	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-15 (4-6)	1060	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-16 (2-4)	1180	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-17 (6-8)	1440	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-18 (4-6)	1580	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-19 (2-4)	1410	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-2 (4-6)	1740	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-20 (6-8)	1470	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-3 (2-4)	1130	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-4 (6-8)	1450	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-5 (4-6)	1970	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-6 (2-4)	964	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-7 (6-8)	1600	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-8 (4-6)	2320	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-9 (2-4)	2060	J+	mg/kg
Metals	12599404-030123-S-MTK-BACKFILL-20 (6-8)	Manganese	161	263	38.2	75-125	20	12599404-030123-S-MTK-BACKFILL-1 (6-8)	143	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-10 (6-8)	1210	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-11 (4-6)	383	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-12 (2-4)	44.9	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-13 (2-4)	14.6	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-14 (6-8)	939	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-15 (4-6)	16.9	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-16 (2-4)	26.0	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-17 (6-8)	52.8	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-18 (4-6)	597	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-19 (2-4)	88.2	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-2 (4-6)	166	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-20 (6-8)	132	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-3 (2-4)	19.6	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-4 (6-8)	177	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-5 (4-6)	714	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-6 (2-4)	288	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-7 (6-8)	148	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-8 (4-6)	84.7	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-9 (2-4)	35.9	J+	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	030123-S-MTK-BACKFILL-21 (4-6)	Antimony	33.9	32.1	2.4	75-125	20	12599404-030123-S-MTK-BACKFILL-21 (4-6)	2.6 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-22 (2-4)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-23 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-24 (4-6)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-25 (4-6)	2.6 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-26 (2-4)	2.2 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-27 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-28 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-29 (2-4)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-30 (6-8)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-31 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-32 (2-4)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-33 (6-8)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-34 (4-6)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-35 (2-4)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-36 (6-8)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-37 (6-8)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-38 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-39 (2-4)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-40 (6-8)	2.4 UJ	mg/kg
Metals	030123-S-MTK-BACKFILL-21 (4-6)	Calcium	198	137	13.9	75-125	20	12599404-030123-S-MTK-BACKFILL-21 (4-6)	7250 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-22 (2-4)	4500 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-23 (6-8)	45200 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-24 (4-6)	74100 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-25 (4-6)	4990 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-26 (2-4)	5340 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-27 (6-8)	3360 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-28 (4-6)	4160 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-29 (2-4)	48200 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-30 (6-8)	6490 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-31 (4-6)	19600 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-32 (2-4)	37600 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-33 (6-8)	22700 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-34 (4-6)	8750 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-35 (2-4)	9760 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-36 (6-8)	92400 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-37 (6-8)	4600 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-38 (4-6)	11600 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-39 (2-4)	3510 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-40 (6-8)	3560 J+	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	030123-S-MTK-BACKFILL-21 (4-6)	Manganese	164	606	112	75-125	20	12599404-030123-S-MTK-BACKFILL-21 (4-6)	36.3 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-22 (2-4)	31.2 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-23 (6-8)	105 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-24 (4-6)	44.0 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-25 (4-6)	47.2 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-26 (2-4)	27.4 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-27 (6-8)	108 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-28 (4-6)	1840 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-29 (2-4)	194 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-30 (6-8)	46.2 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-31 (4-6)	833 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-32 (2-4)	28.2 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-33 (6-8)	15.9 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-34 (4-6)	66.5 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-35 (2-4)	16.6 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-36 (6-8)	323 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-37 (6-8)	215 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-38 (4-6)	157 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-39 (2-4)	15.9 J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-40 (6-8)	127 J+	mg/kg
Metals	030123-S-MTK-BACKFILL-60 (4-6)	Antimony	52.6	50.7	1.7	75-125	20	12599404-030123-S-MTK-BACKFILL-41 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-42 (2-4)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-43 (6-8)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-44 (4-6)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-45 (2-4)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-46 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-47 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-48 (2-4)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-49 (2-4)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-50 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-51 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-52 (2-4)	2.5 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-53 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-54 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-55 (2-4)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-56 (6-8)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-57 (4-6)	2.4 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-58 (2-4)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-59 (6-8)	2.3 UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-60 (4-6)	2.4 UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	030123-S-MTK-BACKFILL-60 (4-6)	Calcium	185	286	19.3	75-125	20	12599404-030123-S-MTK-BACKFILL-41 (4-6)	8460	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-42 (2-4)	28800	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-43 (6-8)	23300	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-44 (4-6)	3470	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-45 (2-4)	11900	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-46 (6-8)	21400	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-47 (4-6)	7650	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-48 (2-4)	5210	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-49 (2-4)	18600	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-50 (6-8)	13300	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-51 (4-6)	6480	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-52 (2-4)	5050	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-53 (6-8)	5410	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-54 (4-6)	2370	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-55 (2-4)	2350	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-56 (6-8)	3570	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-57 (4-6)	3620	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-58 (2-4)	32400	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-59 (6-8)	4200	J+	mg/kg
								12599404-030123-S-MTK-BACKFILL-60 (4-6)	9150	J+	mg/kg
Metals	12599404-030123-S-MTK-BACKFILL-52 (2-4)	Mercury	57.1	64.2	4.1	75-125	20	12599404-030123-S-MTK-BACKFILL-52 (2-4)	0.066	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-53 (6-8)	0.070	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-54 (4-6)	0.064	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-55 (2-4)	0.064	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-56 (6-8)	0.068	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-57 (4-6)	0.066	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-58 (2-4)	0.064	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-59 (6-8)	0.064	UJ	mg/kg
								12599404-030123-S-MTK-BACKFILL-60 (4-6)	0.074	UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	12599404-030723-S-MTK-Backfill-61 (0-2)	Antimony	50.6	46.6	9.7	75-125	20	12599404-030723-S-MTK-Backfill-61 (0-2)	0.590 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-62 (8-10)	0.126 J-	mg/kg
								12599404-030723-S-MTK-Backfill-63 (0-2)	0.553 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-64 (10-12)	0.579 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-65 (8-10)	0.590 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-66 (0-2)	0.582 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-67 (10-12)	0.0899 J-	mg/kg
								12599404-030723-S-MTK-Backfill-68 (0-2)	0.587 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-69 (0-2)	0.570 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-70 (0-2)	0.564 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-71 (8-10)	0.0817 J-	mg/kg
								12599404-030723-S-MTK-Backfill-72 (10-12)	0.124 J-	mg/kg
								12599404-030723-S-MTK-Backfill-73 (10-12)	0.594 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-74 (0-2)	0.551 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-75 (0-2)	0.580 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-76 (8-10)	0.0876 J-	mg/kg
								12599404-030723-S-MTK-Backfill-77 (0-2)	0.555 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-78 (10-12)	0.595 UJ	mg/kg
								12599404-030723-S-MTK-Backfill-79 (8-10)	0.167 J-	mg/kg
								12599404-030723-S-MTK-Backfill-80 (0-2)	0.563 UJ	mg/kg
Metals	12599404-030723-S-MTK-Backfill-61 (0-2)	Manganese	169	83.5	24.4	75-125	20	12599404-030723-S-MTK-Backfill-61 (0-2)	27.0 J	mg/kg
								12599404-030723-S-MTK-Backfill-62 (8-10)	263 J	mg/kg
								12599404-030723-S-MTK-Backfill-63 (0-2)	290 J	mg/kg
								12599404-030723-S-MTK-Backfill-64 (10-12)	52.4 J	mg/kg
								12599404-030723-S-MTK-Backfill-65 (8-10)	20.1 J	mg/kg
								12599404-030723-S-MTK-Backfill-66 (0-2)	171 J	mg/kg
								12599404-030723-S-MTK-Backfill-67 (10-12)	91.1 J	mg/kg
								12599404-030723-S-MTK-Backfill-68 (0-2)	32.5 J	mg/kg
								12599404-030723-S-MTK-Backfill-69 (0-2)	10.6 J	mg/kg
								12599404-030723-S-MTK-Backfill-70 (0-2)	16.9 J	mg/kg
								12599404-030723-S-MTK-Backfill-71 (8-10)	2620 J	mg/kg
								12599404-030723-S-MTK-Backfill-72 (10-12)	1570 J	mg/kg
								12599404-030723-S-MTK-Backfill-73 (10-12)	325 J	mg/kg
								12599404-030723-S-MTK-Backfill-74 (0-2)	11.5 J	mg/kg
								12599404-030723-S-MTK-Backfill-75 (0-2)	45.1 J	mg/kg
								12599404-030723-S-MTK-Backfill-76 (8-10)	420 J	mg/kg
								12599404-030723-S-MTK-Backfill-77 (0-2)	13.1 J	mg/kg
								12599404-030723-S-MTK-Backfill-78 (10-12)	57.4 J	mg/kg
								12599404-030723-S-MTK-Backfill-79 (8-10)	471 J	mg/kg
								12599404-030723-S-MTK-Backfill-80 (0-2)	15.6 J	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals		Aluminum	131	152	10.6	75-125	20	12599404-022323-S-MTK-FILL-1	5810	J+	mg/kg
								12599404-022323-S-MTK-FILL-10	8690	J+	mg/kg
								12599404-022323-S-MTK-FILL-11	9840	J+	mg/kg
								12599404-022323-S-MTK-FILL-12	9270	J+	mg/kg
								12599404-022323-S-MTK-FILL-13	6150	J+	mg/kg
								12599404-022323-S-MTK-FILL-14	8990	J+	mg/kg
								12599404-022323-S-MTK-FILL-15	9560	J+	mg/kg
								12599404-022323-S-MTK-FILL-16	8320	J+	mg/kg
								12599404-022323-S-MTK-FILL-17	9250	J+	mg/kg
								12599404-022323-S-MTK-FILL-18	10300	J+	mg/kg
								12599404-022323-S-MTK-FILL-19	8550	J+	mg/kg
								12599404-022323-S-MTK-FILL-2	7550	J+	mg/kg
								12599404-022323-S-MTK-FILL-20	9930	J+	mg/kg
								12599404-022323-S-MTK-FILL-3	9150	J+	mg/kg
								12599404-022323-S-MTK-FILL-4	5430	J+	mg/kg
								12599404-022323-S-MTK-FILL-5	4740	J+	mg/kg
								12599404-022323-S-MTK-FILL-6	4100	J+	mg/kg
								12599404-022323-S-MTK-FILL-7	10200	J+	mg/kg
								12599404-022323-S-MTK-FILL-8	12900	J+	mg/kg
								12599404-022323-S-MTK-FILL-9	8800	J+	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Antimony	31.3	30.6	7.2	75-125	20	12599404-022323-S-MTK-FILL-1	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	2.4	UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	2.5	UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	2.2	UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	2.4	UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	2.5	UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-2	2.5	UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	2.6	UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	2.4	UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	2.4	UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	2.3	UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-022323-S-MTK-FILL-1	Arsenic	49.9	48.4	11.3	75-125	20	12599404-022323-S-MTK-FILL-1	3.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	4.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	3.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	4.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	3.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	6.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	3.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	3.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	3.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	3.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	8.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	5.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	3.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	4.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	3.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	2.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	2.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	4.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	4.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	4.6	J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Barium	37.7	38.7	4.5	75-125	20	12599404-022323-S-MTK-FILL-1	42.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	73.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	60.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	69.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	51.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	83.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	83.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	53.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	63.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	52.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	99.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	68.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	86.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	53.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	33.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	31.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	26.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	74.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	111	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	70.3	J-	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	12599404-022323-S-MTK-FILL-1	Beryllium	52	51.2	10	75-125	20	12599404-022323-S-MTK-FILL-1	0.46 J-	mg/kg
								12599404-022323-S-MTK-FILL-10	0.61 J-	mg/kg
								12599404-022323-S-MTK-FILL-11	0.67 J-	mg/kg
								12599404-022323-S-MTK-FILL-12	0.64 J-	mg/kg
								12599404-022323-S-MTK-FILL-13	0.48 J-	mg/kg
								12599404-022323-S-MTK-FILL-14	0.73 J-	mg/kg
								12599404-022323-S-MTK-FILL-15	0.68 J-	mg/kg
								12599404-022323-S-MTK-FILL-16	0.64 J-	mg/kg
								12599404-022323-S-MTK-FILL-17	0.63 J-	mg/kg
								12599404-022323-S-MTK-FILL-18	0.67 J-	mg/kg
								12599404-022323-S-MTK-FILL-19	0.84 J-	mg/kg
								12599404-022323-S-MTK-FILL-2	0.57 J-	mg/kg
								12599404-022323-S-MTK-FILL-20	0.80 J-	mg/kg
								12599404-022323-S-MTK-FILL-3	0.65 J-	mg/kg
								12599404-022323-S-MTK-FILL-4	0.46 J-	mg/kg
								12599404-022323-S-MTK-FILL-5	0.39 J-	mg/kg
								12599404-022323-S-MTK-FILL-6	0.35 J-	mg/kg
								12599404-022323-S-MTK-FILL-7	0.70 J-	mg/kg
								12599404-022323-S-MTK-FILL-8	0.84 J-	mg/kg
								12599404-022323-S-MTK-FILL-9	0.65 J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Cadmium	49.8	48.6	9.7	75-125	20	12599404-022323-S-MTK-FILL-1	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	0.57 UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	0.61 UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	0.56 UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	0.63 UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	0.56 UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	0.62 UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	0.57 UJ	mg/kg
								12599404-022323-S-MTK-FILL-2	0.62 UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	0.64 UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	0.57 UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	0.57 UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-022323-S-MTK-FILL-1	Chromium	48.1	48.7	3.1	75-125	20	12599404-022323-S-MTK-FILL-1	6.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	10.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	10.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	11.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	8.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	11.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	11.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	10	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	10.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	10.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	9.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	9.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	10.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	10.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	7.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	6.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	4.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	11.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	14.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	10.1	J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Cobalt	48.2	47.5	6.9	75-125	20	12599404-022323-S-MTK-FILL-1	5.9	UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	5.7	UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	5.9	UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	6.1	UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	5.6	UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	10.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	6.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	5.6	UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	5.9	UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	6.2	UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	76.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	6.2	UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	14.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	6.4	UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	5.8	UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	5.8	UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	5.9	UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	5.7	UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	5.9	UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	5.7	UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-022323-S-MTK-FILL-1	Copper	50.4	50.4	16.8	75-125	20	12599404-022323-S-MTK-FILL-1	4.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	5.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	5.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	6.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	4.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	8.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	7.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	6.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	5.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	5.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	8.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	6.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	5.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	6.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	4.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	4.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	3.0	UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	7.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	7.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	6.0	J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Iron	2.7	12.8	4.4	75-125	20	12599404-022323-S-MTK-FILL-1	7000	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	10200	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	10000	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	11900	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	8150	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	12300	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	11400	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	9430	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	9260	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	10600	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	18600	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	10100	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	11600	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	11000	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	6810	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	6220	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	4840	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	10900	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	13500	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	10500	J-	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-022323-S-MTK-FILL-1	Lead	47.3	46.6	0.8	75-125	20	12599404-022323-S-MTK-FILL-1	4.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	5.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	5.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	6.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	4.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	8.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	7.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	6.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	5.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	5.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	26.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	6.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	13.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	7.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	3.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	3.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	3.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	6.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	8.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	6.0	J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Magnesium	48.7	47.1	4.5	75-125	20	12599404-022323-S-MTK-FILL-1	886	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	1370	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	1370	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	1390	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	1040	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	1470	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	1560	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	1260	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	1390	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	1260	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	1080	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	1210	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	1300	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	1290	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	913	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	802	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	636	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	1560	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	1960	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	1360	J-	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-022323-S-MTK-FILL-1	Manganese	12.8	18.8	5.4	75-125	20	12599404-022323-S-MTK-FILL-1	138	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	269	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	146	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	150	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	174	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	363	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	151	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	133	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	183	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	37.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	715	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	202	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	316	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	93.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	119	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	119	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	73.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	186	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	312	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	213	J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Nickel	48.1	47.5	1.6	75-125	20	12599404-022323-S-MTK-FILL-1	6.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	9.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	8.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	9.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	7.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	13.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	9.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	8.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	8.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	7.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	11.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	8.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	11.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	8.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	6.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	5.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	4.7	UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	9.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	11.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	9.5	J-	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	12599404-022323-S-MTK-FILL-1	Potassium	56.8	54.3	1.5	75-125	20	12599404-022323-S-MTK-FILL-1	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	1300 UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-2	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	1300 UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	1400 J-	mg/kg
								12599404-022323-S-MTK-FILL-9	1100 UJ	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Selenium	50.2	49.4	16.1	75-125	20	12599404-022323-S-MTK-FILL-1	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	2.4 UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	2.5 UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	2.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	2.4 UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	2.5 UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-2	2.5 UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	2.6 UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	2.4 UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	2.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	2.4 UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	2.3 UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	12599404-022323-S-MTK-FILL-1	Silver	50.5	49.5	4.6	75-125	20	12599404-022323-S-MTK-FILL-1	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	0.57 UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	0.61 UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	0.56 UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	0.63 UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	0.56 UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	0.62 UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	0.64 J-	mg/kg
								12599404-022323-S-MTK-FILL-2	0.62 UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	0.64 UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	0.58 UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	0.57 UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	0.59 UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	0.57 UJ	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Sodium	49.6	48.9	12.4	75-125	20	12599404-022323-S-MTK-FILL-1	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	1300 UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-2	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	1300 UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	1100 UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	1200 UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	1100 UJ	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result	Units
Metals	12599404-022323-S-MTK-FILL-1	Thallium	52	51.6	3.2	75-125	20	12599404-022323-S-MTK-FILL-1	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-10	1.1 UJ	mg/kg
								12599404-022323-S-MTK-FILL-11	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-12	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-13	1.1 UJ	mg/kg
								12599404-022323-S-MTK-FILL-14	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-15	1.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-16	1.1 UJ	mg/kg
								12599404-022323-S-MTK-FILL-17	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-18	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-19	1.1 J-	mg/kg
								12599404-022323-S-MTK-FILL-2	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-20	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-3	1.3 UJ	mg/kg
								12599404-022323-S-MTK-FILL-4	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-5	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-6	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-7	1.1 UJ	mg/kg
								12599404-022323-S-MTK-FILL-8	1.2 UJ	mg/kg
								12599404-022323-S-MTK-FILL-9	1.1 UJ	mg/kg
Metals	12599404-022323-S-MTK-FILL-1	Vanadium	50.2	49.5	6	75-125	20	12599404-022323-S-MTK-FILL-1	12.8 J-	mg/kg
								12599404-022323-S-MTK-FILL-10	18.7 J-	mg/kg
								12599404-022323-S-MTK-FILL-11	19.1 J-	mg/kg
								12599404-022323-S-MTK-FILL-12	17.7 J-	mg/kg
								12599404-022323-S-MTK-FILL-13	14.0 J-	mg/kg
								12599404-022323-S-MTK-FILL-14	21.8 J-	mg/kg
								12599404-022323-S-MTK-FILL-15	16.2 J-	mg/kg
								12599404-022323-S-MTK-FILL-16	15.4 J-	mg/kg
								12599404-022323-S-MTK-FILL-17	16.9 J-	mg/kg
								12599404-022323-S-MTK-FILL-18	15.0 J-	mg/kg
								12599404-022323-S-MTK-FILL-19	28.0 J-	mg/kg
								12599404-022323-S-MTK-FILL-2	18.4 J-	mg/kg
								12599404-022323-S-MTK-FILL-20	16.4 J-	mg/kg
								12599404-022323-S-MTK-FILL-3	18.5 J-	mg/kg
								12599404-022323-S-MTK-FILL-4	12.4 J-	mg/kg
								12599404-022323-S-MTK-FILL-5	11.4 J-	mg/kg
								12599404-022323-S-MTK-FILL-6	10.2 J-	mg/kg
								12599404-022323-S-MTK-FILL-7	20.5 J-	mg/kg
								12599404-022323-S-MTK-FILL-8	25.7 J-	mg/kg
								12599404-022323-S-MTK-FILL-9	18.9 J-	mg/kg

Table 8

Qualified Sample Data Due to Outlying MS/MSD Recoveries
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Spiked Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample IDs	Qualified Result		Units
Metals	12599404-022323-S-MTK-FILL-1	Zinc	45.8	48.9	9.6	75-125	20	12599404-022323-S-MTK-FILL-1	14.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-10	22.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-11	20.2	J-	mg/kg
								12599404-022323-S-MTK-FILL-12	27.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-13	19.3	J-	mg/kg
								12599404-022323-S-MTK-FILL-14	38.1	J-	mg/kg
								12599404-022323-S-MTK-FILL-15	29.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-16	27.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-17	22.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-18	17.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-19	16.7	J-	mg/kg
								12599404-022323-S-MTK-FILL-2	20.8	J-	mg/kg
								12599404-022323-S-MTK-FILL-20	21.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-3	20.9	J-	mg/kg
								12599404-022323-S-MTK-FILL-4	16.4	J-	mg/kg
								12599404-022323-S-MTK-FILL-5	13.5	J-	mg/kg
								12599404-022323-S-MTK-FILL-6	9.6	J-	mg/kg
								12599404-022323-S-MTK-FILL-7	27.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-8	29.0	J-	mg/kg
								12599404-022323-S-MTK-FILL-9	23.0	J-	mg/kg
Metals	12599404-022323-S-MTK-FILL-21	Aluminum	488	437	6.1	75-125	20	12599404-022323-S-MTK-FILL-21	12700	J+	mg/kg
								12599404-022323-S-MTK-FILL-22	17600	J+	mg/kg
								12599404-022323-S-MTK-FILL-23	8660	J+	mg/kg
								12599404-022323-S-MTK-FILL-24	10800	J+	mg/kg
Metals	12599404-022323-S-MTK-FILL-21	Antimony	45.0	44.2	1.9	75-125	20	12599404-022323-S-MTK-FILL-21	13	UJ	mg/kg
								12599404-022323-S-MTK-FILL-22	2.4	UJ	mg/kg
								12599404-022323-S-MTK-FILL-23	2.3	UJ	mg/kg
								12599404-022323-S-MTK-FILL-24	2.4	UJ	mg/kg
Metals	12599404-022323-S-MTK-FILL-21	Potassium	132	126	3.8	75-125	20	12599404-022323-S-MTK-FILL-22	2590	J+	mg/kg

Notes:

MS/MSD	- Matrix Spike/Matrix Spike Duplicate
UJ	- Not detected; associated reporting limit is estimated.
J	- Estimated concentration
J-	- Estimated concentration, result may be biased low
J+	- Estimated concentration, result may be biased high

Table 9

Qualified Sample Results Due to Outlying Identification Criteria
Fill Material Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
February - July 2023

Parameter	Analyte	Associated Sample ID	Qualified Result	Units
Dioxins/Furans	12599404-070723-S-MTK-Source Topsoil-1	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.685 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.242 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.377 J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.508 J	pg/g

Notes:

J - Estimated concentration

Data Verification Report

July 9, 2024

To	Sarah Proulx; Willie Beal	**Contact No.**	561-688-9008
Copy to	Deborah Brennan	**Email**	Marisa.Oriaku@ghd.com
From	Marisa Oriaku/cs/6-NF	**Project No.**	12599404
Project Name	San Jacinto River Waste Pits - Southern Impoundment		
Subject	Analytical Results and Data Verification Waste Characterization Sampling San Jacinto River Waste Pits - Southern Impoundment Channelview, Harris County, Texas August-October 2023		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for soil samples collected in support of the Waste Characterization Sampling event at the San Jacinto River Waste Pits - Southern Impoundment site during August-October 2023. Samples were submitted to ALS Environmental located in Houston, Texas, and SGS North America, Inc. located in Scott, Louisiana and Wilmington, North Carolina. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from chain of custody forms, finished report forms, method blank data, and recovery data from surrogate spikes/labeled spikes/laboratory control samples (LCS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. Quality Assurance Project Plan, Final Second Phase Pre-Design Investigation",
   San Jacinto River Waste Pits Site, Harris County, Texas, Report No 6, June 3, 2019
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review",
   United States Environmental Protection Agency (USEPA) 542-R-20-006, November 2020
3. "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9240.1-65,
   EPA 542-R-20-007, November 2020
4. "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005,
   November 2020

Item 2, 3, and 4 will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for total petroleum hydrocarbon (TPH) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within the laboratory control limits.

5. Labeled Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furans (PCDDs/PCDFs) Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted for PCDD/PCDF determinations were spiked with the appropriate number of labeled compounds prior to sample extraction.

Labeled congener recoveries were assessed against method control limits. All recoveries met the method criteria demonstrating acceptable analytical efficiency.

6. Laboratory Control Sample Analyses

LCS or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of one per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPD values were within the laboratory control limits or adhered to the above criteria, demonstrating acceptable analytical accuracy and precision (where applicable).

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines" using the laboratory control limits. All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

7. Analyte Reporting

For all sample results, except PCDDs/PCDFs results, the laboratory reported detected results down to the laboratory's sample-specific method detection limit (MDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the sample-specific MDL were qualified as estimated (J) in Table 2. Non-detect results were presented as non-detect at the quantitation limit (QL) or RL in Table 2.

For PCDD/PCDF sample results, the laboratory reported detected results down to the laboratory's sample specific estimated detection limit (EDL). No positive analyte detections less than the RL but greater than the sample-specific MDL were reported. Non-detect results were presented as non-detect at the EDL.

All soil results were reported on a dry weight basis.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Regards,

Marisa Oriaku
Digital Intelligence-Data Management-Data Validator

Table 1

Sample Collection and Analysis Summary
Waste Characterization Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
August - October 2023

						Analysis/Parameters			
Sample Delivery Group	**Sample Identification**	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Dioxins/Furans-TCLP**	**Metals-TCLP**	**Mercury-TCLP**	**TPH**
LA92821	12599404-080323-MTK-S-RESIDUAL-1	WTS Compliance Point	Soil	08/03/2023	11:00				X
B8666	12599404-101923-3-MTK-CARBON-1	Waste	Soil	10/19/2023	09:00	X			
HS23101281	12599404-101923-S-MTK-Carbon-1	Waste	Soil	10/19/2023	09:00		X	X	X

Notes:

TCLP - Toxicity Characteristic Leaching Procedure
TPH - Total Petroleum Hydrocarbons

Table 2

Analytical Results Summary
Waste Characterization Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
August-October 2023

	Location ID:	WTS Compliance Point	Waste	Waste
	Sample Name:	12599404-080323-MTK-S-RESIDUAL-1	12599404-101923-S-MTK-Carbon-1	12599404-101923-3-MTK-CARBON-1
	Sample Date:	08/03/2023	10/19/2023	10/19/2023
Parameters	**Unit**			
Polychlorinated Dibenzodioxins & Polychlorinated Dibenzofurans, TCLP				
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	--	--	3.9 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	--	--	2.33 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	2 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	--	--	0.969 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	--	--	1.26 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	1.69 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	1.68 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	1.66 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	1.47 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	1.8 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	2.09 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	2.74 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	--	--	1.61 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	--	--	1.79 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	--	--	1.66 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	2.46 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	--	--	2.05 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	--	--	2 UJ
Total heptachlorodibenzofuran (HpCDF)	pg/L	--	--	1.1 UJ
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	--	--	1.71 UJ
Total hexachlorodibenzofuran (HxCDF)	pg/L	--	--	1.74 UJ
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	--	--	2.74 UJ
Total pentachlorodibenzofuran (PeCDF)	pg/L	--	--	1.63 UJ
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	--	--	2.46 UJ
Total tetrachlorodibenzofuran (TCDF)	pg/L	--	--	2.05 UJ
Total WHO Dioxin TEQ				
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	pg/L	--	--	0
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	pg/L	--	--	3.61

Table 2

Analytical Results Summary
Waste Characterization Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
August-October 2023

	Location ID:	WTS Compliance Point	Waste	Waste
	Sample Name:	12599404-080323-MTK-S-RESIDUAL-1	12599404-101923-S-MTK-Carbon-1	12599404-101923-3-MTK-CARBON-1
	Sample Date:	08/03/2023	10/19/2023	10/19/2023
Parameters	**Unit**			
Metals, TCLP				
Antimony	mg/L	--	--	0.00400 U
Arsenic	mg/L	--	--	0.00735 J
Barium	mg/L	--	--	0.404
Beryllium	mg/L	--	--	0.00200 U
Cadmium	mg/L	--	--	0.00200 U
Chromium	mg/L	--	--	0.00400 U
Lead	mg/L	--	--	0.00600 U
Mercury	mg/L	--	--	0.0000300 U
Nickel	mg/L	--	--	0.0202 J
Selenium	mg/L	--	--	0.0110 U
Silver	mg/L	--	--	0.00200 U
Vanadium	mg/L	--	--	0.00600 U
Total Petroleum Hydrocarbons				
Total Petroleum Hydrocarbons (>C12-C28)	mg/kg	66 U	--	--
Total Petroleum Hydrocarbons (>C28-C35)	mg/kg	66 U	--	--
Total Petroleum Hydrocarbons (C12-C28)	mg/kg	--	38 J	--
Total Petroleum Hydrocarbons (C28-C35)	mg/kg	--	9.6 U	--
Total Petroleum Hydrocarbons (C6-C12)	mg/kg	66 U	7.3 U	--
Total Petroleum Hydrocarbons (C6-C35)	mg/kg	66 U	38.0 J	--

Notes:

-- - Not analyzed
J - Estimated concentration
U - Not detected at the associated reporting limit
UJ - Not detected; associated reporting limit is estimated
TCLP - Toxicity Characteristic Leaching Procedure
WHO - World Health Organization
TEQ - Toxic Equivalent

Table 3

Analytical Methods
Waste Characterization Sampling
San Jacinto River Waste Pits - Southern Impoundment
Channelview, Harris County, Texas
August - October 2023

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction or TCLP Extraction (Days)	Collection or Extraction to Analysis (Days)
Total Petroleum Hydrocarbons	TX 1005	Soil	Iced, 0-6° C	14	40
TCLP Metals	SW-846 6020	Leachate	Iced, 0-6° C	180	180
TCLP Mercury	SW-846 7470	Leachate	Iced, 0-6° C	28	28
Dioxins/Furans - TCLP	EPA 1613B	Leachate	Iced, 0-6° C	365	365

Notes:

TCLP - Toxicity Characteristic Leaching Procedure
EPA - Environmental Protection Agency

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
TX-1005 - TNRCC Method 1005 - Total Petroleum Hydrocarbons, Revision 03, June 1, 2001, Austin, TX
EPA - U.S. Environmental protection Agency. Analytical Methodology (October, 1994)

Appendix F

Waste Documentation- See Separate PDF

Appendix G

Geotechnical Laboratory Reports

Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 40989
DATE OF SERVICE: 02/07/2023
AUTHORIZATION:
REPORT DATE: 02/08/2023

SERVICES: Particle-size distribution & Sieve Analysis

Test materials were delivered to our laboratory in accordance with the client's instructions. TWE performed the following test:

3 - Particle-Size Distribution's (ASTM D7928 & D6913)
3 - Atterberg Limits(ASTM D4318)
1 - Sieve Analysis (ASTM C136/C117)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Marc Kemper
(1) Richard Wells

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.

ASTM D6913 & D7928 Particle-Size Distribution

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.4	34.3	41.3	19.2

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	96.2		
#20	95.3		
#40	94.8		
#60	94.0		
#100	71.6		
#200	60.5		
0.0473 mm.	38.0		
0.0342 mm.	32.6		
0.0247 mm.	27.2		
0.0177 mm.	23.5		
0.0130 mm.	21.7		
0.0092 mm.	20.8		
0.0065 mm.	19.9		
0.0046 mm.	19.0		
0.0033 mm.	18.1		
0.0014 mm.	16.3		

· (no specification provided)

Material Description

12599404-0105
Brown Sandy Clay
23-S-MTK

Sieve Test (ASTM D6913 & D1140)

Test Date: 02/02/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 2/2/23 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 17 **LL=** 25 **PI=** 8

Coefficients

D_{90}= 0.2155 D_{85}= 0.1956
D_{60}= 0.0739 D_{50}= 0.0603
D_{30}= 0.0294 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

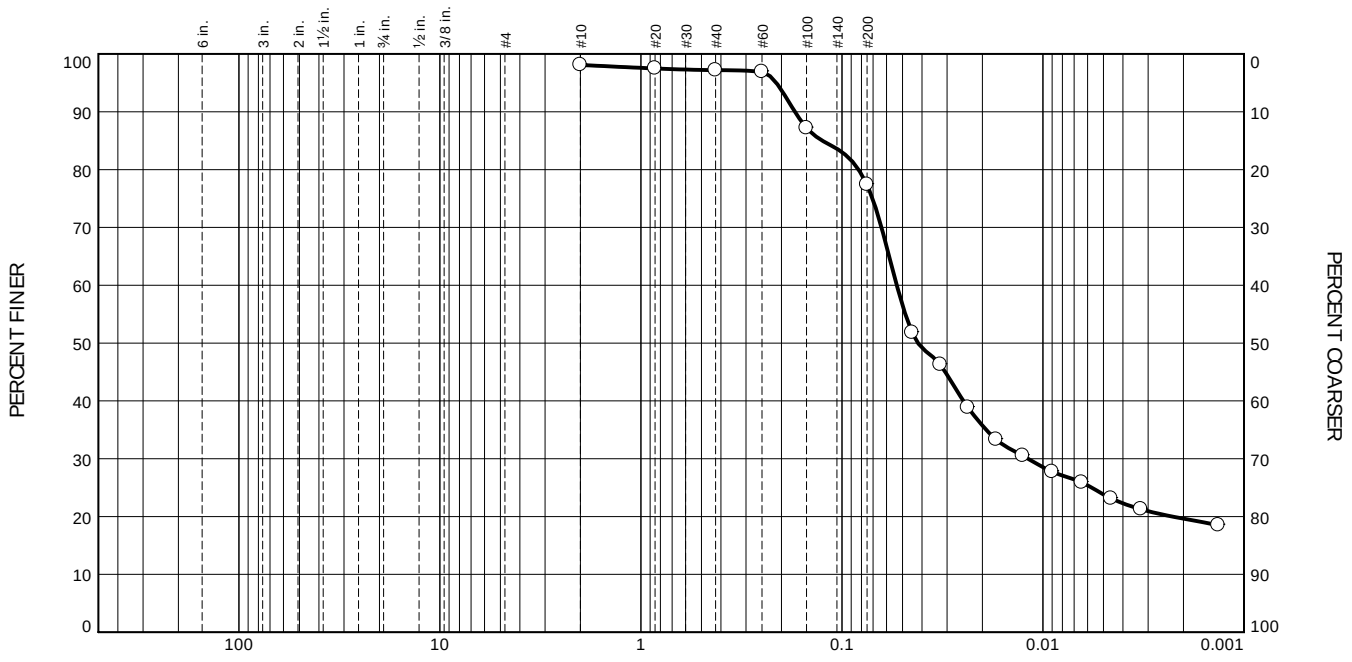
CL/ML

Date Sampled: 01/05/2023
Date Received:
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #2

Tolunay-Wong Engineers, Inc. Houston, Texas	**Client:** GHD **Project:** San Jacinto South Impoundment **Project No:** 22.83.001 **Figure**

ASTM D6913 & D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.9	19.8	53.6	23.8

Test Results (ASTM D6913 & D1140, D7928)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	98.1		
#20	97.5		
#40	97.2		
#60	96.9		
#100	87.2		
#200	77.4		
0.0448 mm.	51.8		
0.0324 mm.	46.3		
0.0236 mm.	38.9		
0.0171 mm.	33.3		
0.0126 mm.	30.5		
0.0090 mm.	27.8		
0.0064 mm.	25.9		
0.0046 mm.	23.1		
0.0033 mm.	21.3		
0.0013 mm.	18.5		

· (no specification provided)

Material Description

12599404-0105
Brown Sandy Clay
23-S-MTK

Sieve Test (ASTM D6913 & D1140)

Test Date: 1/30/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 02/02/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 15 **LL=** 32 **PI=** 17

Coefficients

D_{90}= 0.1714 D_{85}= 0.1249
D_{60}= 0.0534 D_{50}= 0.0418
D_{30}= 0.0119 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

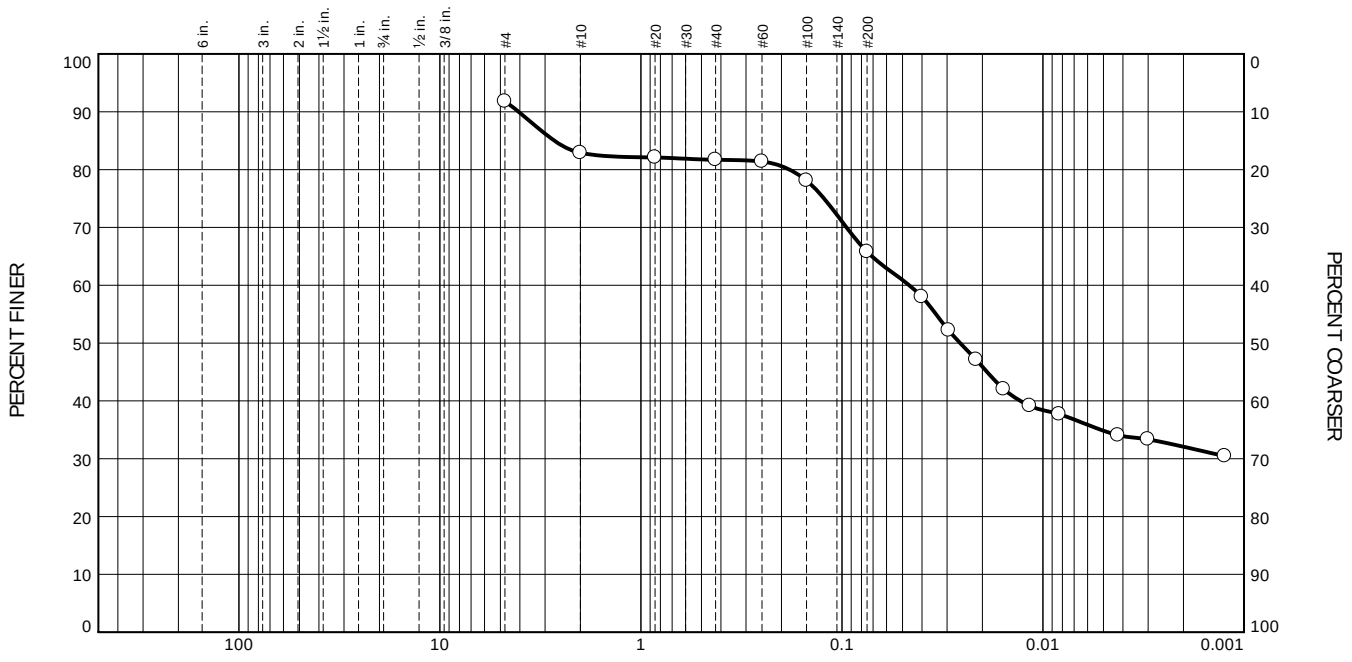
CL

Date Sampled: 01/05/23
Date Received:
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #3

Tolunay-Wong Engineers, Inc. Houston, Texas	**Client:** GHD **Project:** San Jacinto South Impoundment **Project No:** 22.83.001 **Figure**

ASTM D6913 & D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
			8.9	1.2	15.9	31.0	34.8

Test Results (ASTM D422 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#4	91.8		
#10	82.9		
#20	82.1		
#40	81.7		
#60	81.4		
#100	78.1		
#200	65.8		
0.0401 mm.	58.0		
0.0295 mm.	52.2		
0.0215 mm.	47.1		
0.0157 mm.	42.1		
0.0117 mm.	39.2		
0.0083 mm.	37.7		
0.0042 mm.	34.1		
0.0030 mm.	33.4		
0.0012 mm.	30.5		

· (no specification provided)

Material Description

12599404-0105
Brown Sandy Clay
23-S-MTK

Sieve Test (ASTM D422 & D1140)

Test Date: 2/6/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 02/01/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 15 **LL=** 37 **PI=** 22

Coefficients

D_{90}= 4.0567 D_{85}= 2.6931
D_{60}= 0.0462 D_{50}= 0.0258
D_{30}= D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 01/05/2023
Date Received:
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #4

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

Tolunay-Wong Engineers, Inc.

SIZE ANALYSIS (ASTM C-136)

Project No.:	23.83.001		San Jacinto South Impoundment		
Report No.:	40989		12599404-0105		
Soil Description:	Aggregate #2				
Tested By:	Devin	2/1/2023	Oven Serial No.:	B33-03392	
Computed By:	WD	2/7/2023	Scale Serial No.:	14722050	
Checked By:	WD	2/7/2023	Sieve Shaker No.:	13064330	

Moisture

Wet + Tare	730.6
Dry + Tare	710.1
Tare	155.1
Moisture	3.7%

-200

Before Wash (g)	555.0
After Wash (g)	424.0
(only for fine grain) % Sand	76.4%

Total oven weight - t (course and fine): 555.0

	INDIVIDUAL	CUMULATIVE			
Sieve No.	Weight Retained	Percent Retained	Weight Retained	Percent Passing	Specification
3/4"	0.0	0.0%	0.0	100.0%	
1/2"	87.3	15.7%	87.3	84.3%	
3/8"	66.1	27.6%	153.4	72.4%	
#4	119.5	49.2%	272.9	50.8%	
#8					
Pan					
Sieve No.	Adjusted Retained	Sub-sample percentage	Weight Retained	Percent Passing	Specification
8					
10	328.4	59.2%	328.44	40.8%	
16					
20					
30					
40	381.0	68.6%	380.99	31.4%	
50					
60	395.6	71.3%	395.55	28.7%	
100	408.6	73.6%	408.58	26.4%	
200	424.0	76.4%	424.03	23.6%	

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Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF
PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 40994
DATE OF SERVICE: 02/08/2023
AUTHORIZATION:
REPORT DATE: 02/08/2023

SERVICES: Particle-Size Distribution & Sieve Analysis

Test materials were delivered to our laboratory in accordance with the client's instructions. TWE performed the following test:

3 - Particle-Size Distribution's (ASTM D7928 & D6913)
3 - Atterberg Limits(ASTM D4318)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Marc Kemper
(1) Richard Wells

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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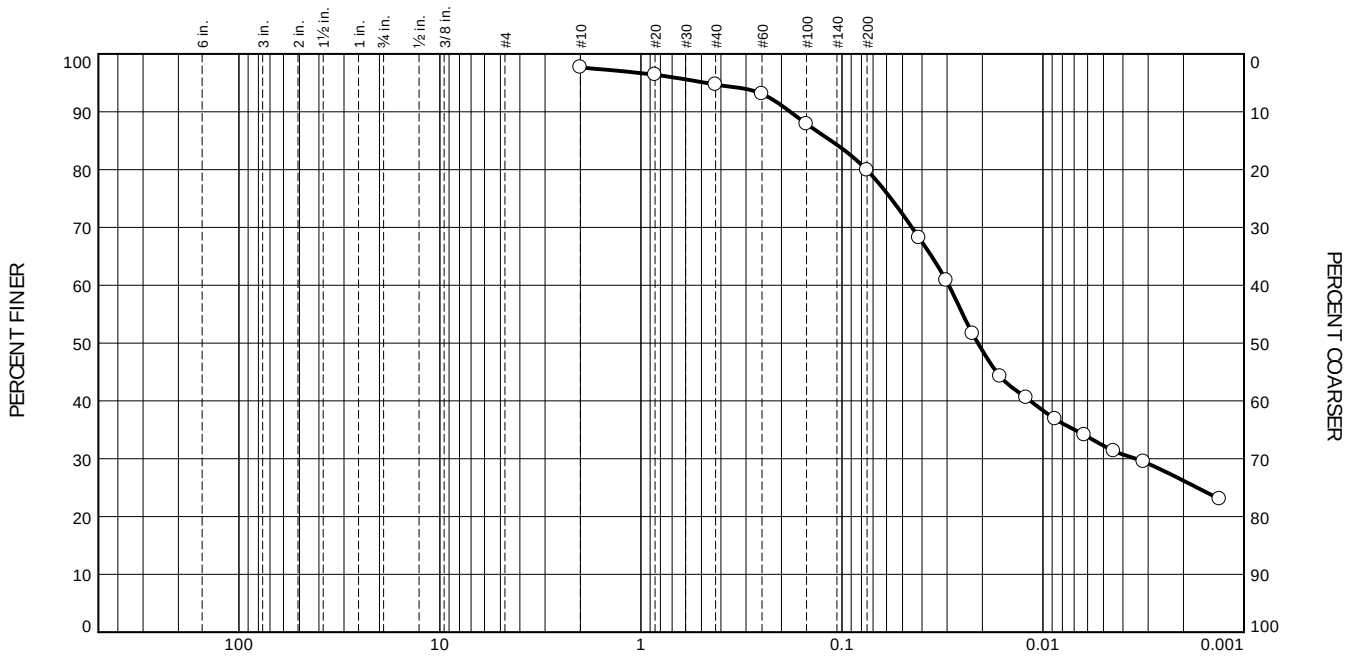
ASTM D6913 & D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				3.0	14.8	47.7	32.2

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	97.7		
#20	96.4		
#40	94.7		
#60	93.1		
#100	87.9		
#200	79.9		
0.0413 mm.	68.2		
0.0303 mm.	60.9		
0.0224 mm.	51.6		
0.0163 mm.	44.3		
0.0121 mm.	40.6		
0.0087 mm.	36.9		
0.0062 mm.	34.1		
0.0044 mm.	31.3		
0.0032 mm.	29.5		
0.0013 mm.	23.0		

· (no specification provided)

Material Description

12599404-0116
Brown Sandy Clay
23-S-MTK

Sieve Test (ASTM D6913 & D1140)

Test Date: 1/30/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 01/30/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 16 **LL=** 35 **PI=** 19

Coefficients

D_{90}= 0.1807 D_{85}= 0.1133
D_{60}= 0.0294 D_{50}= 0.0211
D_{30}= 0.0035 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 01/16/2023
Date Received: 1/25/2023
Checked By: William Bonner
Title: CMT Project

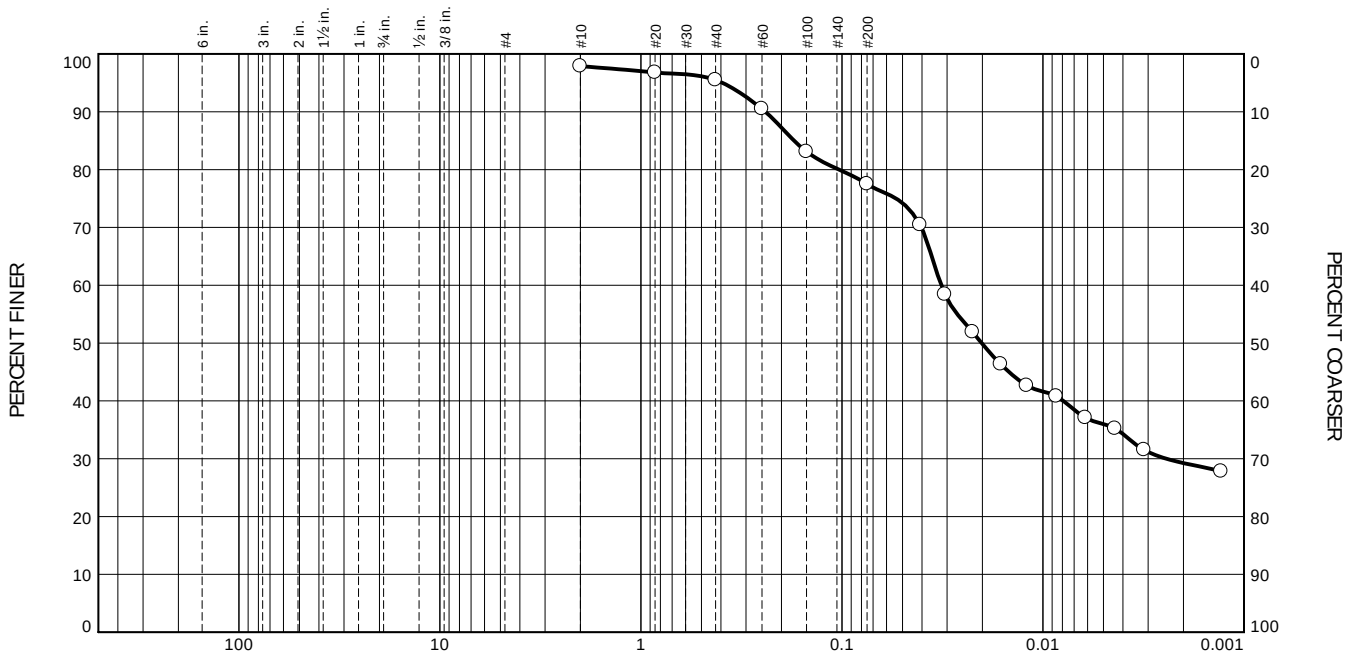
Location: Channelview, TX
Sample Number: Clay #5

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

ASTM D6913 & D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.4	18.0	41.5	36.0

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	97.9		
#20	96.8		
#40	95.5		
#60	90.5		
#100	83.1		
#200	77.5		
0.0409 mm.	70.5		
0.0307 mm.	58.4		
0.0224 mm.	51.9		
0.0162 mm.	46.4		
0.0120 mm.	42.6		
0.0086 mm.	40.8		
0.0061 mm.	37.1		
0.0044 mm.	35.2		
0.0031 mm.	31.5		
0.0013 mm.	27.8		

· (no specification provided)

Material Description

12599404-0118
Brown Sandy Clay
23-S-MTK

Sieve Test (ASTM D6913 & D1140)

Test Date: 1/30/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 02/03/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 17 **LL=** 39 **PI=** 22

Coefficients

D_{90}= 0.2402 D_{85}= 0.1730
D_{60}= 0.0321 D_{50}= 0.0202
D_{30}= 0.0024 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 01/18/2023
Date Received: 01/25/2023
Checked By: William Bonner
Title: CMT Project

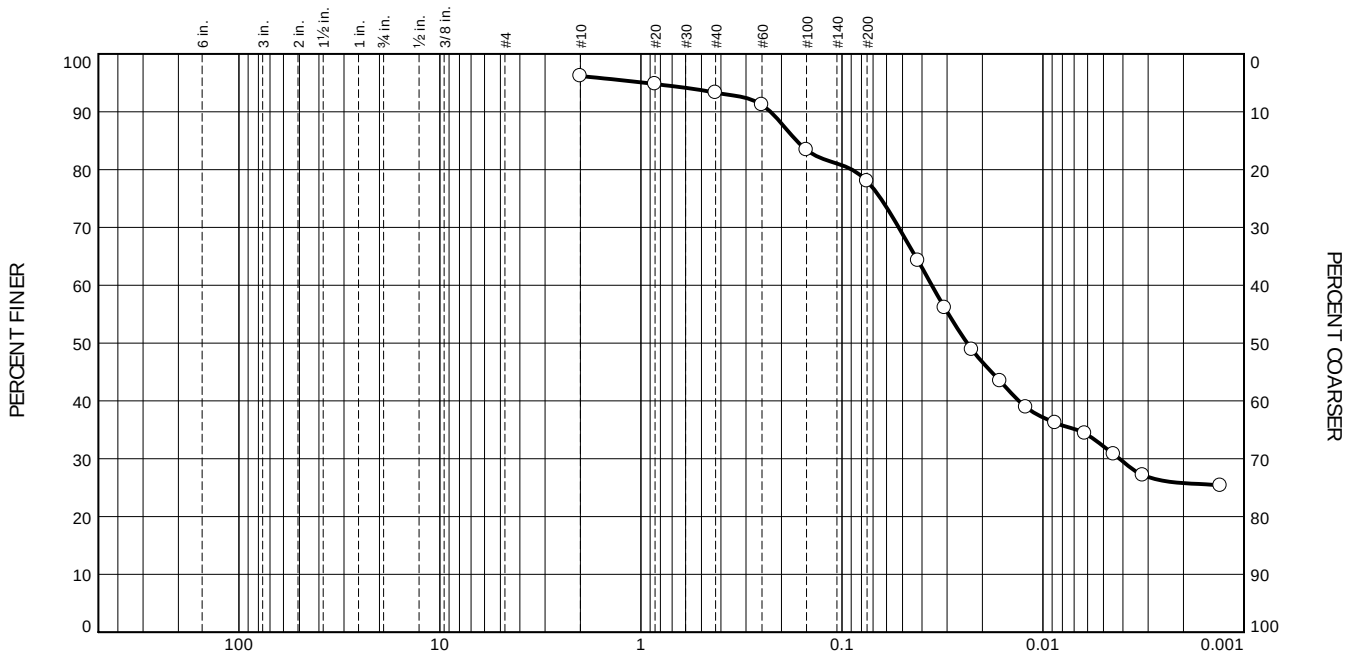
Location: Channelview, TX
Sample Number: Clay #6

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

ASTM D6913 & D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.9	15.3	45.9	32.1

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	96.2		
#20	94.8		
#40	93.3		
#60	91.2		
#100	83.4		
#200	78.0		
0.0419 mm.	64.3		
0.0309 mm.	56.1		
0.0226 mm.	48.9		
0.0163 mm.	43.4		
0.0122 mm.	38.9		
0.0087 mm.	36.2		
0.0062 mm.	34.4		
0.0044 mm.	30.8		
0.0032 mm.	27.2		
0.0013 mm.	25.3		

· (no specification provided)

Material Description

12599404-0119
Brown Sandy Clay
23-S-MTK

Sieve Test (ASTM D6913 & D1140)

Test Date: 01/30/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 01/30/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 16 **LL=** 37 **PI=** 21

Coefficients

D_{90}= 0.2265 D_{85}= 0.1682
D_{60}= 0.0357 D_{50}= 0.0238
D_{30}= 0.0042 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 01/19/2023
Date Received: 01/25/2023
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #7

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

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REPORT OF
PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 41716
DATE OF SERVICE: 06/30/2023
AUTHORIZATION:
REPORT DATE: 06/30/2023

SERVICES: PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:
1 - Particle-Size Distribution's (ASTM D7928 & D6913)
1 - Atterberg Limits(ASTM D4318)
1 - Sieve Analysis (ASTM C136/C117)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Marc Kemper
(1) Richard Wells

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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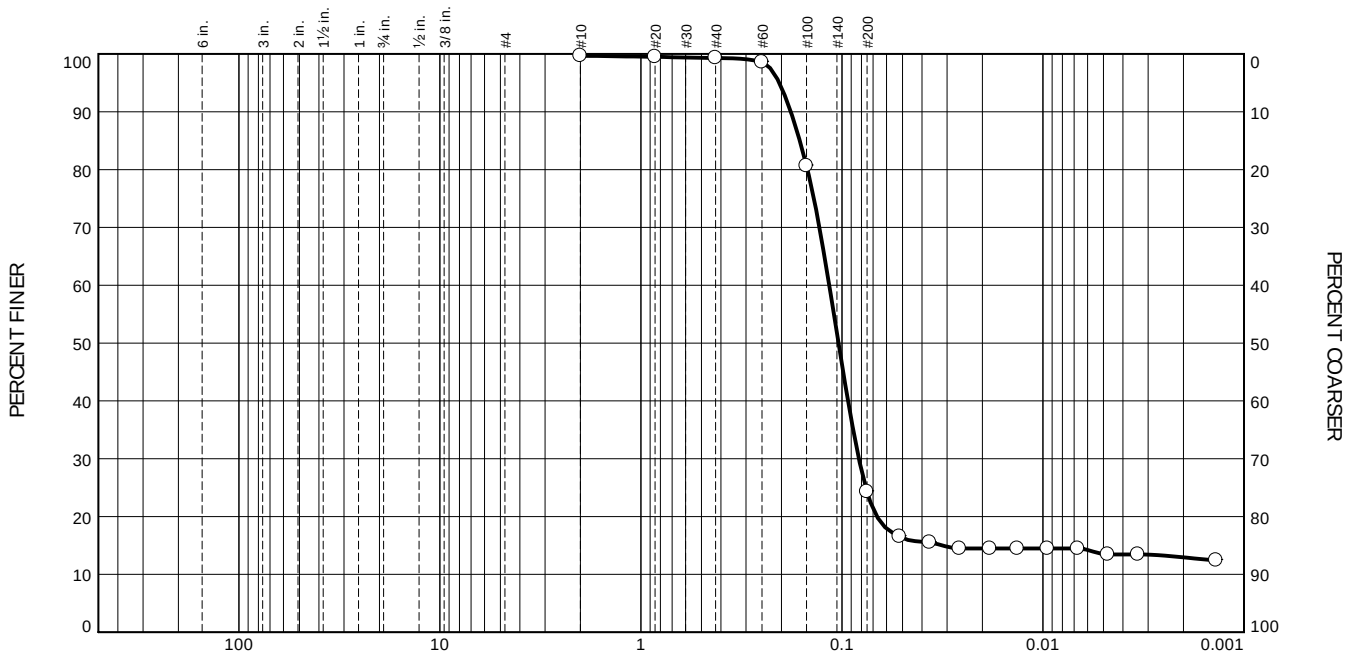
ASTM D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.4	75.0	10.8	13.5

Test Results (ASTM D6913 & D1140, D7928)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	99.7		
#20	99.5		
#40	99.3		
#60	98.6		
#100	80.6		
#200	24.3		
0.0516 mm.	16.5		
0.0366 mm.	15.5		
0.0260 mm.	14.5		
0.0184 mm.	14.5		
0.0134 mm.	14.5		
0.0095 mm.	14.5		
0.0067 mm.	14.5		
0.0048 mm.	13.4		
0.0034 mm.	13.4		
0.0014 mm.	12.4		

· (no specification provided)

Material Description

Light Brown Sandy Silt
12599404-031523
S-MTK-Source - Clay 8

Sieve Test (ASTM D6913 & D1140)

Test Date: 03/31/23 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 03/31/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 18 **LL=** 21 **PI=** 3

Coefficients

D_{90}= 0.1796 D_{85}= 0.1622
D_{60}= 0.1157 D_{50}= 0.1040
D_{30}= 0.0823 D_{15}= 0.0316
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

ML

Date Sampled: 03/15/2023
Date Received: 03/24/2023
Checked By: William
Title: Bonner

Location: Channelview, TX
Sample Number: Clay #8

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA **6/30/2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Location: Channelview, TX
Sample Number: Clay #8
Material Description: Light Brown Sandy Silt
12599404-031523
S-MTK-Source - Clay 8
Sample Date: 03/15/2023 **Date Received:** 03/24/2023
PL: 18 **LL:** 21
PI: 3 **USCS Classification:** ML
AASHTO Classification: A-2-4(0)
Checked By: William **Title:** Bonner

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 03/31/23 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	99.7	0.3
#20	99.5	0.5
#40	99.3	0.7
#60	98.6	1.4
#100	80.6	19.4
#200	24.3	75.7

Hydrometer Test Data (ASTM D7928)

Test Date: 03/31/2023 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 589.60
Dry weight and tare = 545.60
Tare weight = 183.00
Sample moisture = 12.1%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: 0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 99.7
Wet weight of hydrometer specimen (gms): 54.04
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.6	13.00	5.00	8.00	14.4	0.0516	16.5	83.5
2.00	23.5	12.50	5.00	7.50	14.5	0.0366	15.5	84.5
4.00	23.6	12.00	5.00	7.00	14.6	0.0260	14.5	85.5
8.00	23.5	12.00	5.00	7.00	14.6	0.0184	14.5	85.5
15.00	23.6	12.00	5.00	7.00	14.6	0.0134	14.5	85.5

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
30.00	23.6	12.00	5.00	7.00	14.6	0.0095	14.5	85.5
60.00	23.6	12.00	5.00	7.00	14.6	0.0067	14.5	85.5
120.00	23.5	11.50	5.00	6.50	14.6	0.0048	13.4	86.6
240.00	23.6	11.50	5.00	6.50	14.6	0.0034	13.4	86.6
1440.00	23.4	11.00	5.00	6.00	14.7	0.0014	12.4	87.6

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.4	75.0		10.8	13.5	24.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0316	0.0670	0.0823	0.0933	0.1040	0.1157	0.1484	0.1622	0.1796	0.2048

Fineness Modulus

0.21

Tolunay-Wong Engineers, Inc.
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Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF
PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 41717
DATE OF SERVICE: 06/30/2023
AUTHORIZATION:
REPORT DATE: 06/30/2023

SERVICES: PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:
1 - Particle-Size Distribution's (ASTM D7928 & D6913)
1 - Atterberg Limits(ASTM D4318)
1 - Sieve Analysis (ASTM C136/C117)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Marc Kemper
(1) Richard Wells

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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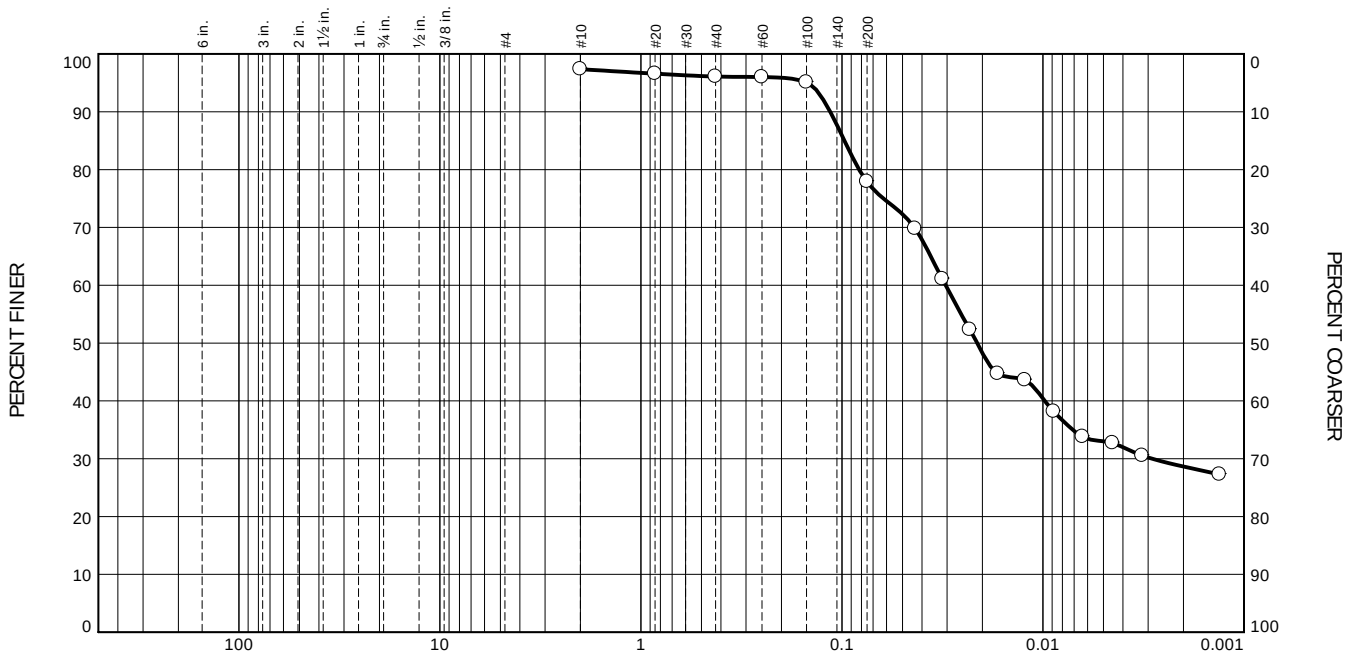
ASTM D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.3	18.2	44.9	33.0

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	97.4		
#20	96.6		
#40	96.1		
#60	96.0		
#100	95.1		
#200	77.9		
0.0432 mm.	69.8		
0.0316 mm.	61.1		
0.0231 mm.	52.4		
0.0168 mm.	44.7		
0.0123 mm.	43.6		
0.0089 mm.	38.2		
0.0063 mm.	33.8		
0.0045 mm.	32.7		
0.0032 mm.	30.5		
0.0013 mm.	27.3		

· (no specification provided)

Material Description

Light Brown Lean Clay w/ Sand
12599404-032023
S-MTK-Source - Clay 9

Sieve Test (ASTM D6913 & D1140)

Test Date: 03/30/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 03/31/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 14 **LL=** 32 **PI=** 18

Coefficients

D_{90}= 0.1143 D_{85}= 0.0972
D_{60}= 0.0305 D_{50}= 0.0212
D_{30}= 0.0029 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 03/20/2023
Date Received: 03/24/2023
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #9

Tolunay-Wong Engineers, Inc. Houston, Texas	**Client:** GHD **Project:** San Jacinto South Impoundment **Project No:** 22.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **6/30/2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Location: Channelview, TX
Sample Number: Clay #9
Material Description: Light Brown Lean Clay w/ Sand
12599404-032023
S-MTK-Source - Clay 9
Sample Date: 03/20/2023 **Date Received:** 03/24/2023
PL: 14 **LL:** 32
PI: 18 **USCS Classification:** CL
AASHTO Classification: A-6(12)
Checked By: William Bonner **Title:** CMT Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 03/30/2023 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	97.4	2.6
#20	96.6	3.4
#40	96.1	3.9
#60	96.0	4.0
#100	95.1	4.9
#200	77.9	22.1

Hydrometer Test Data (ASTM D7928)

Test Date: 03/31/2023 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 574.50
Dry weight and tare = 512.30
Tare weight = 167.30
Sample moisture = 18.0%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: 0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 97.4
Wet weight of hydrometer specimen (gms): 52.69
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.6	37.00	5.00	32.00	10.1	0.0432	69.8	30.2
2.00	23.5	33.00	5.00	28.00	10.8	0.0316	61.1	38.9
4.00	23.5	29.00	5.00	24.00	11.5	0.0231	52.4	47.6
8.00	23.6	25.50	5.00	20.50	12.1	0.0168	44.7	55.3
15.00	23.6	25.00	5.00	20.00	12.2	0.0123	43.6	56.4

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
30.00	23.6	22.50	5.00	17.50	12.7	0.0089	38.2	61.8
60.00	23.6	20.50	5.00	15.50	13.0	0.0063	33.8	66.2
120.00	23.5	20.00	5.00	15.00	13.1	0.0045	32.7	67.3
240.00	23.6	19.00	5.00	14.00	13.3	0.0032	30.5	69.5
1440.00	23.6	17.50	5.00	12.50	13.6	0.0013	27.3	72.7

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.3	18.2		44.9	33.0	77.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0029	0.0098	0.0212	0.0305	0.0821	0.0972	0.1143	0.1476

Fineness Modulus

0.16

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www.tweinc.com

REPORT OF
PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 41718
DATE OF SERVICE: 06/30/2023
AUTHORIZATION:
REPORT DATE: 06/30/2023

SERVICES: PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:
1 - Particle-Size Distribution's (ASTM D7928 & D6913)
1 - Atterberg Limits(ASTM D4318)
1 - Sieve Analysis (ASTM C136/C117)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Marc Kemper
(1) Richard Wells

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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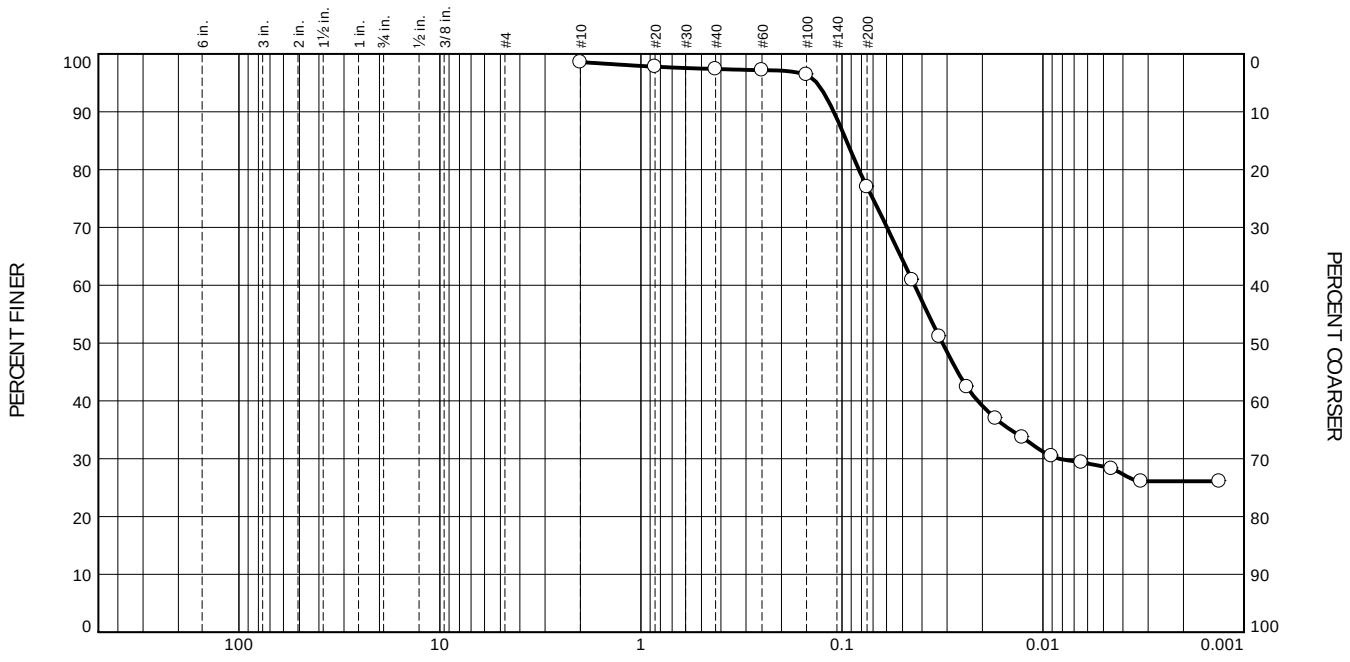
ASTM D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.2	20.4	48.4	28.6

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	98.6		
#20	97.8		
#40	97.4		
#60	97.2		
#100	96.4		
#200	77.0		
0.0448 mm.	60.9		
0.0328 mm.	51.1		
0.0239 mm.	42.4		
0.0172 mm.	37.0		
0.0127 mm.	33.7		
0.0091 mm.	30.4		
0.0064 mm.	29.4		
0.0046 mm.	28.3		
0.0032 mm.	26.1		
0.0013 mm.	26.1		

· (no specification provided)

Material Description

Light Brown Lean Clay w/ Sand
12599404-032423
S-MTK-Source - Clay - 10

Sieve Test (ASTM D6913 & D1140)

Test Date: 03/31/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 03/31/23 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 15 **LL=** 30 **PI=** 15

Coefficients

D_{90}= 0.1098 D_{85}= 0.0950
D_{60}= 0.0435 D_{50}= 0.0316
D_{30}= 0.0083 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 03/24/2023
Date Received: 03/24/2023
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #10

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA **6/30/2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Location: Channelview, TX
Sample Number: Clay #10
Material Description: Light Brown Sandy Lean Clay
12599404-032423
S-MTK-Source - Clay - 10
Sample Date: 03/24/2023 **Date Received:** 03/24/2023
PL: 15 **LL:** 30
PI: 15 **USCS Classification:** CL
Checked By: William Bonner **Title:** CMT Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 03/31/2023 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	98.6	1.4
#20	97.8	2.2
#40	97.4	2.6
#60	97.2	2.8
#100	96.4	3.6
#200	77.0	23.0

Hydrometer Test Data (ASTM D7928)

Test Date: 03/31/23 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 603.60
Dry weight and tare = 542.70
Tare weight = 196.50
Sample moisture = 17.6%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: 0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 98.6
Wet weight of hydrometer specimen (gms): 53.31
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.6	33.00	5.00	28.00	10.8	0.0448	60.9	39.1
2.00	23.6	28.50	5.00	23.50	11.6	0.0328	51.1	48.9
4.00	23.6	24.50	5.00	19.50	12.3	0.0239	42.4	57.6
8.00	23.6	22.00	5.00	17.00	12.8	0.0172	37.0	63.0
15.00	23.6	20.50	5.00	15.50	13.0	0.0127	33.7	66.3
30.00	23.6	19.00	5.00	14.00	13.3	0.0091	30.4	69.6

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
60.00	23.5	18.50	5.00	13.50	13.4	0.0064	29.4	70.6
120.00	23.5	18.00	5.00	13.00	13.5	0.0046	28.3	71.7
240.00	23.6	17.00	5.00	12.00	13.7	0.0032	26.1	73.9
1440.00	23.5	17.00	5.00	12.00	13.7	0.0013	26.1	73.9

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.2	20.4		48.4	28.6	77.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0083	0.0211	0.0316	0.0435	0.0824	0.0950	0.1098	0.1332

Fineness Modulus

0.11

Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF
PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 41737
DATE OF SERVICE: 07/06/2023
AUTHORIZATION:
REPORT DATE: 07/06/2023

SERVICES: PARTICLE-SIZE DISTRIBUTION & SIEVE ANALYSIS

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:
4 - Particle-Size Distribution's (ASTM D7928 & D6913)
4 - Atterberg Limits(ASTM D4318)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Kathleen.Shaw@ghd.com
(1) Marc.Kemper@ghd.com
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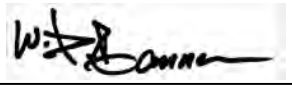
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

TOLUNAY-WONG ENGINEERS, INC.



William Bonner
Project Manager

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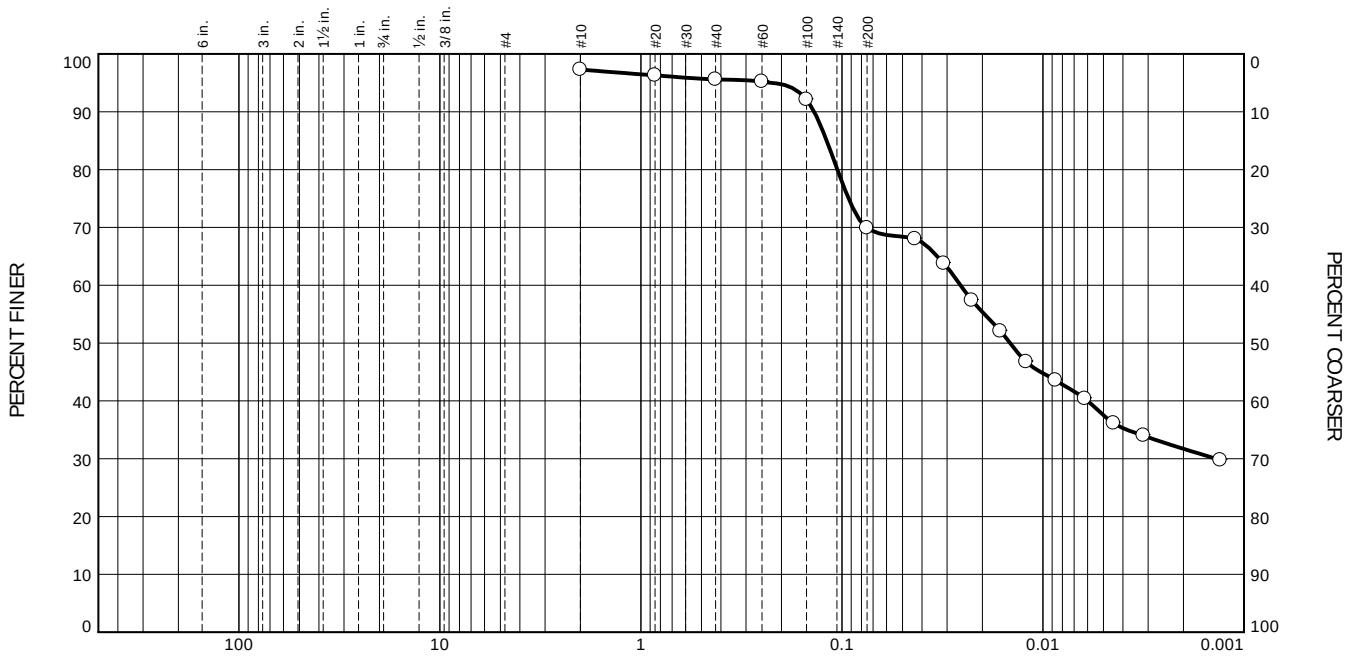
ASTM D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.7	25.7	32.4	37.5

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	97.3		
#20	96.3		
#40	95.6		
#60	95.2		
#100	92.1		
#200	69.9		
0.0432 mm.	68.0		
0.0311 mm.	63.8		
0.0226 mm.	57.4		
0.0163 mm.	52.1		
0.0121 mm.	46.8		
0.0087 mm.	43.6		
0.0062 mm.	40.4		
0.0044 mm.	36.1		
0.0032 mm.	34.0		
0.0013 mm.	29.8		

· (no specification provided)

Material Description

12599404-041923-S-MTK
Clay 11

Sieve Test (ASTM D6913 & D1140)

Test Date: 06/15 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 06/11/23 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 13 **LL=** 35 **PI=** 22

Coefficients

D_{90}= 0.1373 D_{85}= 0.1191
D_{60}= 0.0257 D_{50}= 0.0146
D_{30}= 0.0014 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 04/19/23
Date Received: 06/07/23
Checked By: W. Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #11

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA **7/ 6/ 2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Location: Channelview, TX
Sample Number: Clay #11
Material Description: 12599404-041923-S-MTK
Clay 11
Sample Date: 04/19/23 **Date Received:** 06/07/23
PL: 13 **LL:** 35
PI: 22 **USCS Classification:** CL
AASHTO Classification: A-6(13)
Checked By: W. Bonner **Title:** CMT Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 06/15 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	97.3	2.7
#20	96.3	3.7
#40	95.6	4.4
#60	95.2	4.8
#100	92.1	7.9
#200	69.9	30.1

Hydrometer Test Data (ASTM D7928)

Test Date: 06/11/23 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 689.50
Dry weight and tare = 617.80
Tare weight = 187.90
Sample moisture = 16.7%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: 0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 97.3
Wet weight of hydrometer specimen (gms): 53.42
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.6	37.00	5.00	32.00	10.1	0.0432	68.0	32.0
2.00	23.6	35.00	5.00	30.00	10.4	0.0311	63.8	36.2
4.00	23.5	32.00	5.00	27.00	11.0	0.0226	57.4	42.6
8.00	23.6	29.50	5.00	24.50	11.4	0.0163	52.1	47.9
15.00	23.6	27.00	5.00	22.00	11.9	0.0121	46.8	53.2
30.00	23.6	25.50	5.00	20.50	12.1	0.0087	43.6	56.4

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
60.00	23.5	24.00	5.00	19.00	12.4	0.0062	40.4	59.6
120.00	23.5	22.00	5.00	17.00	12.8	0.0044	36.1	63.9
240.00	23.6	21.00	5.00	16.00	12.9	0.0032	34.0	66.0
1440.00	23.5	19.00	5.00	14.00	13.3	0.0013	29.8	70.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.7	25.7		32.4	37.5	69.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0014	0.0060	0.0146	0.0257	0.1054	0.1191	0.1373	0.2217

Fineness Modulus

0.20

ASTM D7928 Particle-Size Distribution

% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.4	24.2	44.0	25.6

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	96.2		
#20	94.8		
#40	93.8		
#60	93.3		
#100	91.3		
#200	69.6		
0.0446 mm.	59.5		
0.0327 mm.	50.1		
0.0238 mm.	41.7		
0.0172 mm.	35.5		
0.0126 mm.	33.4		
0.0091 mm.	29.2		
0.0065 mm.	27.1		
0.0046 mm.	25.0		
0.0033 mm.	23.0		
0.0013 mm.	20.9		

· (no specification provided)

Material Description

12599404-042023-S-MTK
Clay 12

Sieve Test (ASTM D6913 & D1140)

Test Date: 06/15/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 06/09/23 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 15 **LL=** 31 **PI=** 16

Coefficients

D_{90}= 0.1386 D_{85}= 0.1163
D_{60}= 0.0455 D_{50}= 0.0326
D_{30}= 0.0097 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 04/20/2023
Date Received: 06/07/2023
Checked By: William Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #12

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA **7/ 6/ 2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Location: Channelview, TX
Sample Number: Clay #12
Material Description: 12599404-042023-S-MTK
Clay 12
Sample Date: 04/20/2023 **Date Received:** 06/07/2023
PL: 15 **LL:** 31
PI: 16 **USCS Classification:** CL
AASHTO Classification: A-6(9)
Checked By: William Bonner **Title:** CMT Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 06/15/2023 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	96.2	3.8
#20	94.8	5.2
#40	93.8	6.2
#60	93.3	6.7
#100	91.3	8.7
#200	69.6	30.4

Hydrometer Test Data (ASTM D7928)

Test Date: 06/09/23 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 698.00
Dry weight and tare = 626.50
Tare weight = 183.10
Sample moisture = 16.1%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: 0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 96.2
Wet weight of hydrometer specimen (gms): 53.52
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.5	33.50	5.00	28.50	10.7	0.0446	59.5	40.5
2.00	23.5	29.00	5.00	24.00	11.5	0.0327	50.1	49.9
4.00	23.6	25.00	5.00	20.00	12.2	0.0238	41.7	58.3
8.00	23.6	22.00	5.00	17.00	12.8	0.0172	35.5	64.5
15.00	23.6	21.00	5.00	16.00	12.9	0.0126	33.4	66.6
30.00	23.6	19.00	5.00	14.00	13.3	0.0091	29.2	70.8

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
60.00	23.5	18.00	5.00	13.00	13.5	0.0065	27.1	72.9
120.00	23.5	17.00	5.00	12.00	13.7	0.0046	25.0	75.0
240.00	23.6	16.00	5.00	11.00	13.8	0.0033	23.0	77.0
1440.00	23.6	15.00	5.00	10.00	14.0	0.0013	20.9	79.1

Results

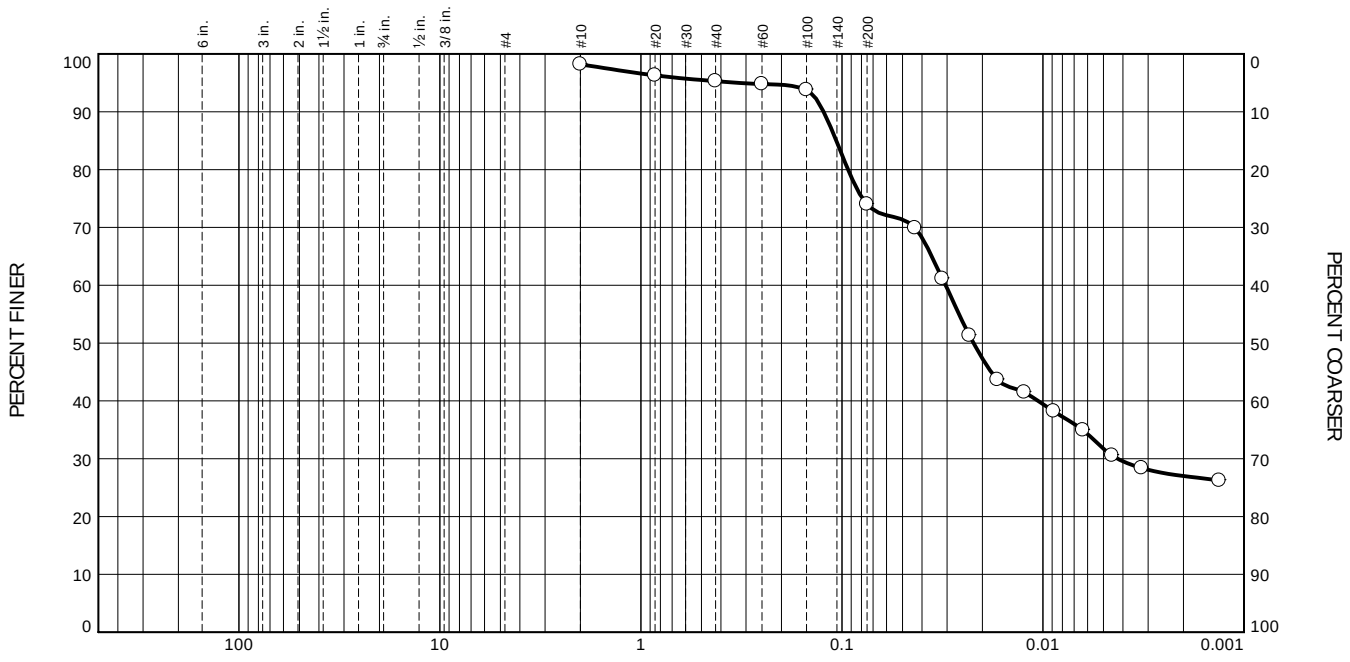
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					2.4	24.2		44.0	25.6	69.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0097	0.0220	0.0326	0.0455	0.1016	0.1163	0.1386	0.9658

Fineness Modulus

0.26

ASTM D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.9	21.3	42.3	31.7

Test Results (ASTM D6913 & D1140, D7928)			
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	98.2		
#20	96.3		
#40	95.3		
#60	94.8		
#100	93.8		
#200	74.0		
0.0432 mm.	69.9		
0.0316 mm.	61.1		
0.0232 mm.	51.3		
0.0168 mm.	43.7		
0.0124 mm.	41.5		
0.0089 mm.	38.2		
0.0063 mm.	34.9		
0.0045 mm.	30.6		
0.0032 mm.	28.4		
0.0013 mm.	26.2		

· (no specification provided)

Sample Number: Clay #13

Material Description

12599404-042823-S-MTK
Clay 13

Sieve Test (ASTM D6913 & D1140)

Test Date: 06/15/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 6/29/2023 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 15 **LL=** 32 **PI=** 17

Coefficients

D_{90}= 0.1233 D_{85}= 0.1067
D_{60}= 0.0305 D_{50}= 0.0221
D_{30}= 0.0043 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

Date Sampled: 04/28/23
Date Received: 06/07/2023
Checked By: W. Bonner
Title: CMT Project

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment
Project No: 22.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA **7/ 6/ 2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Sample Number: Clay #13
Material Description: 12599404-042823-S-MTK
Clay 13
Sample Date: 04/28/23 **Date Received:** 06/07/2023
PL: 15 **LL:** 32
PI: 17
AASHTO Classification: A-6(10)
Checked By: W. Bonner **Title:** CMT Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 06/15/2023 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	98.2	1.8
#20	96.3	3.7
#40	95.3	4.7
#60	94.8	5.2
#100	93.8	6.2
#200	74.0	26.0

Hydrometer Test Data (ASTM D7928)

Test Date: 6/29/2023 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 686.20
Dry weight and tare = 608.30
Tare weight = 181.30
Sample moisture = 18.2%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: -0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 98.2
Wet weight of hydrometer specimen (gms): 53.17
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.6	37.00	5.00	32.00	10.1	0.0432	69.9	30.1
2.00	23.4	33.00	5.00	28.00	10.8	0.0316	61.1	38.9
4.00	23.6	28.50	5.00	23.50	11.6	0.0232	51.3	48.7
8.00	23.6	25.00	5.00	20.00	12.2	0.0168	43.7	56.3
15.00	23.7	24.00	5.00	19.00	12.4	0.0124	41.5	58.5
30.00	23.6	22.50	5.00	17.50	12.7	0.0089	38.2	61.8
60.00	23.6	21.00	5.00	16.00	12.9	0.0063	34.9	65.1

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
120.00	23.6	19.00	5.00	14.00	13.3	0.0045	30.6	69.4
240.00	23.5	18.00	5.00	13.00	13.5	0.0032	28.4	71.6
1440.00	23.6	17.00	5.00	12.00	13.7	0.0013	26.2	73.8

Results

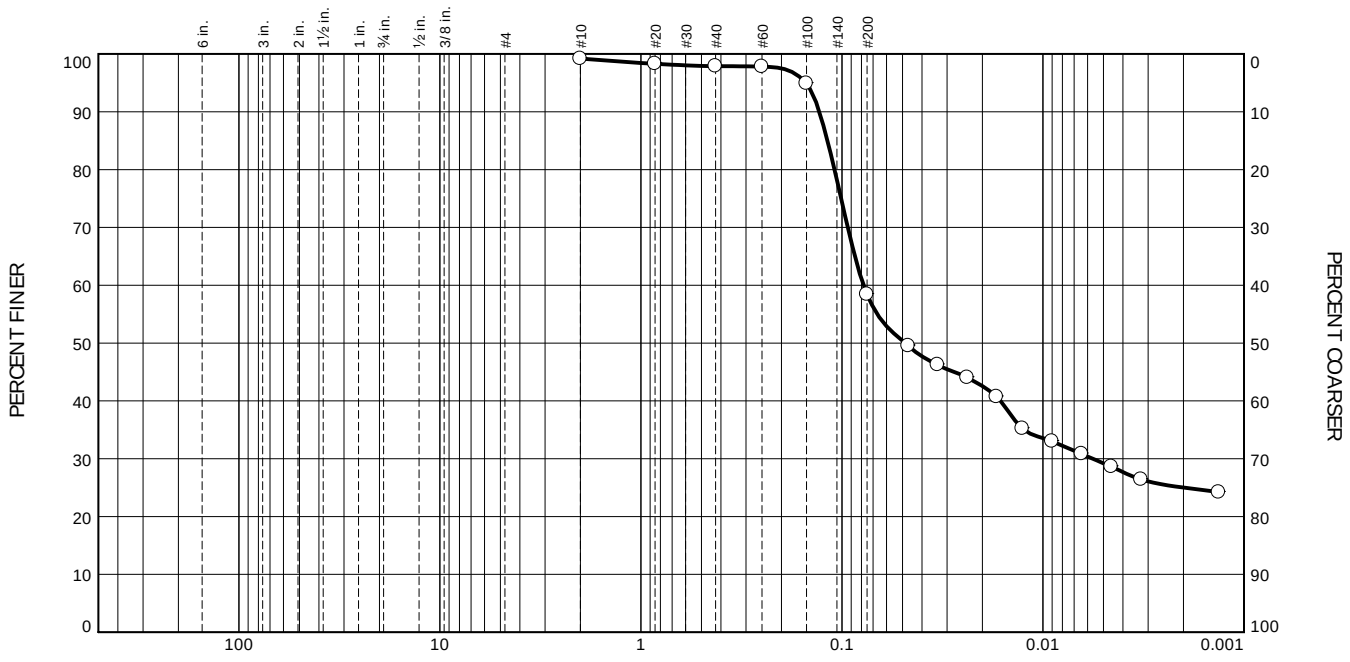
Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					2.9	21.3		42.3	31.7	74.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0043	0.0106	0.0221	0.0305	0.0932	0.1067	0.1233	0.3234

Fineness Modulus

0.19

ASTM D7928 Particle-Size Distribution



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.3	39.5	29.2	29.2

Test Results (ASTM D6913 & D1140, D7928)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)
#10	99.2		
#20	98.3		
#40	97.9		
#60	97.8		
#100	94.9		
#200	58.4		
0.0467 mm.	49.5		
0.0334 mm.	46.2		
0.0238 mm.	44.0		
0.0170 mm.	40.7		
0.0126 mm.	35.2		
0.0090 mm.	33.0		
0.0064 mm.	30.8		
0.0046 mm.	28.6		
0.0032 mm.	26.4		
0.0013 mm.	24.2		

· (no specification provided)

Material Description

12599404-050323-S-MTK
Clay 14

Sieve Test (ASTM D6913 & D1140)

Test Date: 06/15/2023 **Technician:** Devin Johnson

Test Notes

Hydrometer Test (ASTM D7928)

Test Date: 06/29/23 **Technician:** Devin Johnson

Test Notes

Atterberg (ASTM D4318)

PL= 14 **LL=** 35 **PI=** 21

Coefficients

D_{90}= 0.1295 D_{85}= 0.1180
D_{60}= 0.0781 D_{50}= 0.0484
D_{30}= 0.0057 D_{15}=
D_{10}=
C_u= C_c=

USCS (ASTM D2487)

CL

Date Sampled: 05/03/2023
Date Received: 06/07/2023
Checked By: W. Bonner
Title: CMT Project

Location: Channelview, TX
Sample Number: Clay #14

Tolunay-Wong Engineers, Inc.
Houston, Texas

Client: GHD
Project: San Jacinto South Impoundment

Project No: 22.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA **7/ 6/ 2023**

Client: GHD
Project: San Jacinto South Impoundment
Project Number: 22.83.001
Location: Channelview, TX
Sample Number: Clay #14
Material Description: 12599404-050323-S-MTK
Clay 14
Sample Date: 05/03/2023 **Date Received:** 06/07/2023
PL: 14 **LL:** 35
PI: 21 **USCS Classification:** CL
AASHTO Classification: A-6(9)
Checked By: W. Bonner **Title:** CMT Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 06/15/2023 **Technician:** Devin Johnson

Sieve Opening Size	Percent Passing	Percent Retained
#10	99.2	0.8
#20	98.3	1.7
#40	97.9	2.1
#60	97.8	2.2
#100	94.9	5.1
#200	58.4	41.6

Hydrometer Test Data (ASTM D7928)

Test Date: 06/29/23 **Technician:** Devin Johnson

Moisture Content
Moist weight and tare = 677.00
Dry weight and tare = 597.20
Tare weight = 154.90
Sample moisture = 18.0%

Sedimentation Cylinder
Area (cm^2): 27.8
Volume (cc): 1000

Hydrometer
Type: 152H
Submerged vol. of bulb (cm^3): 54
Top of scale to buoyancy center (cm): 18.6
Bottom of scale to buoyancy center (cm): 7.0
Meniscus correction: -0.25

Hydrometer Specimen
Test uses material passing #10 sieve
Percent passing #10: 99.2
Wet weight of hydrometer specimen (gms): 53.20
Specific gravity of solids: 2.65 (assumed)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
1.00	23.6	27.50	5.00	22.50	11.8	0.0467	49.5	50.5
2.00	23.7	26.00	5.00	21.00	12.1	0.0334	46.2	53.8
4.00	23.6	25.00	5.00	20.00	12.2	0.0238	44.0	56.0
8.00	23.6	23.50	5.00	18.50	12.5	0.0170	40.7	59.3
15.00	23.6	21.00	5.00	16.00	12.9	0.0126	35.2	64.8
30.00	23.6	20.00	5.00	15.00	13.1	0.0090	33.0	67.0

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Companion Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer	Percent Coarser
60.00	23.6	19.00	5.00	14.00	13.3	0.0064	30.8	69.2
120.00	23.6	18.00	5.00	13.00	13.5	0.0046	28.6	71.4
240.00	23.6	17.00	5.00	12.00	13.7	0.0032	26.4	73.6
1440.00	23.5	16.00	5.00	11.00	13.8	0.0013	24.2	75.8

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.3	39.5		29.2	29.2	58.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0057	0.0163	0.0484	0.0781	0.1089	0.1180	0.1295	0.1509

Fineness Modulus

0.11

Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF MOISTURE-DENSITY RELATIONS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 87822
DATE OF SERVICE: 10/20/2023
AUTHORIZATION:
REPORT DATE:
TEST DATE: 10/25/2023

CONTRACTOR: GHD Services

PROJECT DATA

DATE SAMPLED: 10/20/2023
SAMPLED BY: Deliverd by Client
TEST FOR: General Fill
SAMPLE LOCATION: Not provided

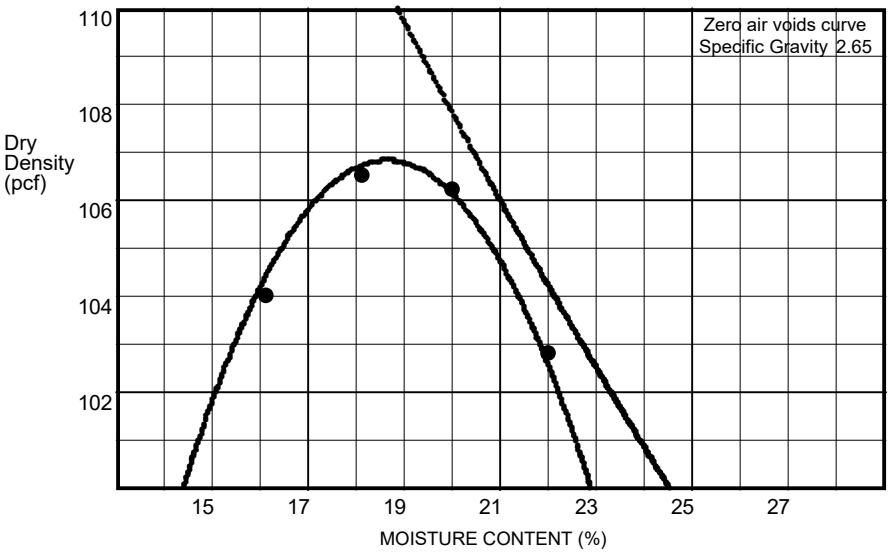
MATERIAL
Tan Fat Clay

RAMMER TYPE: Mechanical
METHOD OF TEST: ASTM D1557, METHOD A

MATERIAL PREPARATION METHOD: Moist
CLASSIFICATION:

MAXIMUM DENSITY, pcf: 106.8
OPTIMUM MOISTURE (%): 18.8

REPORT OF TESTS



Technician: Jesse Folk, Lab Manager

Report Distribution:
(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Kathleen.Shaw@ghd.com
(1) Marc.Kemper@ghd.com
(1) Marisa.oriaku@ghd.com
(1) Mary.Cameron@ghd.com
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

TOLUNAY-WONG ENGINEERS, INC.

Reginald Jackson
CMT Director

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.

Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF
PARTICLE-SIZE DISTRIBUTION & ATTERBERG LIMITS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 41814
DATE OF SERVICE: 10/25/2023
AUTHORIZATION: Richard Wells
REPORT DATE: 10/25/2023

SERVICES: PARTICLE-SIZE DISTRIBUTION, ATTERBERG LIMITS & SOIL CLASSIFICATION

PARTICLE-SIZE DISTRIBUTION, ATTERBERG LIMITS & SOIL CLASSIFICATION

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:
8 - Particle-Size Distribution's (ASTM D7928 & D6913)
8 - Atterberg Limits(ASTM D4318)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:
(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Kathleen.Shaw@ghd.com
(1) Marc.Kemper@ghd.com
(1) Marisa.oriaku@ghd.com
(1) Mary.Cameron@ghd.com
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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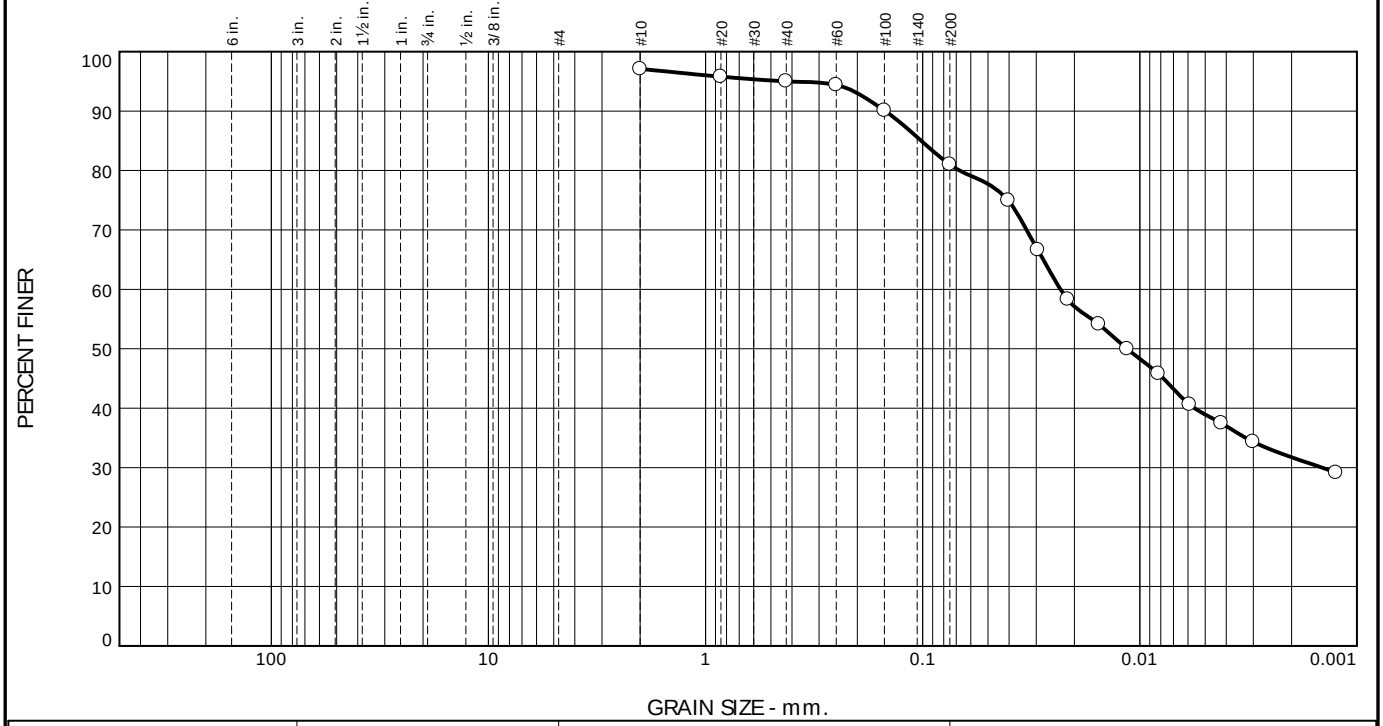
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.1	14.0	49.3	31.7

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.1		
#20	95.8		
#40	95.0		
#60	94.4		
#100	90.1		
#200	81.0		
0.0404 mm.	75.0		
0.0295 mm.	66.6		
0.0215 mm.	58.3		
0.0154 mm.	54.1		
0.0114 mm.	50.0		
0.0082 mm.	45.8		
0.0059 mm.	40.6		
0.0042 mm.	37.5		
0.0030 mm.	34.4		
0.0012 mm.	29.2		

* (no specification provided)

Material Description

Brown Lean Clay w/ Sand

Atterberg Limits (ASTM D 4318)

PL= 16 LL= 34 PI= 18

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(13)

Coefficients

D_{90}= 0.1486 D_{85}= 0.1016 D_{60}= 0.0232
D_{50}= 0.0115 D_{30}= 0.0014 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 7/7/23 **Date Tested:** 07/18/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment **Date Sampled:** 5/5/23
Sample Number: Clay 15

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 15
Material Description: Brown Lean Clay w/ Sand
Sample Date: 5/5/23 **Date Received:** 7/7/23
PL: 16 **LL:** 34
PI: 18 **USCS Classification:** CL
AASHTO Classification: A-6(13)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 07/18/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	97.1
#20	95.8
#40	95.0
#60	94.4
#100	90.1
#200	81.0

Hydrometer Test Data (ASTM D7928)

Test Date: 07/18/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.1
Weight of hydrometer specimen (gms.) = 53.75
Hygroscopic moisture correction:
Moist weight and tare = 667.50
Dry weight and tare = 601.20
Tare weight = 167.10
Hygroscopic moisture = 15.3%
Table of composite correction values:

Temp., deg. C:	23.6	23.5
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.5	41.00	36.00	9.5	0.0404	75.0
2.00	23.5	37.00	32.00	10.2	0.0295	66.6
4.00	23.6	33.00	28.00	10.8	0.0215	58.3
8.00	23.5	31.00	26.00	11.2	0.0154	54.1
15.00	23.6	29.00	24.00	11.5	0.0114	50.0
30.00	23.5	27.00	22.00	11.8	0.0082	45.8
60.00	23.6	24.50	19.50	12.2	0.0059	40.6
120.00	23.6	23.00	18.00	12.5	0.0042	37.5
240.00	23.5	21.50	16.50	12.7	0.0030	34.4
1440.00	23.6	19.00	14.00	13.1	0.0012	29.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					2.1	14.0		49.3	31.7	81.0

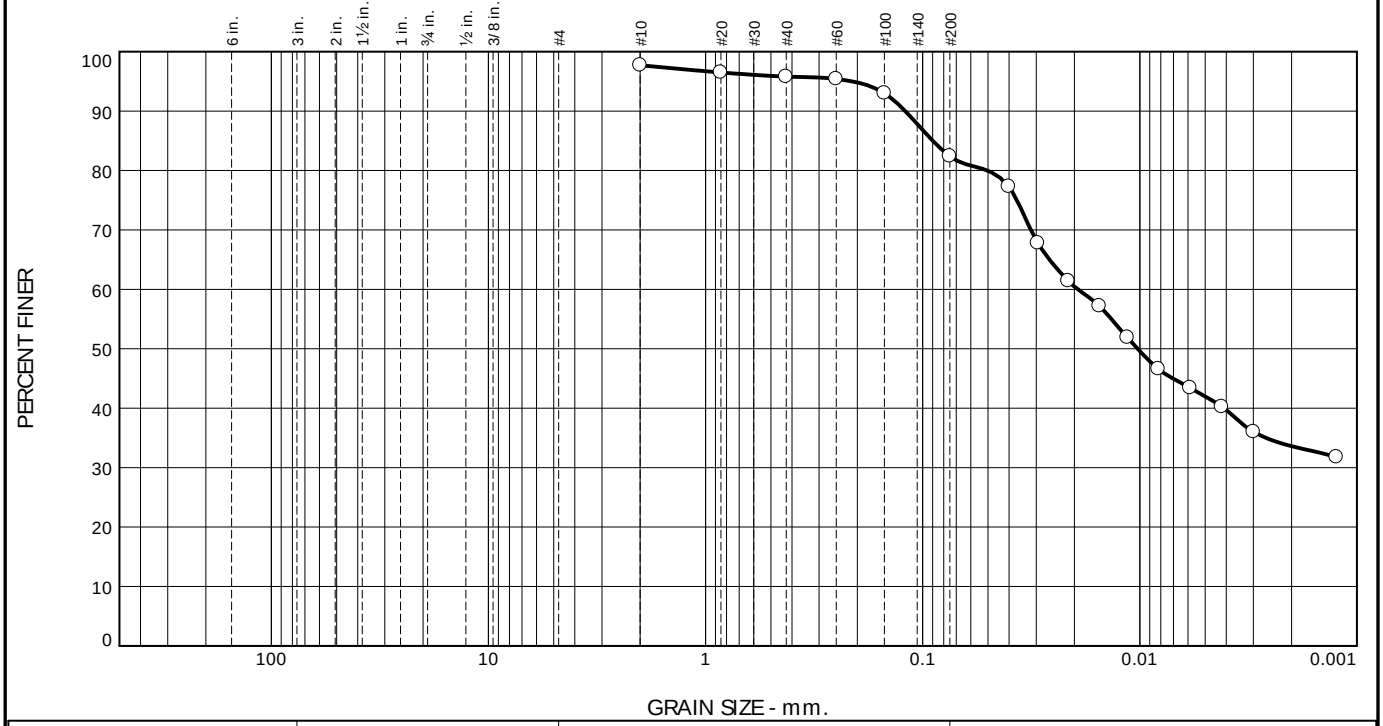
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0014
D_{40}	0.0056
D_{50}	0.0115
D_{60}	0.0232
D_{80}	0.0677
D_{85}	0.1016
D_{90}	0.1486
D_{95}	0.4250

Fineness Modulus

0.23

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.9	13.4	48.8	33.6

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.7		
#20	96.5		
#40	95.8		
#60	95.4		
#100	93.0		
#200	82.4		
0.0401 mm.	77.3		
0.0295 mm.	67.8		
0.0213 mm.	61.4		
0.0153 mm.	57.2		
0.0114 mm.	51.9		
0.0082 mm.	46.6		
0.0059 mm.	43.4		
0.0042 mm.	40.2		
0.0030 mm.	36.0		
0.0012 mm.	31.8		

* (no specification provided)

Material Description

Brown Lean Clay w/ Sand

Atterberg Limits (ASTM D 4318)

PL= 15 LL= 36 PI= 21

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(16)

Coefficients

D_{90}= 0.1203 D_{85}= 0.0899 D_{60}= 0.0193
D_{50}= 0.0102 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/2023 **Date Tested:** 7/18/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment **Date Sampled:** 05/09/2023
Sample Number: Clay 16

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 16
Material Description: Brown Lean Clay w/ Sand
Sample Date: 05/09/2023 **Date Received:** 07/07/2023
PL: 15 **LL:** 36
PI: 21 **USCS Classification:** CL
AASHTO Classification: A-6(16)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 7/18/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	97.7
#20	96.5
#40	95.8
#60	95.4
#100	93.0
#200	82.4

Hydrometer Test Data (ASTM D7928)

Test Date: 07/18/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.7
Weight of hydrometer specimen (gms.) = 53.58
Hygroscopic moisture correction:
Moist weight and tare = 681.40
Dry weight and tare = 611.80
Tare weight = 180.40
Hygroscopic moisture = 16.1%
Table of composite correction values:

Temp., deg. C:	23.5	23.8
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	41.50	36.50	9.4	0.0401	77.3
2.00	23.6	37.00	32.00	10.2	0.0295	67.8
4.00	23.6	34.00	29.00	10.7	0.0213	61.4
8.00	23.5	32.00	27.00	11.0	0.0153	57.2
15.00	23.5	29.50	24.50	11.4	0.0114	51.9
30.00	23.5	27.00	22.00	11.8	0.0082	46.6
60.00	23.5	25.50	20.50	12.1	0.0059	43.4
120.00	23.6	24.00	19.00	12.3	0.0042	40.2
240.00	23.8	22.00	17.00	12.6	0.0030	36.0
1440.00	23.5	20.00	15.00	13.0	0.0012	31.8

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.9	13.4		48.8	33.6	82.4

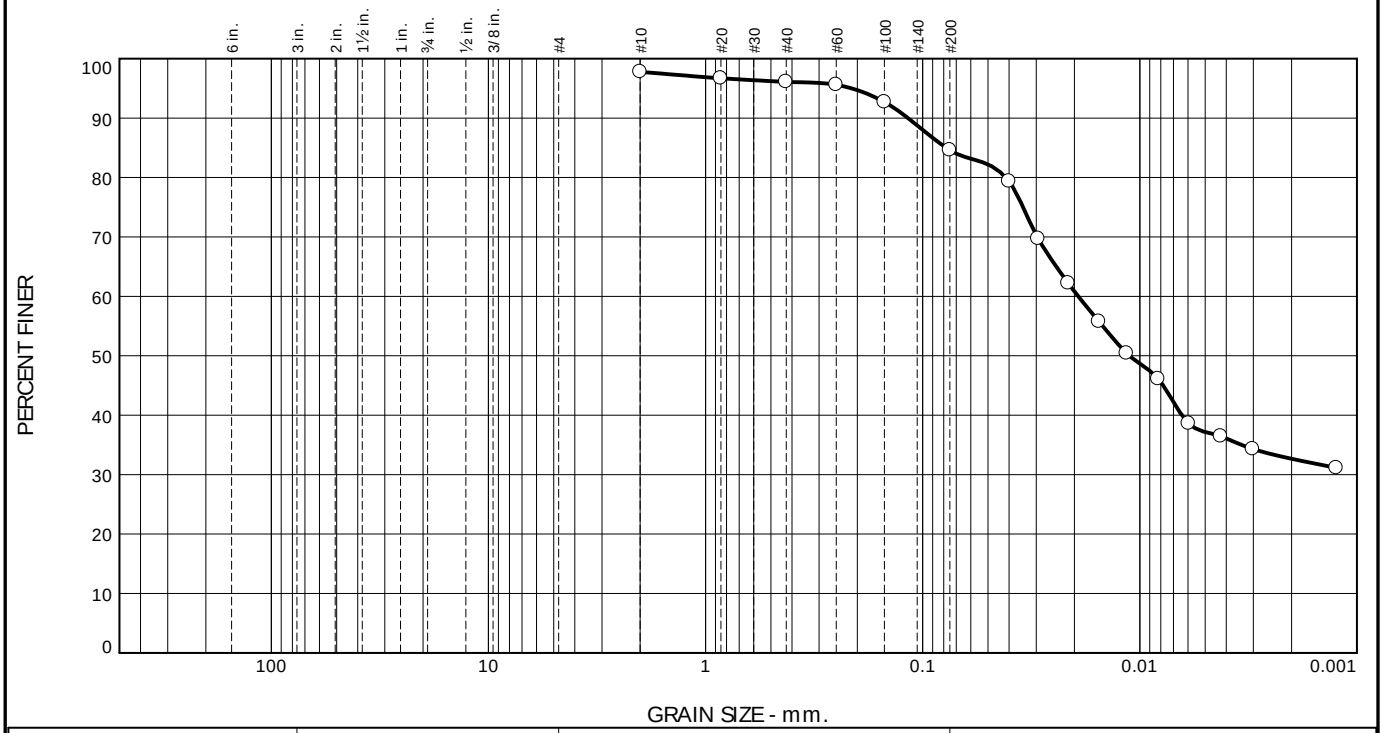
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0041
D_{50}	0.0102
D_{60}	0.0193
D_{80}	0.0503
D_{85}	0.0899
D_{90}	0.1203
D_{95}	0.2114

Fineness Modulus

0.18

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.7	11.5	51.9	32.7

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.8		
#20	96.7		
#40	96.1		
#60	95.6		
#100	92.7		
#200	84.6		
0.0400 mm.	79.4		
0.0294 mm.	69.7		
0.0213 mm.	62.2		
0.0154 mm.	55.8		
0.0115 mm.	50.4		
0.0082 mm.	46.1		
0.0060 mm.	38.6		
0.0042 mm.	36.5		
0.0030 mm.	34.3		
0.0012 mm.	31.1		

* (no specification provided)

Material Description

Brown Clay w/ Sand

Atterberg Limits (ASTM D 4318)

PL= 15 LL= 38 PI= 23

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(19)

Coefficients

D_{90}= 0.1169 D_{85}= 0.0780 D_{60}= 0.0192
D_{50}= 0.0112 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/23 **Date Tested:** 07/18/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment **Date Sampled:** 05/12/13
Sample Number: Clay 17

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 17
Material Description: Brown Clay w/ Sand
Sample Date: 05/12/13 **Date Received:** 07/07/23
PL: 15 **LL:** 38
PI: 23 **USCS Classification:** CL
AASHTO Classification: A-6(19)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 07/18/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	97.8
#20	96.7
#40	96.1
#60	95.6
#100	92.7
#200	84.6

Hydrometer Test Data (ASTM D7928)

Test Date: 07/18/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.8
Weight of hydrometer specimen (gms.) = 53.39
Hygroscopic moisture correction:
Moist weight and tare = 698.80
Dry weight and tare = 625.60
Tare weight = 198.00
Hygroscopic moisture = 17.1%
Table of composite correction values:

Temp., deg. C:	23.5	23.6
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.5	42.00	37.00	9.4	0.0400	79.4
2.00	23.5	37.50	32.50	10.1	0.0294	69.7
4.00	23.6	34.00	29.00	10.7	0.0213	62.2
8.00	23.6	31.00	26.00	11.2	0.0154	55.8
15.00	23.5	28.50	23.50	11.6	0.0115	50.4
30.00	23.6	26.50	21.50	11.9	0.0082	46.1
60.00	23.6	23.00	18.00	12.5	0.0060	38.6
120.00	23.6	22.00	17.00	12.6	0.0042	36.5
240.00	23.6	21.00	16.00	12.8	0.0030	34.3
1440.00	23.6	19.50	14.50	13.1	0.0012	31.1

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.7	11.5		51.9	32.7	84.6

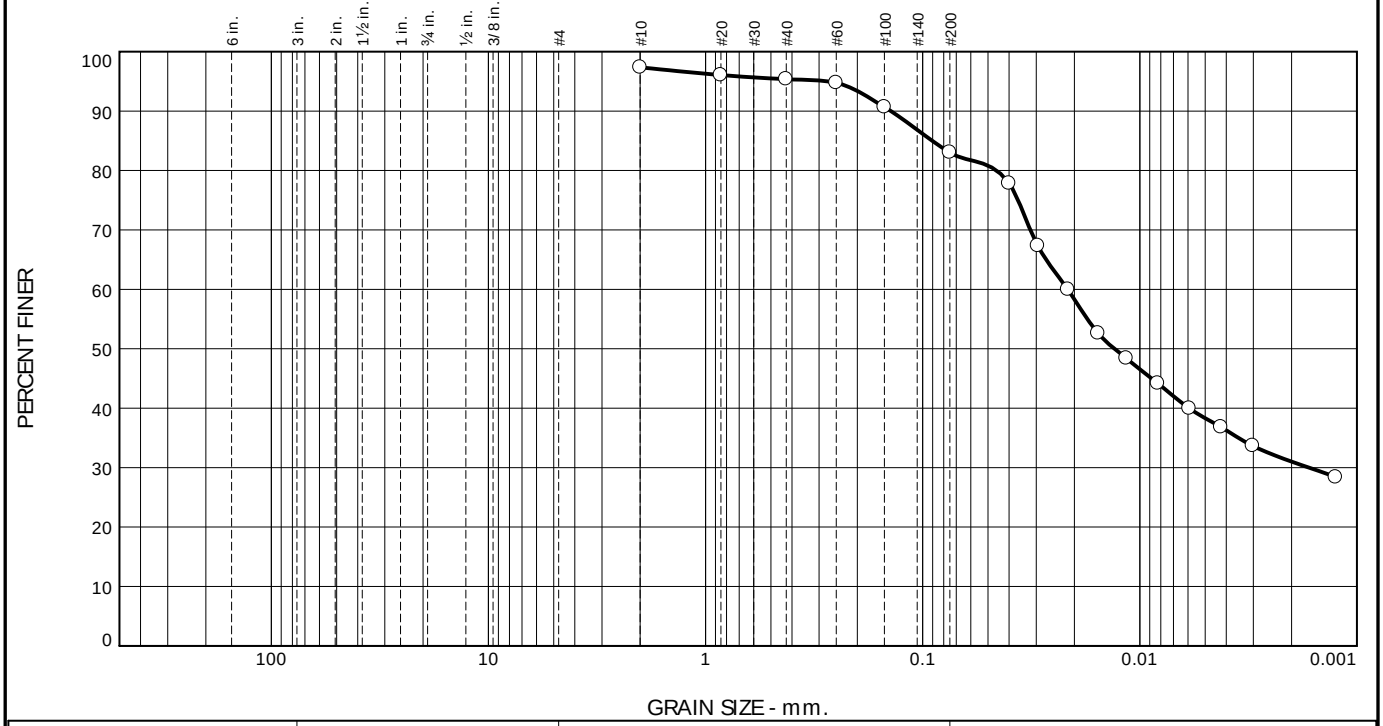
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0064
D_{50}	0.0112
D_{60}	0.0192
D_{80}	0.0414
D_{85}	0.0780
D_{90}	0.1169
D_{95}	0.2122

Fineness Modulus

0.18

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.0	12.4	52.0	31.0

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.4		
#20	96.1		
#40	95.4		
#60	94.8		
#100	90.7		
#200	83.0		
0.0400 mm.	77.9		
0.0295 mm.	67.3		
0.0214 mm.	60.0		
0.0156 mm.	52.6		
0.0115 mm.	48.4		
0.0083 mm.	44.2		
0.0059 mm.	40.0		
0.0042 mm.	36.8		
0.0030 mm.	33.7		
0.0013 mm.	28.4		

* (no specification provided)

Material Description

Brown Lean Clay w/ Sand

Atterberg Limits (ASTM D 4318)

PL= 15 LL= 34 PI= 19

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(14)

Coefficients

D_{90}= 0.1401 D_{85}= 0.0904 D_{60}= 0.0215
D_{50}= 0.0131 D_{30}= 0.0017 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/2023 **Date Tested:** 07/18/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment
Sample Number: Clay 18

Date Sampled: 05/16/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 18
Material Description: Brown Lean Clay w/ Sand
Sample Date: 05/16/23 **Date Received:** 07/07/2023
PL: 15 **LL:** 34
PI: 19 **USCS Classification:** CL
AASHTO Classification: A-6(14)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 07/18/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	97.4
#20	96.1
#40	95.4
#60	94.8
#100	90.7
#200	83.0

Hydrometer Test Data (ASTM D7928)

Test Date: 07/18/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.4
Weight of hydrometer specimen (gms.) = 53.44
Hygroscopic moisture correction:
Moist weight and tare = 680.00
Dry weight and tare = 612.80
Tare weight = 178.40
Hygroscopic moisture = 15.5%
Table of composite correction values:

Temp., deg. C:	23.5	23.6
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	42.00	37.00	9.4	0.0400	77.9
2.00	23.5	37.00	32.00	10.2	0.0295	67.3
4.00	23.5	33.50	28.50	10.8	0.0214	60.0
8.00	23.5	30.00	25.00	11.3	0.0156	52.6
15.00	23.6	28.00	23.00	11.7	0.0115	48.4
30.00	23.6	26.00	21.00	12.0	0.0083	44.2
60.00	23.6	24.00	19.00	12.3	0.0059	40.0
120.00	23.6	22.50	17.50	12.6	0.0042	36.8
240.00	23.6	21.00	16.00	12.8	0.0030	33.7
1440.00	23.6	18.50	13.50	13.2	0.0013	28.4

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					2.0	12.4		52.0	31.0	83.0

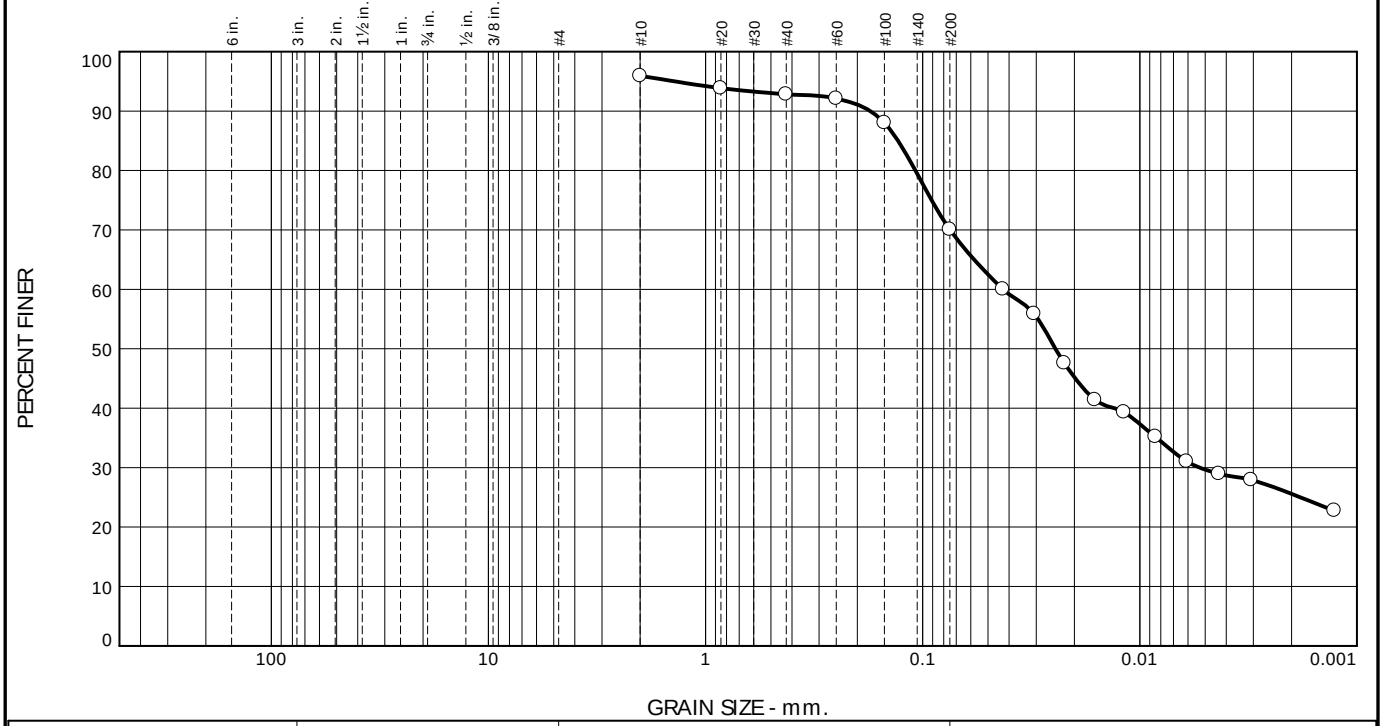
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0017
D_{40}	0.0059
D_{50}	0.0131
D_{60}	0.0215
D_{80}	0.0457
D_{85}	0.0904
D_{90}	0.1401
D_{95}	0.2742

Fineness Modulus

0.22

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				3.1	22.7	44.5	25.6

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	95.9		
#20	93.9		
#40	92.8		
#60	92.1		
#100	88.0		
#200	70.1		
0.0427 mm.	60.0		
0.0307 mm.	55.9		
0.0223 mm.	47.6		
0.0161 mm.	41.4		
0.0118 mm.	39.3		
0.0085 mm.	35.2		
0.0061 mm.	31.0		
0.0043 mm.	29.0		
0.0031 mm.	27.9		
0.0013 mm.	22.8		

* (no specification provided)

Material Description

Brown Sandy Lean Clay

Atterberg Limits (ASTM D 4318)

PL= 15 LL= 34 PI= 19

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(11)

Coefficients

D_{90}= 0.1740 D_{85}= 0.1299 D_{60}= 0.0426
D_{50}= 0.0245 D_{30}= 0.0053 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/23 **Date Tested:** 07/20/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment
Sample Number: Clay 19

Date Sampled: 05/22/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 19
Material Description: Brown Sandy Lean Clay
Sample Date: 05/22/23 **Date Received:** 07/07/23
PL: 15 **LL:** 34
PI: 19 **USCS Classification:** CL
AASHTO Classification: A-6(11)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Sieve Opening Size	Percent Passing
#10	95.9
#20	93.9
#40	92.8
#60	92.1
#100	88.0
#200	70.1

Hydrometer Test Data (ASTM D7928)

Test Date: 07/20/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 95.9
Weight of hydrometer specimen (gms.) = 53.64
Hygroscopic moisture correction:
Moist weight and tare = 683.40
Dry weight and tare = 615.40
Tare weight = 182.90
Hygroscopic moisture = 15.7%
Table of composite correction values:

Temp., deg. C:	23.5	23.6
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	34.00	29.00	10.7	0.0427	60.0
2.00	23.5	32.00	27.00	11.0	0.0307	55.9
4.00	23.6	28.00	23.00	11.7	0.0223	47.6
8.00	23.6	25.00	20.00	12.2	0.0161	41.4
15.00	23.6	24.00	19.00	12.3	0.0118	39.3
30.00	23.6	22.00	17.00	12.6	0.0085	35.2
60.00	23.5	20.00	15.00	13.0	0.0061	31.0
120.00	23.5	19.00	14.00	13.1	0.0043	29.0
240.00	23.5	18.50	13.50	13.2	0.0031	27.9
1440.00	23.6	16.00	11.00	13.6	0.0013	22.8

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					3.1	22.7		44.5	25.6	70.1

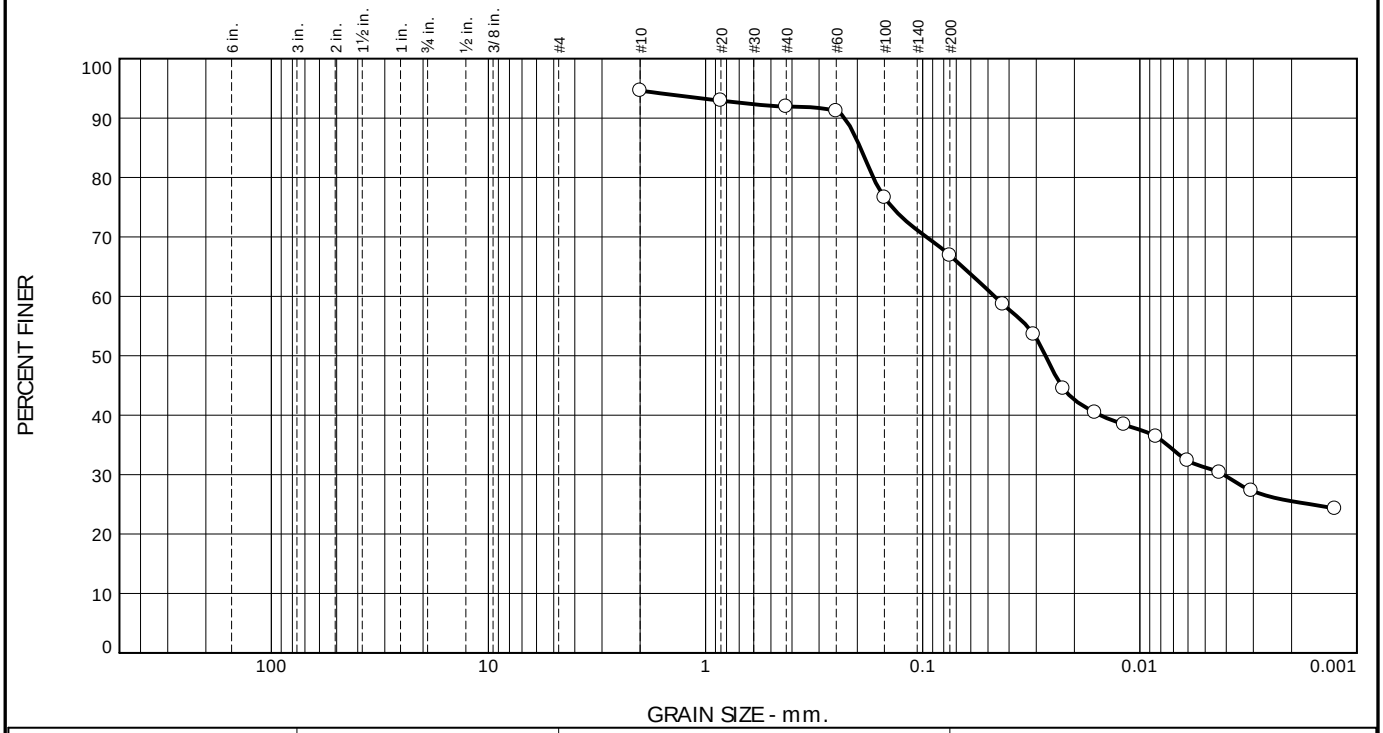
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0053
D_{40}	0.0131
D_{50}	0.0245
D_{60}	0.0426
D_{80}	0.1080
D_{85}	0.1299
D_{90}	0.1740
D_{95}	1.3855

Fineness Modulus

0.32

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				2.7	25.0	41.4	25.5

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	94.6		
#20	92.9		
#40	91.9		
#60	91.2		
#100	76.6		
#200	66.9		
0.0427 mm.	58.7		
0.0308 mm.	53.6		
0.0225 mm.	44.5		
0.0161 mm.	40.5		
0.0118 mm.	38.4		
0.0084 mm.	36.4		
0.0060 mm.	32.4		
0.0043 mm.	30.3		
0.0031 mm.	27.3		
0.0013 mm.	24.3		

* (no specification provided)

Material Description

Brown Sandy Lean Clay
12599404-052523-S-MTK-Source Clay 20

Atterberg Limits (ASTM D 4318)

PL= 15 LL= 37 PI= 22

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(12)

Coefficients

D_{90}= 0.2285 D_{85}= 0.1937 D_{60}= 0.0466
D_{50}= 0.0272 D_{30}= 0.0041 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/23 **Date Tested:** 07/27/23 &

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment
Sample Number: Clay 20

Date Sampled: 05/25/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 20
Material Description: Brown Sandy Lean Clay
12599404-052523-S-MTK-Source Clay 20
Sample Date: 05/25/23 **Date Received:** 07/07/23
PL: 15 **LL:** 37
PI: 22 **USCS Classification:** CL
AASHTO Classification: A-6(12)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 07/27/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	94.6
#20	92.9
#40	91.9
#60	91.2
#100	76.6
#200	66.9

Hydrometer Test Data (ASTM D7928)

Test Date: 07/20/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 94.6
Weight of hydrometer specimen (gms.) = 53.75
Hygroscopic moisture correction:
Moist weight and tare = 688.50
Dry weight and tare = 622.70
Tare weight = 182.40
Hygroscopic moisture = 14.9%
Table of composite correction values:

Temp., deg. C:	23.4	23.6
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	34.00	29.00	10.7	0.0427	58.7
2.00	23.4	31.50	26.50	11.1	0.0308	53.6
4.00	23.4	27.00	22.00	11.8	0.0225	44.5
8.00	23.6	25.00	20.00	12.2	0.0161	40.5
15.00	23.6	24.00	19.00	12.3	0.0118	38.4
30.00	23.5	23.00	18.00	12.5	0.0084	36.4
60.00	23.6	21.00	16.00	12.8	0.0060	32.4
120.00	23.5	20.00	15.00	13.0	0.0043	30.3
240.00	23.6	18.50	13.50	13.2	0.0031	27.3

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1440.00	23.6	17.00	12.00	13.5	0.0013	24.3

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					2.7	25.0		41.4	25.5	66.9

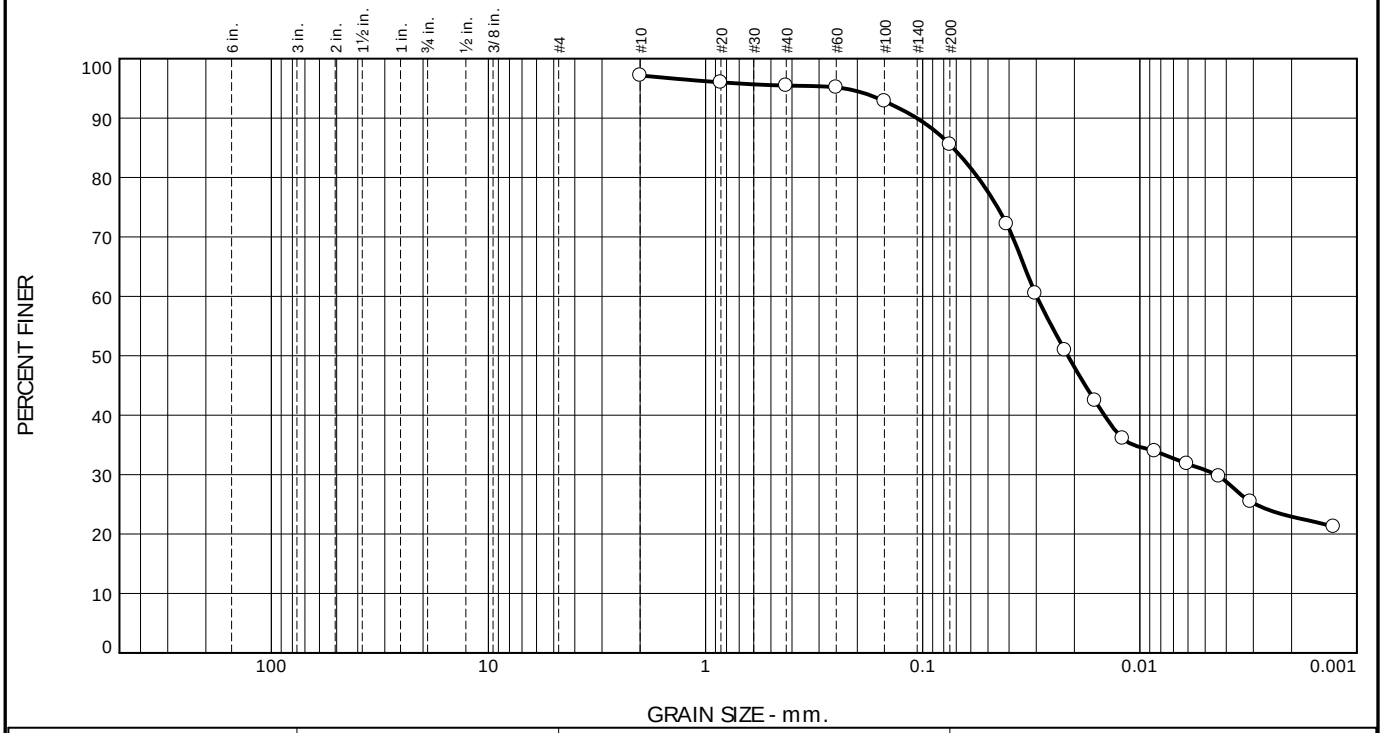
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0041
D_{40}	0.0152
D_{50}	0.0272
D_{60}	0.0466
D_{80}	0.1689
D_{85}	0.1937
D_{90}	0.2285
D_{95}	

Fineness Modulus

0.46

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.7	9.9	62.7	22.9

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.2		
#20	96.0		
#40	95.5		
#60	95.2		
#100	92.8		
#200	85.6		
0.0410 mm.	72.2		
0.0303 mm.	60.5		
0.0222 mm.	51.0		
0.0161 mm.	42.5		
0.0120 mm.	36.1		
0.0085 mm.	34.0		
0.0061 mm.	31.9		
0.0043 mm.	29.7		
0.0031 mm.	25.5		
0.0013 mm.	21.2		

* (no specification provided)

Material Description

Brown Lean Clay
12599404-052723-S-MTK-Source Clay 21

Atterberg Limits (ASTM D 4318)

PL= 15 LL= 35 PI= 20

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(16)

Coefficients

D_{90}= 0.1065 D_{85}= 0.0725 D_{60}= 0.0298
D_{50}= 0.0214 D_{30}= 0.0045 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/23 **Date Tested:** 07/20/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment
Sample Number: Clay 21

Date Sampled: 05/27/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 21
Material Description: Brown Lean Clay
12599404-052723-S-MTK-Source Clay 21
Sample Date: 05/27/23 **Date Received:** 07/07/23
PL: 15 **LL:** 35
PI: 20 **USCS Classification:** CL
AASHTO Classification: A-6(16)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Sieve Opening Size	Percent Passing
#10	97.2
#20	96.0
#40	95.5
#60	95.2
#100	92.8
#200	85.6

Hydrometer Test Data (ASTM D7928)

Test Date: 07/20/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.2
Weight of hydrometer specimen (gms.) = 53.45
Hygroscopic moisture correction:
Moist weight and tare = 697.40
Dry weight and tare = 625.40
Tare weight = 196.50
Hygroscopic moisture = 16.8%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = -0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	39.00	34.00	9.9	0.0410	72.2
2.00	23.6	33.50	28.50	10.8	0.0303	60.5
4.00	23.5	29.00	24.00	11.5	0.0222	51.0
8.00	23.6	25.00	20.00	12.2	0.0161	42.5
15.00	23.6	22.00	17.00	12.6	0.0120	36.1
30.00	23.6	21.00	16.00	12.8	0.0085	34.0
60.00	23.7	20.00	15.00	13.0	0.0061	31.9
120.00	23.6	19.00	14.00	13.1	0.0043	29.7
240.00	23.5	17.00	12.00	13.5	0.0031	25.5
1440.00	23.5	15.00	10.00	13.8	0.0013	21.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.7	9.9		62.7	22.9	85.6

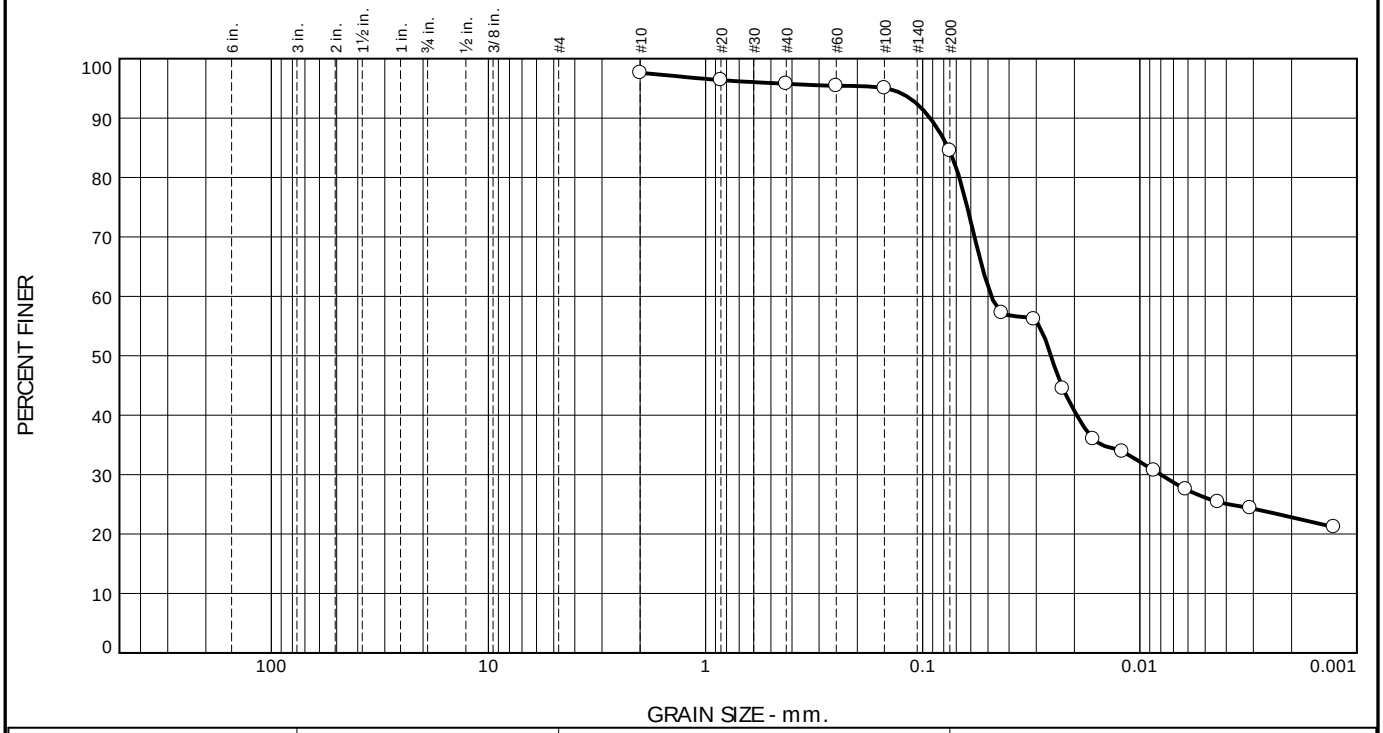
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0045
D_{40}	0.0146
D_{50}	0.0214
D_{60}	0.0298
D_{80}	0.0556
D_{85}	0.0725
D_{90}	0.1065
D_{95}	0.2314

Fineness Modulus

0.20

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.8	11.3	61.7	22.8

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.6		
#20	96.4		
#40	95.8		
#60	95.4		
#100	95.0		
#200	84.5		
0.0433 mm.	57.2		
0.0307 mm.	56.1		
0.0226 mm.	44.5		
0.0164 mm.	36.0		
0.0121 mm.	33.9		
0.0086 mm.	30.7		
0.0061 mm.	27.5		
0.0044 mm.	25.4		
0.0031 mm.	24.4		
0.0013 mm.	21.2		

* (no specification provided)

Material Description

Brown Lean Clay w/ Sand
12599404-053023-S-MTK-Source Clay 22

Atterberg Limits (ASTM D 4318)

PL= 16 LL= 38 PI= 22

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(18)

Coefficients

D_{90}= 0.0924 D_{85}= 0.0762 D_{60}= 0.0483
D_{50}= 0.0257 D_{30}= 0.0080 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 07/07/23 **Date Tested:** 07/27/23 &

Tested By: D. Johnson

Checked By: W. Bonner

Title: Project Manager

Source of Sample: San Jacinto River Impoundment
Sample Number: Clay 22

Date Sampled: 05/30/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Location: San Jacinto River Impoundment
Sample Number: Clay 22
Material Description: Brown Lean Clay w/ Sand
12599404-053023-S-MTK-Source Clay 22
Sample Date: 05/30/23 **Date Received:** 07/07/23
PL: 16 **LL:** 38
PI: 22 **USCS Classification:** CL
AASHTO Classification: A-6(18)
Checked By: W. Bonner **Title:** Project Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 07/27/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	97.6
#20	96.4
#40	95.8
#60	95.4
#100	95.0
#200	84.5

Hydrometer Test Data (ASTM D7928)

Test Date: 07/20/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.6
Weight of hydrometer specimen (gms.) = 53.54
Hygroscopic moisture correction:
Moist weight and tare = 688.00
Dry weight and tare = 618.10
Tare weight = 187.10
Hygroscopic moisture = 16.2%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.7	32.00	27.00	11.0	0.0433	57.2
2.00	23.6	31.50	26.50	11.1	0.0307	56.1
4.00	23.5	26.00	21.00	12.0	0.0226	44.5
8.00	23.7	22.00	17.00	12.6	0.0164	36.0
15.00	23.6	21.00	16.00	12.8	0.0121	33.9
30.00	23.5	19.50	14.50	13.1	0.0086	30.7
60.00	23.6	18.00	13.00	13.3	0.0061	27.5
120.00	23.6	17.00	12.00	13.5	0.0044	25.4
240.00	23.6	16.50	11.50	13.5	0.0031	24.4

Hydrometer Test Data (continued)

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1440.00	23.6	15.00	10.00	13.8	0.0013	21.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.8	11.3		61.7	22.8	84.5

Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0080
D_{40}	0.0195
D_{50}	0.0257
D_{60}	0.0483
D_{80}	0.0678
D_{85}	0.0762
D_{90}	0.0924
D_{95}	0.1477

Fineness Modulus

0.17

Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF MOISTURE-DENSITY RELATIONS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 42364
DATE OF SERVICE: 10/30/2023
AUTHORIZATION:
REPORT DATE:
TEST DATE: 10/30/2023

CONTRACTOR: GHD Services

PROJECT DATA

DATE SAMPLED: 10/26/2023
SAMPLED BY: Client
TEST FOR: Base Material
SAMPLE LOCATION: Client Dropped Off

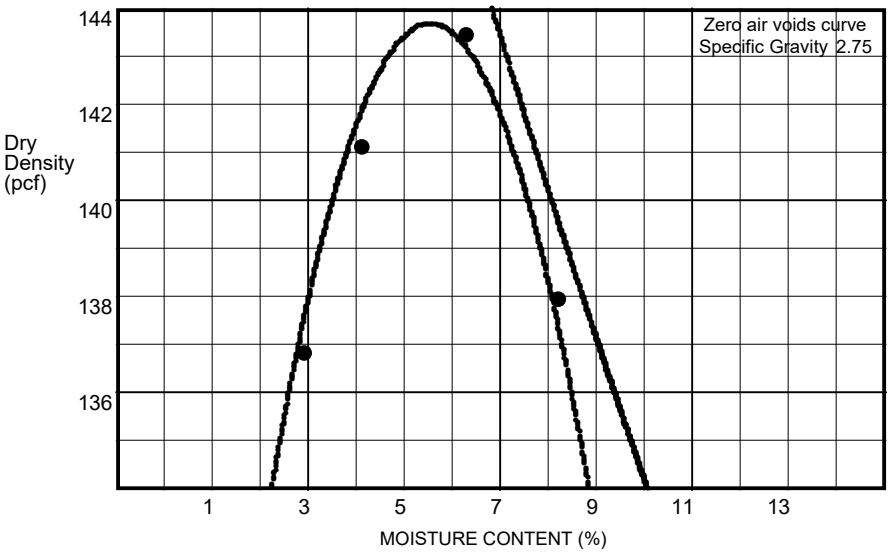
MATERIAL PREPARATION METHOD: Moist
CLASSIFICATION:

MATERIAL
12599404-102623-Road Base

RAMMER TYPE: Mechanical
METHOD OF TEST: ASTM D1557, METHOD C

MAXIMUM DENSITY, pcf: 143.7
OPTIMUM MOISTURE (%): 5.7

REPORT OF TESTS



Note: Maximum Density and Optimum Moisture corrected for 25% oversized particles retained on 3/4" sieve in accordance with ASTM D 4718 procedure using a Specific Gravity of 2.75.

Technician:

Report Distribution:

(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Kathleen.Shaw@ghd.com
(1) Marc.Kemper@ghd.com
(1) Marisa.oriaku@ghd.com
(1) Mary.Cameron@ghd.com
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF MOISTURE-DENSITY RELATIONS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 42385
DATE OF SERVICE: 10/31/2023
AUTHORIZATION:
REPORT DATE:
TEST DATE: 10/30/2023

CONTRACTOR: GHD Services

PROJECT DATA

DATE SAMPLED: 10/20/2023
SAMPLED BY: Client
TEST FOR: General Fill
SAMPLE LOCATION: Client Dropped Off

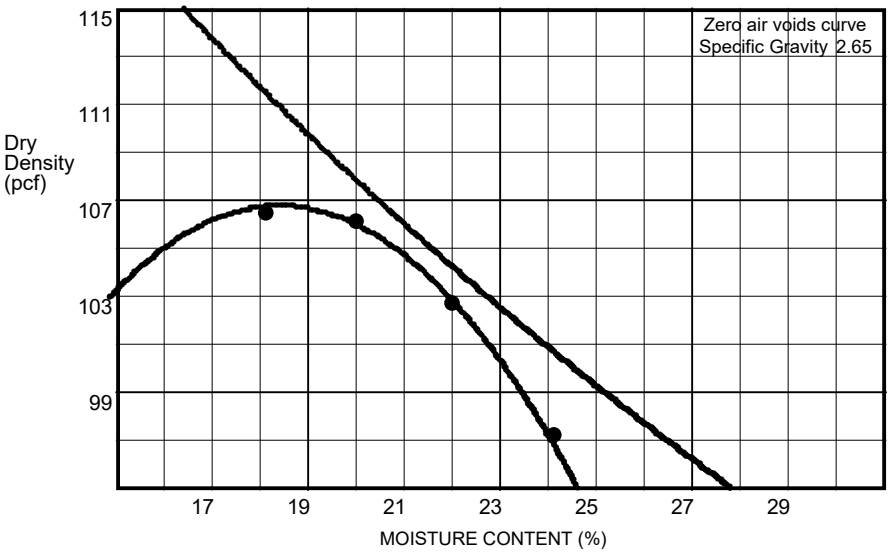
MATERIAL PREPARATION METHOD: Moist
CLASSIFICATION:

MATERIAL
Tan Fat Clay

RAMMER TYPE: Mechanical
METHOD OF TEST: ASTM D698, METHOD C

MAXIMUM DENSITY, pcf: 106.7
OPTIMUM MOISTURE (%): 18.5

REPORT OF TESTS



Technician: Jesse Folk, Lab Manager

Report Distribution:
(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Kathleen.Shaw@ghd.com
(1) Marc.Kemper@ghd.com
(1) Marisa.oriaku@ghd.com
(1) Mary.Cameron@ghd.com
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

REPORT OF
PARTICLE-SIZE DISTRIBUTION & ATTERBERG LIMITS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 42464
DATE OF SERVICE: 11/09/2023
AUTHORIZATION:
REPORT DATE: 11/09/2023

SERVICES: PARTICLE-SIZE DISTRIBUTION, ATTERBERG LIMITS & SOIL CLASSIFICATION

PARTICLE-SIZE DISTRIBUTION, ATTERBERG LIMITS & SOIL CLASSIFICATION

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:

7 - Particle-Size Distribution's (ASTM D7928 & D6913)
7 - Atterberg Limits(ASTM D4318)

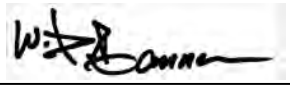
Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:

(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Kathleen.Shaw@ghd.com
(1) Marc.Kemper@ghd.com
(1) Marisa.oriaku@ghd.com
(1) Mary.Cameron@ghd.com
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

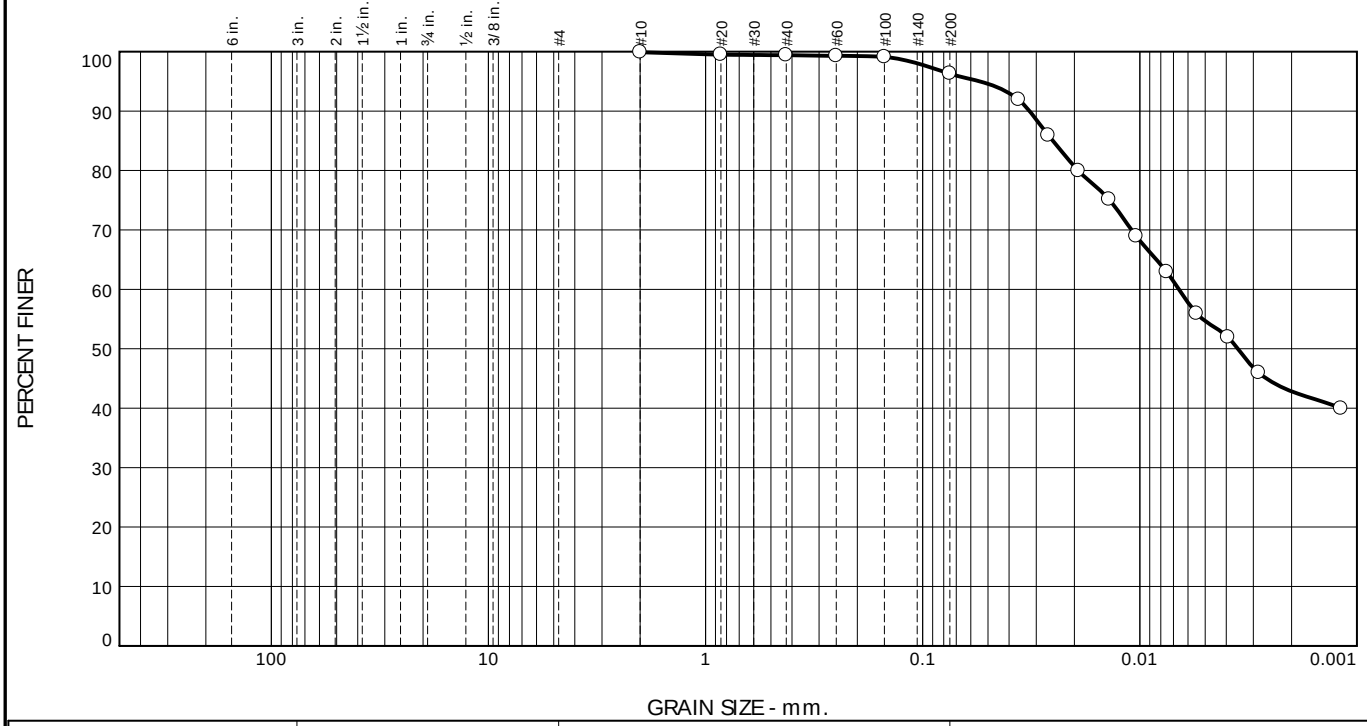
TOLUNAY-WONG ENGINEERS, INC.



William Bonner
Project Manager

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.5	3.1	53.5	42.8

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.5		
#40	99.4		
#60	99.3		
#100	99.1		
#200	96.3		
0.0361 mm.	91.9		
0.0264 mm.	85.9		
0.0192 mm.	79.9		
0.0138 mm.	75.1		
0.0104 mm.	68.9		
0.0075 mm.	62.9		
0.0055 mm.	55.9		
0.0039 mm.	52.0		
0.0028 mm.	46.0		
0.0012 mm.	40.0		

* (no specification provided)

Material Description

Brown Lean Clay
12599404-060123-S-MTK-Source Clay 23

Atterberg Limits (ASTM D 4318)

PL= 17 LL= 39 PI= 22

Classification

USCS (D 2487)= CL AASHTO (M 145)= A-6(22)

Coefficients

D_{90}= 0.0322 D_{85}= 0.0251 D_{60}= 0.0066
D_{50}= 0.0035 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/2023 **Date Tested:** 10/09/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 23

Date Sampled: 06/01/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 23
Material Description: Brown Lean Clay
12599404-060123-S-MTK-Source Clay 23
Sample Date: 06/01/2023 **Date Received:** 09/07/2023
PL: 17 **LL:** 39
PI: 22 **USCS Classification:** CL
AASHTO Classification: A-6(22)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/09/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.5
#40	99.4
#60	99.3
#100	99.1
#200	96.3

Hydrometer Test Data (ASTM D7928)

Test Date: 09/18/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 61.65
Hygroscopic moisture correction:
Moist weight and tare = 699.12
Dry weight and tare = 600.00
Tare weight = 198.60
Hygroscopic moisture = 24.7%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	51.00	46.00	7.9	0.0361	91.9
2.00	23.5	48.00	43.00	8.4	0.0264	85.9
4.00	23.6	45.00	40.00	8.9	0.0192	79.9
8.00	23.6	42.60	37.60	9.3	0.0138	75.1
15.00	23.6	39.50	34.50	9.8	0.0104	68.9
30.00	23.6	36.50	31.50	10.3	0.0075	62.9
60.00	23.5	33.00	28.00	10.8	0.0055	55.9
120.00	23.5	31.00	26.00	11.2	0.0039	52.0
240.00	23.6	28.00	23.00	11.7	0.0028	46.0
1440.00	23.6	25.00	20.00	12.2	0.0012	40.0

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.5	3.1		53.5	42.8	96.3

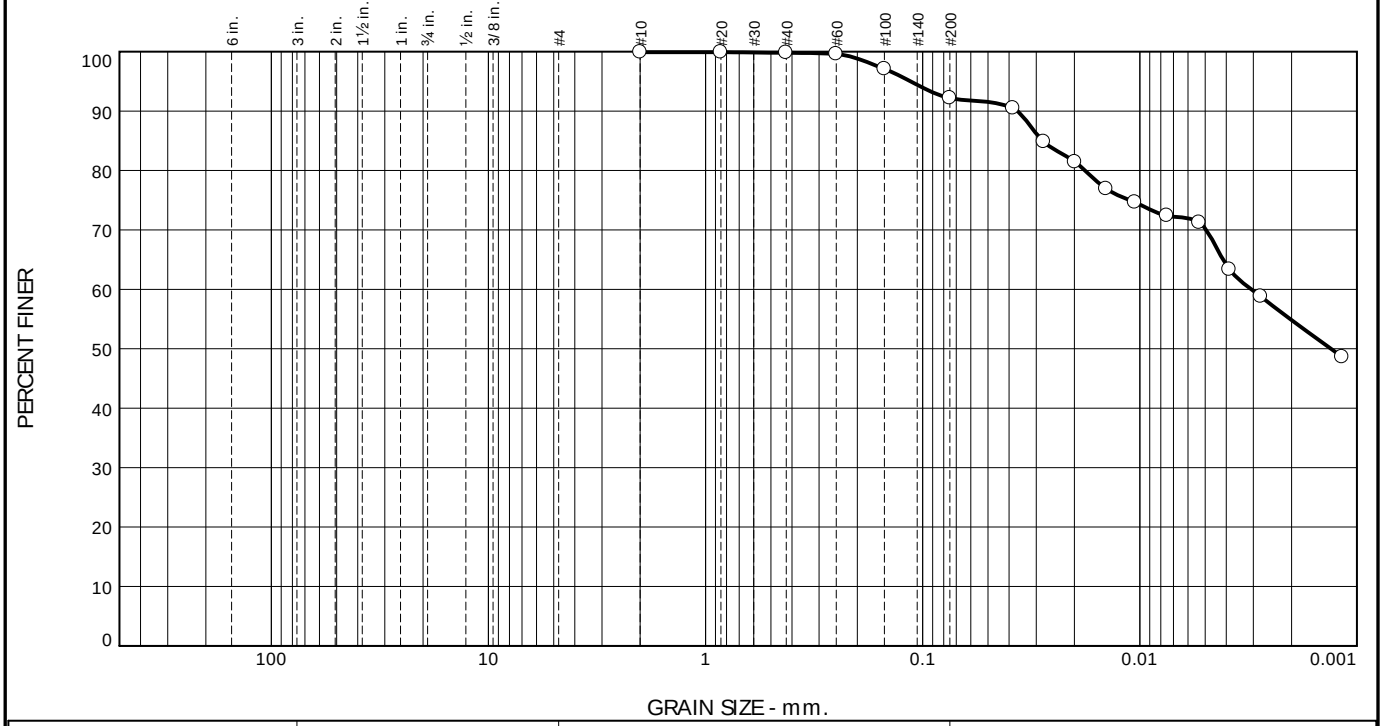
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0012
D_{50}	0.0035
D_{60}	0.0066
D_{80}	0.0192
D_{85}	0.0251
D_{90}	0.0322
D_{95}	0.0546

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	7.6	37.4	54.8

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.9		
#40	99.8		
#60	99.6		
#100	97.1		
#200	92.2		
0.0383 mm.	90.5		
0.0277 mm.	84.8		
0.0199 mm.	81.4		
0.0143 mm.	76.9		
0.0105 mm.	74.6		
0.0075 mm.	72.4		
0.0053 mm.	71.3		
0.0039 mm.	63.3		
0.0028 mm.	58.8		
0.0012 mm.	48.6		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-060523-S-MTK-Source Clay 24

Atterberg Limits (ASTM D 4318)

PL= 24 LL= 70 PI= 46

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(48)

Coefficients

D_{90}= 0.0366 D_{85}= 0.0281 D_{60}= 0.0031
D_{50}= 0.0013 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/2023 **Date Tested:** 10/05/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 24

Date Sampled: 06/05/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 24
Material Description: Brown Fat Clay
12599404-060523-S-MTK-Source Clay 24
Sample Date: 06/05/2023 **Date Received:** 09/07/2023
PL: 24 **LL:** 70
PI: 46 **USCS Classification:** CH
AASHTO Classification: A-7-6(48)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.9
#40	99.8
#60	99.6
#100	97.1
#200	92.2

Hydrometer Test Data (ASTM D7928)

Test Date: 10/05/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 53.56
Hygroscopic moisture correction:
Moist weight and tare = 697.80
Dry weight and tare = 605.30
Tare weight = 196.70
Hygroscopic moisture = 22.6%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	45.00	40.00	8.9	0.0383	90.5
2.00	23.6	42.50	37.50	9.3	0.0277	84.8
4.00	23.5	41.00	36.00	9.5	0.0199	81.4
8.00	23.6	39.00	34.00	9.9	0.0143	76.9
15.00	23.5	38.00	33.00	10.0	0.0105	74.6
30.00	23.6	37.00	32.00	10.2	0.0075	72.4
60.00	23.6	36.50	31.50	10.3	0.0053	71.3
120.00	23.6	33.00	28.00	10.8	0.0039	63.3
240.00	23.6	31.00	26.00	11.2	0.0028	58.8
1440.00	23.5	26.50	21.50	11.9	0.0012	48.6

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	7.6		37.4	54.8	92.2

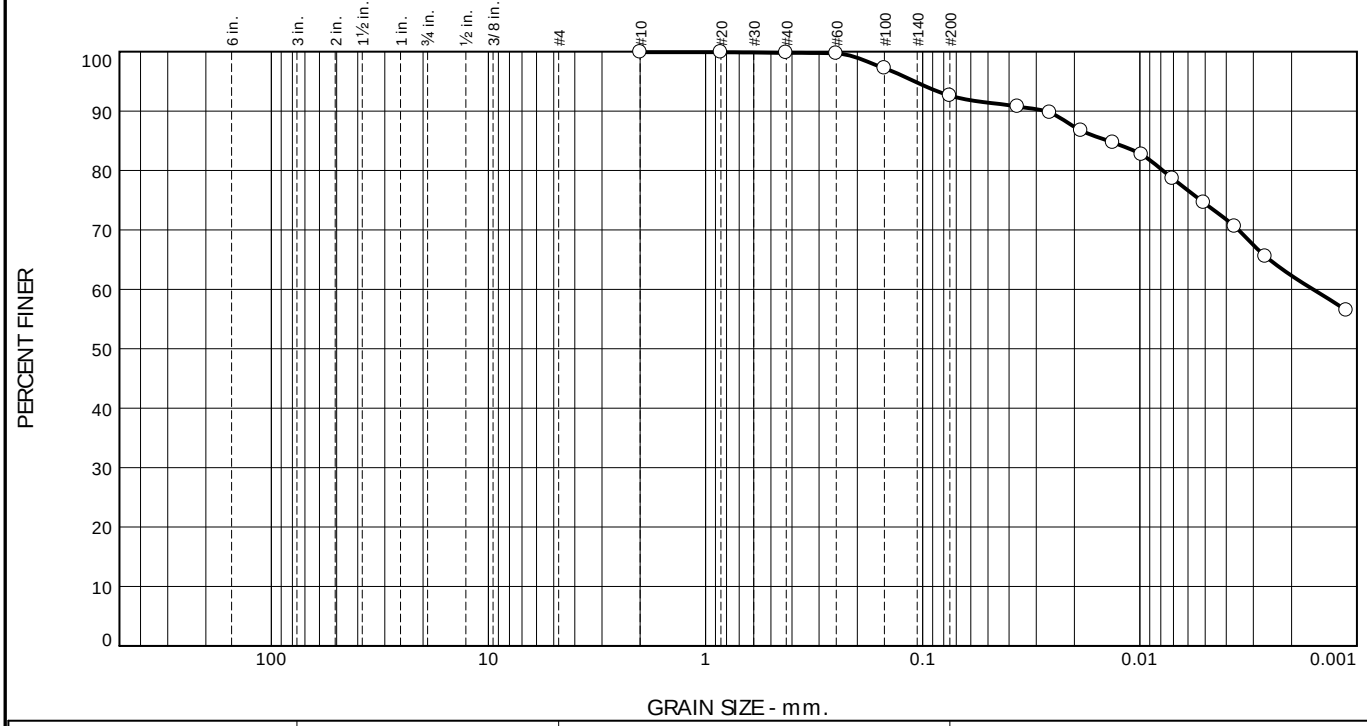
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0013
D_{60}	0.0031
D_{80}	0.0179
D_{85}	0.0281
D_{90}	0.0366
D_{95}	0.1137

Fineness Modulus

0.03

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	7.2	30.3	62.3

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.9		
#40	99.8		
#60	99.7		
#100	97.2		
#200	92.6		
0.0365 mm.	90.8		
0.0260 mm.	89.7		
0.0186 mm.	86.7		
0.0133 mm.	84.7		
0.0098 mm.	82.7		
0.0071 mm.	78.7		
0.0051 mm.	74.6		
0.0037 mm.	70.6		
0.0026 mm.	65.5		
0.0011 mm.	56.5		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-060723-S-MTK-Source Clay 25

Atterberg Limits (ASTM D 4318)

PL= 21 LL= 75 PI= 54

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(56)

Coefficients

D_{90}= 0.0272 D_{85}= 0.0140 D_{60}= 0.0016
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/2023 **Date Tested:** 10/09/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 25

Date Sampled: 06/07/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 25
Material Description: Brown Fat Clay
12599404-060723-S-MTK-Source Clay 25
Sample Date: 06/07/2023 **Date Received:** 09/07/2023
PL: 21 **LL:** 75
PI: 54 **USCS Classification:** CH
AASHTO Classification: A-7-6(56)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/09/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.9
#40	99.8
#60	99.7
#100	97.2
#200	92.6

Hydrometer Test Data (ASTM D7928

Test Date: 09/18/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 61.12
Hygroscopic moisture correction:
Moist weight and tare = 685.50
Dry weight and tare = 584.80
Tare weight = 178.30
Hygroscopic moisture = 24.8%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	50.00	45.00	8.1	0.0365	90.8
2.00	23.6	49.50	44.50	8.1	0.0260	89.7
4.00	23.5	48.00	43.00	8.4	0.0186	86.7
8.00	23.6	47.00	42.00	8.5	0.0133	84.7
15.00	23.5	46.00	41.00	8.7	0.0098	82.7
30.00	23.6	44.00	39.00	9.0	0.0071	78.7
60.00	23.6	42.00	37.00	9.4	0.0051	74.6
120.00	23.6	40.00	35.00	9.7	0.0037	70.6
240.00	23.6	37.50	32.50	10.1	0.0026	65.5
1440.00	23.5	33.00	28.00	10.8	0.0011	56.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	7.2		30.3	62.3	92.6

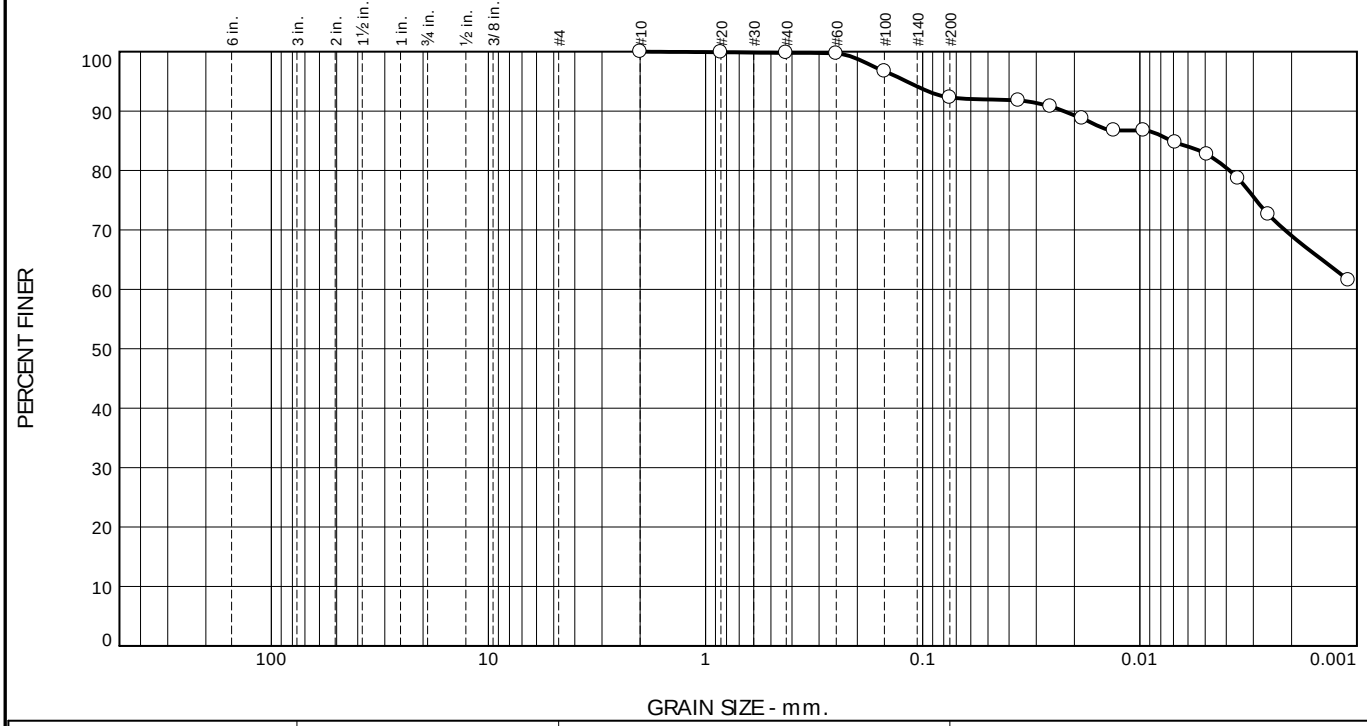
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	0.0016
D_{80}	0.0078
D_{85}	0.0140
D_{90}	0.0272
D_{95}	0.1090

Fineness Modulus

0.03

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	7.5	23.3	69.0

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	100.0		
#20	99.9		
#40	99.8		
#60	99.7		
#100	96.7		
#200	92.3		
0.0363 mm.	91.8		
0.0258 mm.	90.8		
0.0184 mm.	88.8		
0.0132 mm.	86.7		
0.0096 mm.	86.7		
0.0069 mm.	84.7		
0.0049 mm.	82.7		
0.0035 mm.	78.7		
0.0026 mm.	72.6		
0.0011 mm.	61.5		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-060923-S-MTK-Source Clay 26

Atterberg Limits (ASTM D 4318)

PL= 23 LL= 76 PI= 53

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(55)

Coefficients

D_{90}= 0.0224 D_{85}= 0.0072 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/23 **Date Tested:** 10/09/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 26

Date Sampled: 06/09/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 26
Material Description: Brown Fat Clay
12599404-060923-S-MTK-Source Clay 26
Sample Date: 06/09/23 **Date Received:** 09/07/23
PL: 23 **LL:** 76
PI: 53 **USCS Classification:** CH
AASHTO Classification: A-7-6(55)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/09/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	100.0
#20	99.9
#40	99.8
#60	99.7
#100	96.7
#200	92.3

Hydrometer Test Data (ASTM D7928)

Test Date: 10/09/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer specimen (gms.) = 61.45
Hygroscopic moisture correction:
Moist weight and tare = 697.40
Dry weight and tare = 594.20
Tare weight = 187.20
Hygroscopic moisture = 25.4%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = -0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.7	50.50	45.50	8.0	0.0363	91.8
2.00	23.6	50.00	45.00	8.1	0.0258	90.8
4.00	23.6	49.00	44.00	8.2	0.0184	88.8
8.00	23.6	48.00	43.00	8.4	0.0132	86.7
15.00	23.6	48.00	43.00	8.4	0.0096	86.7
30.00	23.6	47.00	42.00	8.5	0.0069	84.7
60.00	23.6	46.00	41.00	8.7	0.0049	82.7
120.00	23.6	44.00	39.00	9.0	0.0035	78.7
240.00	23.6	41.00	36.00	9.5	0.0026	72.6
1440.00	23.6	35.50	30.50	10.4	0.0011	61.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	7.5	7.7	23.3	69.0	92.3

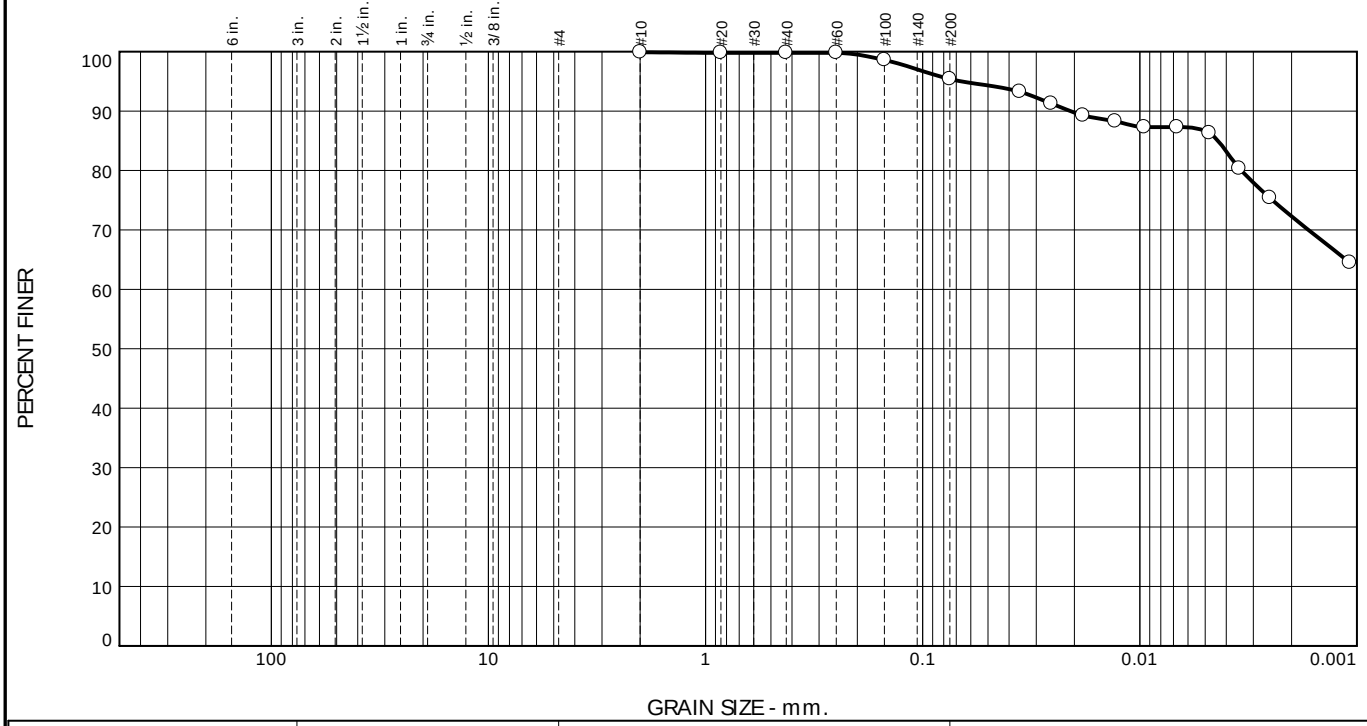
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	
D_{80}	0.0039
D_{85}	0.0072
D_{90}	0.0224
D_{95}	0.1186

Fineness Modulus

0.04

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	4.4	23.1	72.3

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.8		
#40	99.8		
#60	99.8		
#100	98.6		
#200	95.4		
0.0358 mm.	93.3		
0.0256 mm.	91.3		
0.0183 mm.	89.3		
0.0130 mm.	88.3		
0.0095 mm.	87.3		
0.0067 mm.	87.3		
0.0048 mm.	86.3		
0.0035 mm.	80.4		
0.0025 mm.	75.4		
0.0011 mm.	64.5		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-061323-S-MTK-Source Clay 27

Atterberg Limits (ASTM D 4318)

PL= 22 LL= 74 PI= 52

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(56)

Coefficients

D_{90}= 0.0209 D_{85}= 0.0044 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/23 **Date Tested:** 10/09/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 27

Date Sampled: 06/15/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 27
Material Description: Brown Fat Clay
12599404-061323-S-MTK-Source Clay 27
Sample Date: 06/15/2023 **Date Received:** 09/07/23
PL: 22 **LL:** 74
PI: 52 **USCS Classification:** CH
AASHTO Classification: A-7-6(56)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/09/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.8
#40	99.8
#60	99.8
#100	98.6
#200	95.4

Hydrometer Test Data (ASTM D7928)

Test Date: 10/09/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 61.06
Hygroscopic moisture correction:
Moist weight and tare = 697.80
Dry weight and tare = 605.30
Tare weight = 196.70
Hygroscopic moisture = 22.6%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	52.00	47.00	7.7	0.0358	93.3
2.00	23.5	51.00	46.00	7.9	0.0256	91.3
4.00	23.6	50.00	45.00	8.1	0.0183	89.3
8.00	23.5	49.50	44.50	8.1	0.0130	88.3
15.00	23.5	49.00	44.00	8.2	0.0095	87.3
30.00	23.5	49.00	44.00	8.2	0.0067	87.3
60.00	23.6	48.50	43.50	8.3	0.0048	86.3
120.00	23.6	45.50	40.50	8.8	0.0035	80.4
240.00	23.6	43.00	38.00	9.2	0.0025	75.4
1440.00	23.6	37.50	32.50	10.1	0.0011	64.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	4.4		23.1	72.3	95.4

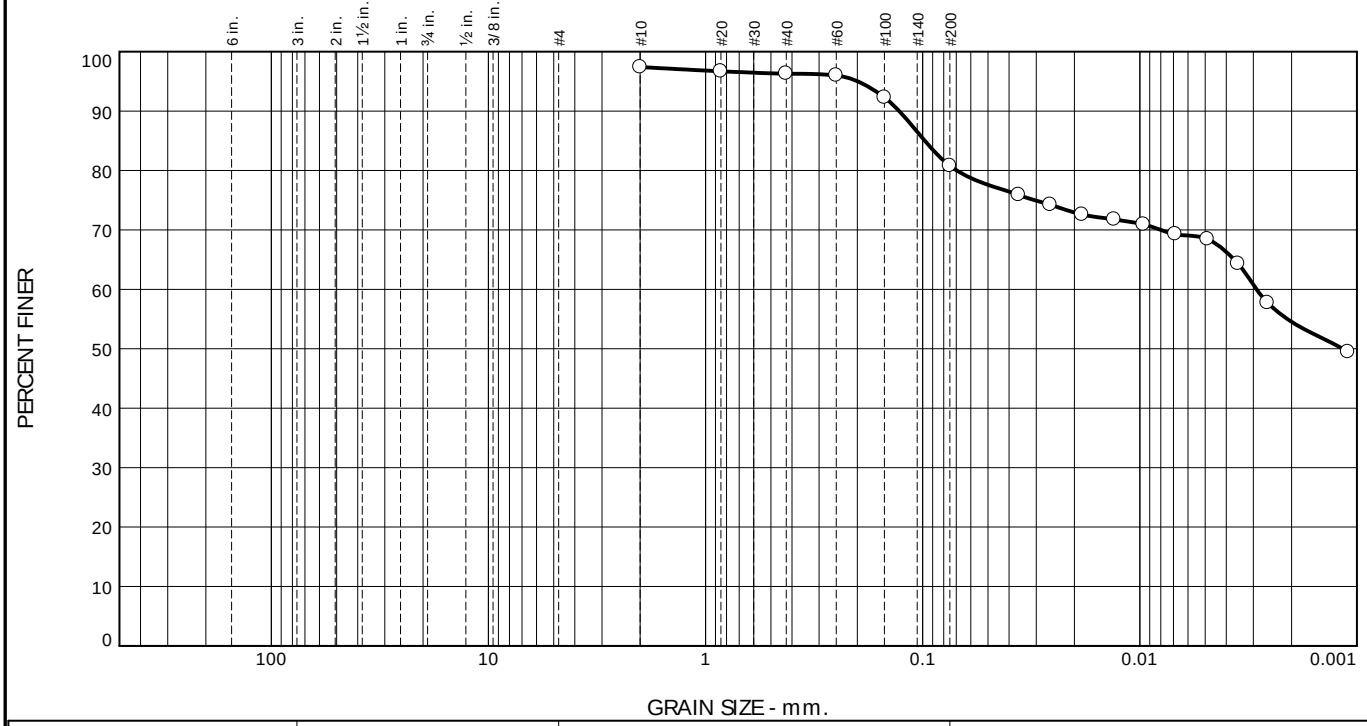
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	
D_{80}	0.0034
D_{85}	0.0044
D_{90}	0.0209
D_{95}	0.0664

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.1	15.5	26.3	54.5

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	97.4		
#20	96.7		
#40	96.3		
#60	96.0		
#100	92.3		
#200	80.8		
0.0361 mm.	75.9		
0.0258 mm.	74.2		
0.0185 mm.	72.6		
0.0131 mm.	71.8		
0.0096 mm.	70.9		
0.0069 mm.	69.3		
0.0049 mm.	68.5		
0.0035 mm.	64.3		
0.0026 mm.	57.7		
0.0011 mm.	49.5		

* (no specification provided)

Material Description

Brown Fat Clay w/ Sand
12599404-061523-S-MTK-Source Clay 28

Atterberg Limits (ASTM D 4318)

PL= 20 LL= 66 PI= 46

Classification

USCS (D 2487)= AASHTO (M 145)= A-7-6(39)

Coefficients

D_{90}= 0.1282 D_{85}= 0.0978 D_{60}= 0.0029
D_{50}= 0.0012 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/23 **Date Tested:** 10/09/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 28

Date Sampled: 06/17/23

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 28
Material Description: Brown Fat Clay w/ Sand
12599404-061523-S-MTK-Source Clay 28
Sample Date: 06/17/23 **Date Received:** 09/07/23
PL: 20 **LL:** 66
PI: 46
AASHTO Classification: A-7-6(39)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/09/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	97.4
#20	96.7
#40	96.3
#60	96.0
#100	92.3
#200	80.8

Hydrometer Test Data (ASTM D7928)

Test Date: 10/09/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 97.4
Weight of hydrometer specimen (gms.) = 71.75
Hygroscopic moisture correction:
Moist weight and tare = 689.70
Dry weight and tare = 590.10
Tare weight = 154.90
Hygroscopic moisture = 22.9%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	51.00	46.00	7.9	0.0361	75.9
2.00	23.5	50.00	45.00	8.1	0.0258	74.2
4.00	23.5	49.00	44.00	8.2	0.0185	72.6
8.00	23.5	48.50	43.50	8.3	0.0131	71.8
15.00	23.6	48.00	43.00	8.4	0.0096	70.9
30.00	23.5	47.00	42.00	8.5	0.0069	69.3
60.00	23.6	46.50	41.50	8.6	0.0049	68.5
120.00	23.6	44.00	39.00	9.0	0.0035	64.3
240.00	23.6	40.00	35.00	9.7	0.0026	57.7
1440.00	23.6	35.00	30.00	10.5	0.0011	49.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.1	15.5		26.3	54.5	80.8

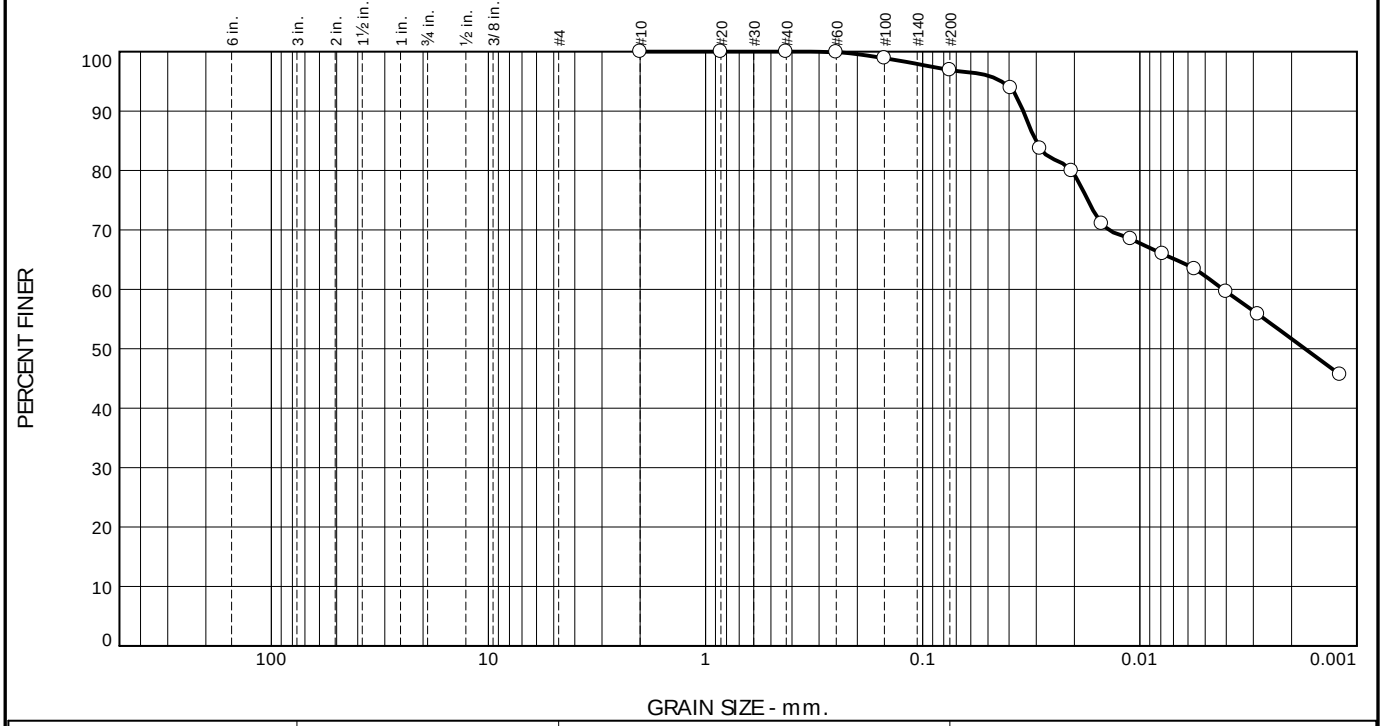
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0012
D_{60}	0.0029
D_{80}	0.0696
D_{85}	0.0978
D_{90}	0.1282
D_{95}	0.1990

Fineness Modulus

0.18

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.0	3.1	45.2	51.7

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	100.0		
#20	100.0		
#40	100.0		
#60	99.9		
#100	98.9		
#200	96.9		
0.0394 mm.	93.9		
0.0288 mm.	83.7		
0.0206 mm.	79.9		
0.0150 mm.	71.0		
0.0110 mm.	68.5		
0.0079 mm.	66.0		
0.0056 mm.	63.4		
0.0040 mm.	59.6		
0.0029 mm.	55.8		
0.0012 mm.	45.7		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-061723-S-MTK-Source Clay 29

Atterberg Limits (ASTM D 4318)

PL= 20 LL= 67 PI= 47

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(51)

Coefficients

D_{90}= 0.0344 D_{85}= 0.0302 D_{60}= 0.0041
D_{50}= 0.0017 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 09/07/2023 **Date Tested:** 10/09/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 29

Date Sampled: 06/17/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 29
Material Description: Brown Fat Clay
12599404-061723-S-MTK-Source Clay 29
Sample Date: 06/17/2023 **Date Received:** 09/07/2023
PL: 20 **LL:** 67
PI: 47 **USCS Classification:** CH
AASHTO Classification: A-7-6(51)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/09/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	100.0
#20	100.0
#40	100.0
#60	99.9
#100	98.9
#200	96.9

Hydrometer Test Data (ASTM D7928)

Test Date: 10/02/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer specimen (gms.) = 50.33
Hygroscopic moisture correction:
Moist weight and tare = 675.40
Dry weight and tare = 560.70
Tare weight = 167.00
Hygroscopic moisture = 29.1%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	42.00	37.00	9.4	0.0394	93.9
2.00	23.6	38.00	33.00	10.0	0.0288	83.7
4.00	23.6	36.50	31.50	10.3	0.0206	79.9
8.00	23.6	33.00	28.00	10.8	0.0150	71.0
15.00	23.6	32.00	27.00	11.0	0.0110	68.5
30.00	23.5	31.00	26.00	11.2	0.0079	66.0
60.00	23.5	30.00	25.00	11.3	0.0056	63.4
120.00	23.5	28.50	23.50	11.6	0.0040	59.6
240.00	23.5	27.00	22.00	11.8	0.0029	55.8
1440.00	23.6	23.00	18.00	12.5	0.0012	45.7

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.1	45.2	51.7	96.9

Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0017
D_{60}	0.0041
D_{80}	0.0207
D_{85}	0.0302
D_{90}	0.0344
D_{95}	0.0434

Fineness Modulus

0.01

Tolunay-Wong Engineers, Inc.
1821 N Avenue J
Freeport, Texas 77541
Ph. (979) 239-4111
www.tweinc.com

PARTICLE SIZE DISTRIBUTION & ATTERBERG LIMITS

PROJECT: Southern Impoundment RA
PO# 12599404-2022-003

CLIENT: GHD Services
2055 Niagara Falls Blvd
Niagara Falls NY 14304

PROJECT NO.: 23.83.001
REPORT NO.: 42793
DATE OF SERVICE: 01/03/2024
AUTHORIZATION:
REPORT DATE: 01/03/2024

SERVICES:

PARTICLE-SIZE DISTRIBUTION, ATTERBERG LIMITS & SOIL CLASSIFICATION

Test materials were delivered to our laboratory in accordance with the client's instructions.

TWE performed the following test:

20 - Particle-Size Distribution's (ASTM D7928 & D6913)
20 - Atterberg Limits(ASTM D4318)

Please see attached report for laboratory test results.

Technician: Devin Johnson

Report Distribution:

(1) GHD Services
(1) Jason.Davis@ghd.com
(1) Jennifer.Devonshire@ghd.com
(1) Marc.Kemper@ghd.com
(1) Marisa.oriaku@ghd.com
(1) Mary.Cameron@ghd.com
(1) Richard.Wells@ghd.com
(1) Sarah.belanger@ghd.com
(1) Willie.Beal@ghd.com

TOLUNAY-WONG ENGINEERS, INC.

William Bonner
Project Manager

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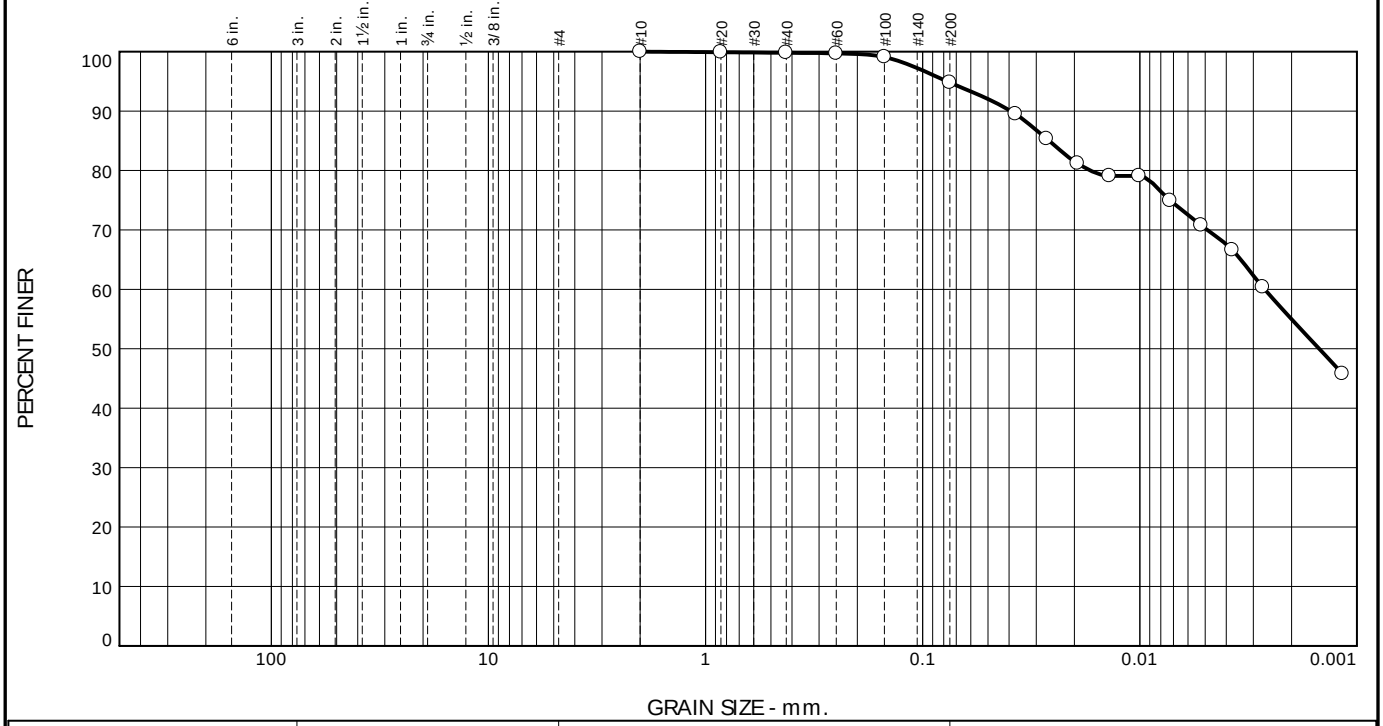
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	5.0	39.8	55.0

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	100.0		
#20	99.9		
#40	99.8		
#60	99.7		
#100	99.1		
#200	94.8		
0.0373 mm.	89.5		
0.0268 mm.	85.3		
0.0193 mm.	81.2		
0.0138 mm.	79.1		
0.0101 mm.	79.1		
0.0072 mm.	74.9		
0.0052 mm.	70.8		
0.0037 mm.	66.6		
0.0027 mm.	60.4		
0.0012 mm.	45.8		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-061923-S-MTK-Source Clay 30

Atterberg Limits (ASTM D 4318)

PL= 21 LL= 68 PI= 47

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(50)

Coefficients

D_{90}= 0.0393 D_{85}= 0.0261 D_{60}= 0.0027
D_{50}= 0.0015 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/25/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 30

Date Sampled: 06/19/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 30
Material Description: Brown Fat Clay
12599404-061923-S-MTK-Source Clay 30
Sample Date: 06/19/2023 **Date Received:** 10/12/2023
PL: 21 **LL:** 68
PI: 47 **USCS Classification:** CH
AASHTO Classification: A-7-6(50)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/25/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	100.0
#20	99.9
#40	99.8
#60	99.7
#100	99.1
#200	94.8

Hydrometer Test Data (ASTM D7928)

Test Date: 10/25/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer specimen (gms.) = 59.99
Hygroscopic moisture correction:
Moist weight and tare = 508.40
Dry weight and tare = 441.80
Tare weight = 188.30
Hygroscopic moisture = 26.3%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.70
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.4	48.00	43.00	8.4	0.0373	89.5
2.00	23.6	46.00	41.00	8.7	0.0268	85.3
4.00	23.6	44.00	39.00	9.0	0.0193	81.2
8.00	23.6	43.00	38.00	9.2	0.0138	79.1
15.00	23.6	43.00	38.00	9.2	0.0101	79.1
30.00	23.7	41.00	36.00	9.5	0.0072	74.9
60.00	23.6	39.00	34.00	9.9	0.0052	70.8
120.00	23.6	37.00	32.00	10.2	0.0037	66.6
240.00	23.6	34.00	29.00	10.7	0.0027	60.4
1440.00	23.6	27.00	22.00	11.8	0.0012	45.8

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	5.0	5.2	39.8	55.0	94.8

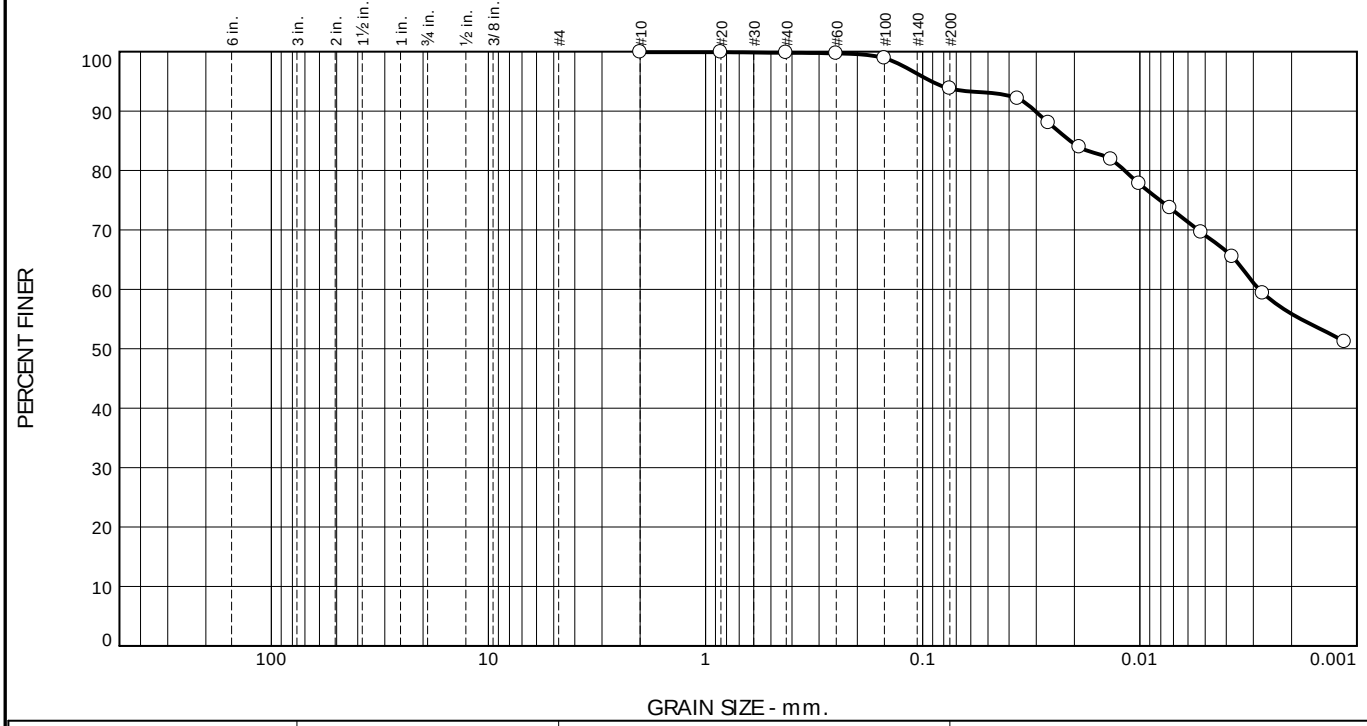
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0015
D_{60}	0.0027
D_{80}	0.0169
D_{85}	0.0261
D_{90}	0.0393
D_{95}	0.0772

Fineness Modulus

0.01

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	6.0	37.9	55.9

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.9		
#40	99.8		
#60	99.7		
#100	98.9		
#200	93.8		
0.0365 mm.	92.1		
0.0263 mm.	88.0		
0.0190 mm.	83.9		
0.0136 mm.	81.9		
0.0101 mm.	77.8		
0.0073 mm.	73.7		
0.0052 mm.	69.6		
0.0038 mm.	65.5		
0.0027 mm.	59.4		
0.0011 mm.	51.2		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-062123-S-MTK-Source Clay 31

Atterberg Limits (ASTM D 4318)

PL= 20 LL= 66 PI= 46

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(48)

Coefficients

D_{90}= 0.0303 D_{85}= 0.0209 D_{60}= 0.0028
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/25/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 31

Date Sampled: 06/21/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 31
Material Description: Brown Fat Clay
12599404-062123-S-MTK-Source Clay 31
Sample Date: 06/21/2023 **Date Received:** 10/12/2023
PL: 20 **LL:** 66
PI: 46 **USCS Classification:** CH
AASHTO Classification: A-7-6(48)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/25/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.9
#40	99.8
#60	99.7
#100	98.9
#200	93.8

Hydrometer Test Data (ASTM D7928)

Test Date: 10/25/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 59.99
Hygroscopic moisture correction:
Moist weight and tare = 508.20
Dry weight and tare = 443.70
Tare weight = 178.30
Hygroscopic moisture = 24.3%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	50.00	45.00	8.1	0.0365	92.1
2.00	23.6	48.00	43.00	8.4	0.0263	88.0
4.00	23.6	46.00	41.00	8.7	0.0190	83.9
8.00	23.5	45.00	40.00	8.9	0.0136	81.9
15.00	23.6	43.00	38.00	9.2	0.0101	77.8
30.00	23.5	41.00	36.00	9.5	0.0073	73.7
60.00	23.6	39.00	34.00	9.9	0.0052	69.6
120.00	23.5	37.00	32.00	10.2	0.0038	65.5
240.00	23.6	34.00	29.00	10.7	0.0027	59.4
1440.00	23.6	30.00	25.00	11.3	0.0011	51.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	6.0		37.9	55.9	93.8

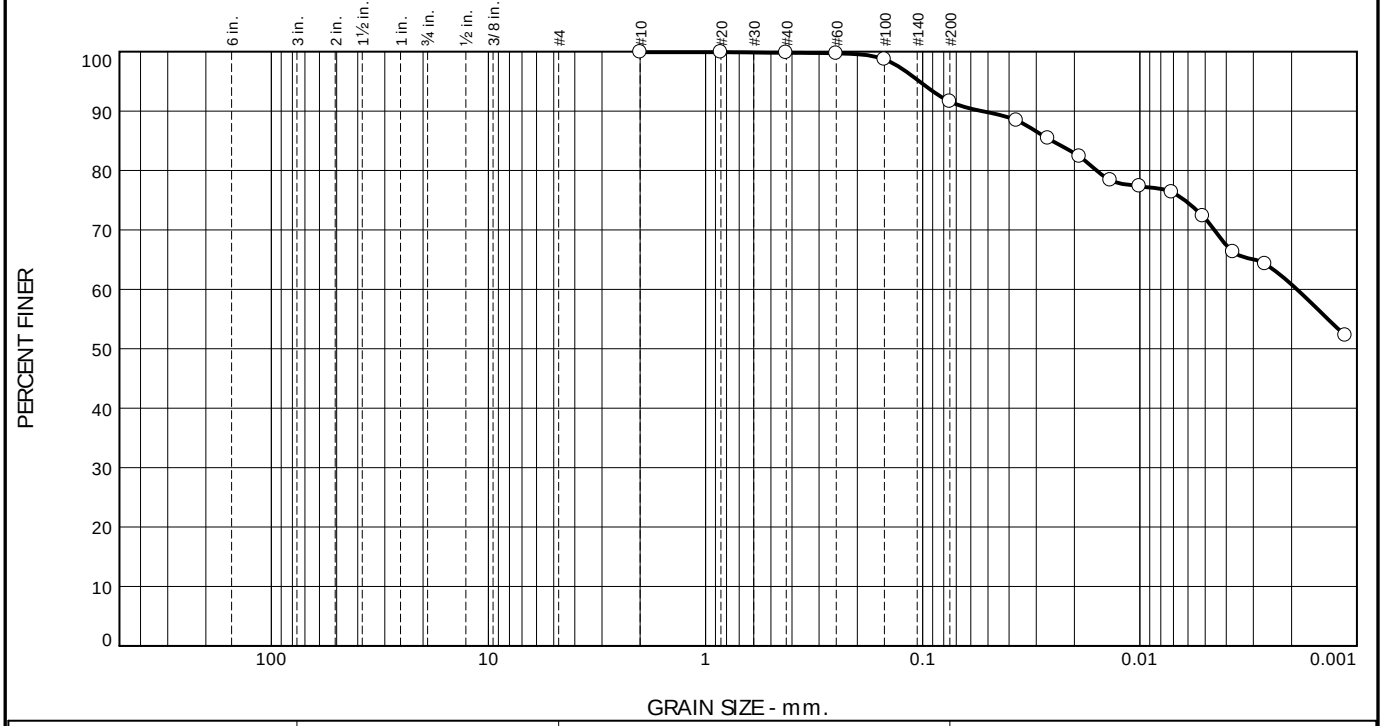
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	0.0028
D_{80}	0.0117
D_{85}	0.0209
D_{90}	0.0303
D_{95}	0.0912

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	8.2	30.8	60.8

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.9		
#40	99.8		
#60	99.7		
#100	98.7		
#200	91.6		
0.0369 mm.	88.4		
0.0265 mm.	85.4		
0.0190 mm.	82.4		
0.0137 mm.	78.4		
0.0100 mm.	77.4		
0.0071 mm.	76.4		
0.0051 mm.	72.3		
0.0037 mm.	66.3		
0.0027 mm.	64.3		
0.0011 mm.	52.2		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-062723-S-MTK-Source Clay 32

Atterberg Limits (ASTM D 4318)

PL= 21 LL= 66 PI= 45

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(46)

Coefficients

D_{90}= 0.0534 D_{85}= 0.0253 D_{60}= 0.0019
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/25/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 32

Date Sampled: 06/27/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 32
Material Description: Brown Fat Clay
12599404-062723-S-MTK-Source Clay 32
Sample Date: 06/27/2023 **Date Received:** 10/12/2023
PL: 21 **LL:** 66
PI: 45 **USCS Classification:** CH
AASHTO Classification: A-7-6(46)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/25/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.9
#40	99.8
#60	99.7
#100	98.7
#200	91.6

Hydrometer Test Data (ASTM D7928)

Test Date: 10/24/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 59.98
Hygroscopic moisture correction:
Moist weight and tare = 516.00
Dry weight and tare = 458.40
Tare weight = 196.50
Hygroscopic moisture = 22.0%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.5	49.00	44.00	8.2	0.0369	88.4
2.00	23.5	47.50	42.50	8.5	0.0265	85.4
4.00	23.6	46.00	41.00	8.7	0.0190	82.4
8.00	23.6	44.00	39.00	9.0	0.0137	78.4
15.00	23.6	43.50	38.50	9.1	0.0100	77.4
30.00	23.6	43.00	38.00	9.2	0.0071	76.4
60.00	23.6	41.00	36.00	9.5	0.0051	72.3
120.00	23.6	38.00	33.00	10.0	0.0037	66.3
240.00	23.6	37.00	32.00	10.2	0.0027	64.3
1440.00	23.7	31.00	26.00	11.2	0.0011	52.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	8.2		30.8	60.8	91.6

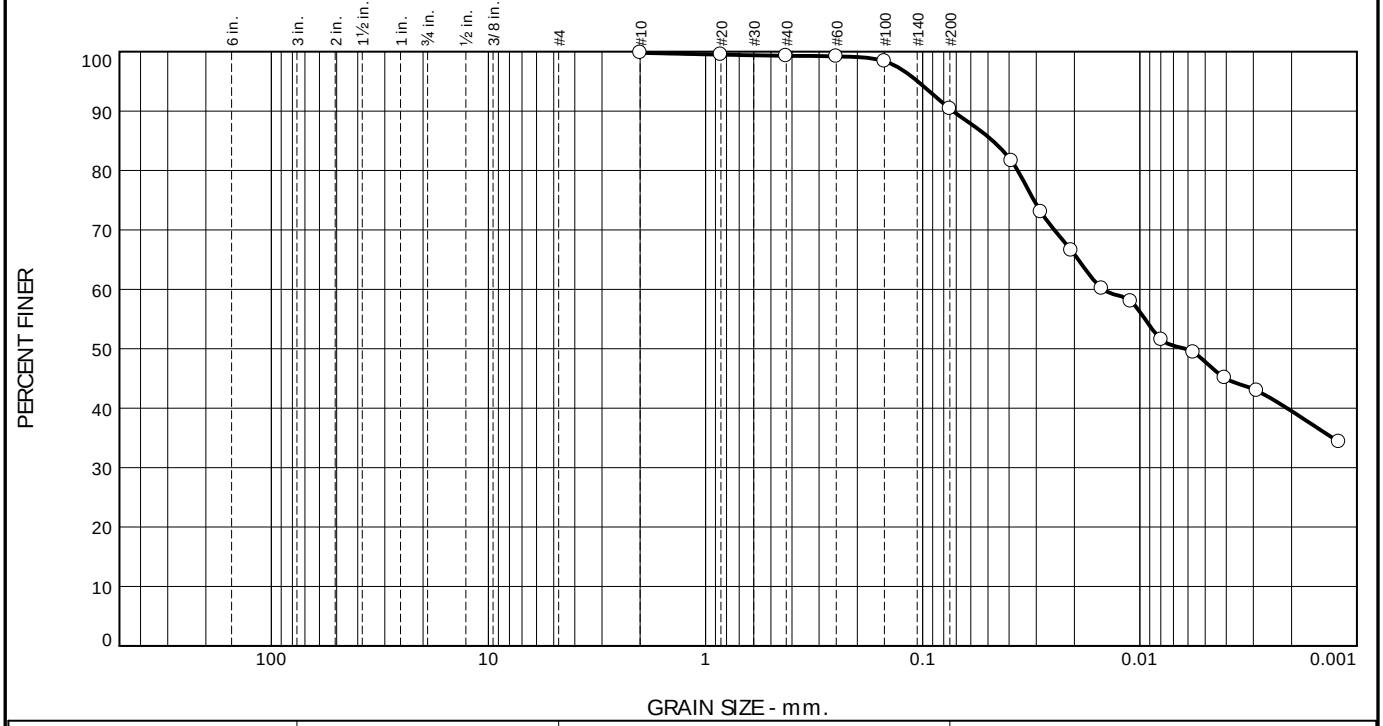
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	0.0019
D_{80}	0.0158
D_{85}	0.0253
D_{90}	0.0534
D_{95}	0.1036

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.5	8.9	50.9	39.5

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.8		
#20	99.5		
#40	99.3		
#60	99.2		
#100	98.4		
#200	90.4		
0.0390 mm.	81.6		
0.0286 mm.	73.0		
0.0207 mm.	66.6		
0.0150 mm.	60.1		
0.0110 mm.	58.0		
0.0080 mm.	51.6		
0.0057 mm.	49.4		
0.0041 mm.	45.1		
0.0029 mm.	43.0		
0.0012 mm.	34.4		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-070123-S-MTK-Source Clay 33

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 57 PI= 38

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(37)

Coefficients

D_{90}= 0.0726 D_{85}= 0.0476 D_{60}= 0.0148
D_{50}= 0.0062 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/25/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 33

Date Sampled: 07/01/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 33
Material Description: Brown Fat Clay
12599404-070123-S-MTK-Source Clay 33
Sample Date: 07/01/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 57
PI: 38 **USCS Classification:** CH
AASHTO Classification: A-7-6(37)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/25/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.8
#20	99.5
#40	99.3
#60	99.2
#100	98.4
#200	90.4

Hydrometer Test Data (ASTM D7928)

Test Date: 10/25/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer specimen (gms.) = 55
Hygroscopic moisture correction:
Moist weight and tare = 497.60
Dry weight and tare = 443.30
Tare weight = 167.70
Hygroscopic moisture = 19.7%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	43.00	38.00	9.2	0.0390	81.6
2.00	23.6	39.00	34.00	9.9	0.0286	73.0
4.00	23.6	36.00	31.00	10.3	0.0207	66.6
8.00	23.6	33.00	28.00	10.8	0.0150	60.1
15.00	23.6	32.00	27.00	11.0	0.0110	58.0
30.00	23.6	29.00	24.00	11.5	0.0080	51.6
60.00	23.6	28.00	23.00	11.7	0.0057	49.4
120.00	23.6	26.00	21.00	12.0	0.0041	45.1
240.00	23.6	25.00	20.00	12.2	0.0029	43.0
1440.00	23.7	21.00	16.00	12.8	0.0012	34.4

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.5	8.9		50.9	39.5	90.4

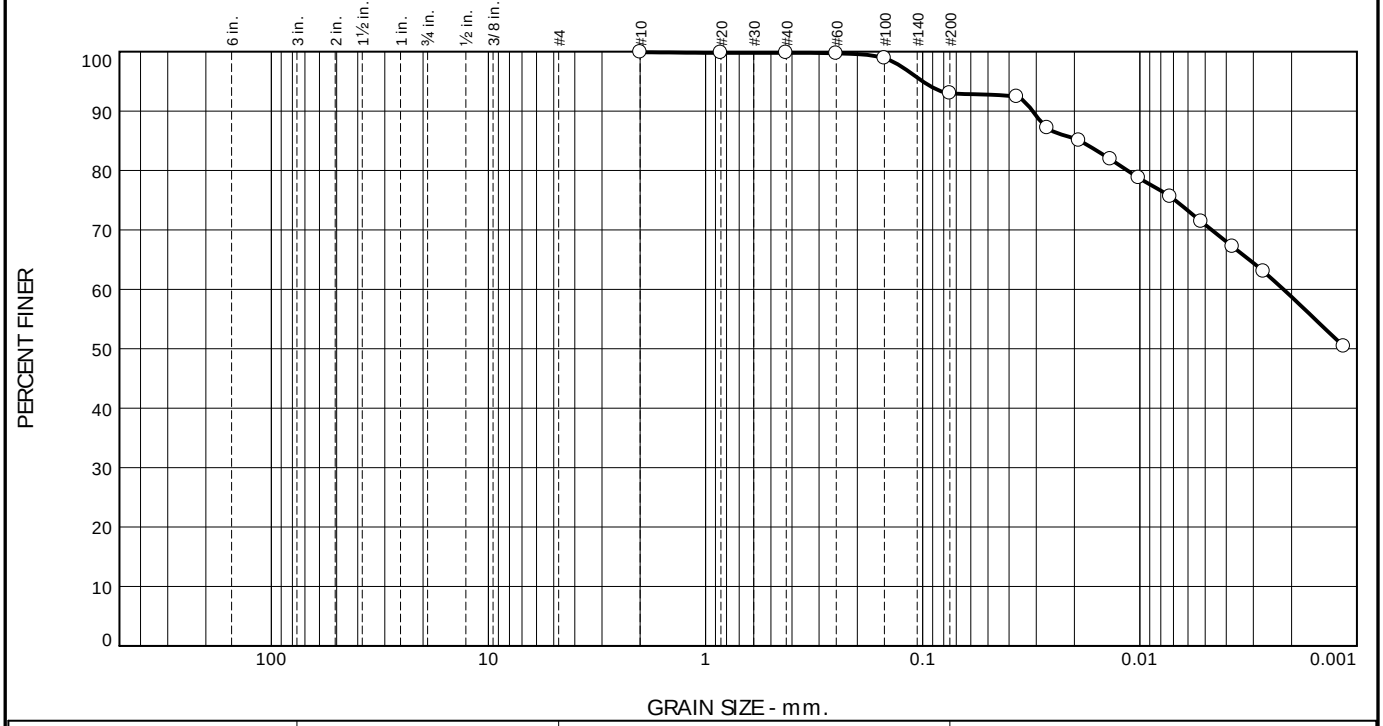
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0021
D_{50}	0.0062
D_{60}	0.0148
D_{80}	0.0365
D_{85}	0.0476
D_{90}	0.0726
D_{95}	0.1054

Fineness Modulus

0.03

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	6.8	34.3	58.7

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.8		
#40	99.8		
#60	99.7		
#100	98.9		
#200	93.0		
0.0369 mm.	92.4		
0.0267 mm.	87.2		
0.0191 mm.	85.1		
0.0137 mm.	81.9		
0.0101 mm.	78.8		
0.0073 mm.	75.6		
0.0052 mm.	71.4		
0.0037 mm.	67.2		
0.0027 mm.	63.0		
0.0012 mm.	50.4		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-070523-S-MTK-Source Clay 34

Atterberg Limits (ASTM D 4318)

PL= 23 LL= 73 PI= 50

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(52)

Coefficients

D_{90}= 0.0312 D_{85}= 0.0189 D_{60}= 0.0022
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/25/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 34

Date Sampled: 07/05/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 34
Material Description: Brown Fat Clay
12599404-070523-S-MTK-Source Clay 34
Sample Date: 07/05/2023 **Date Received:** 10/12/2023
PL: 23 **LL:** 73
PI: 50 **USCS Classification:** CH
AASHTO Classification: A-7-6(52)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/25/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.8
#40	99.8
#60	99.7
#100	98.9
#200	93.0

Hydrometer Test Data (ASTM D7928)

Test Date: 10/24/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 59.0
Hygroscopic moisture correction:
Moist weight and tare = 501.10
Dry weight and tare = 436.00
Tare weight = 180.01
Hygroscopic moisture = 25.4%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	49.00	44.00	8.2	0.0369	92.4
2.00	23.6	46.50	41.50	8.6	0.0267	87.2
4.00	23.6	45.50	40.50	8.8	0.0191	85.1
8.00	23.6	44.00	39.00	9.0	0.0137	81.9
15.00	23.6	42.50	37.50	9.3	0.0101	78.8
30.00	23.6	41.00	36.00	9.5	0.0073	75.6
60.00	23.6	39.00	34.00	9.9	0.0052	71.4
120.00	23.7	37.00	32.00	10.2	0.0037	67.2
240.00	23.6	35.00	30.00	10.5	0.0027	63.0
1440.00	23.5	29.00	24.00	11.5	0.0012	50.4

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	6.8		34.3	58.7	93.0

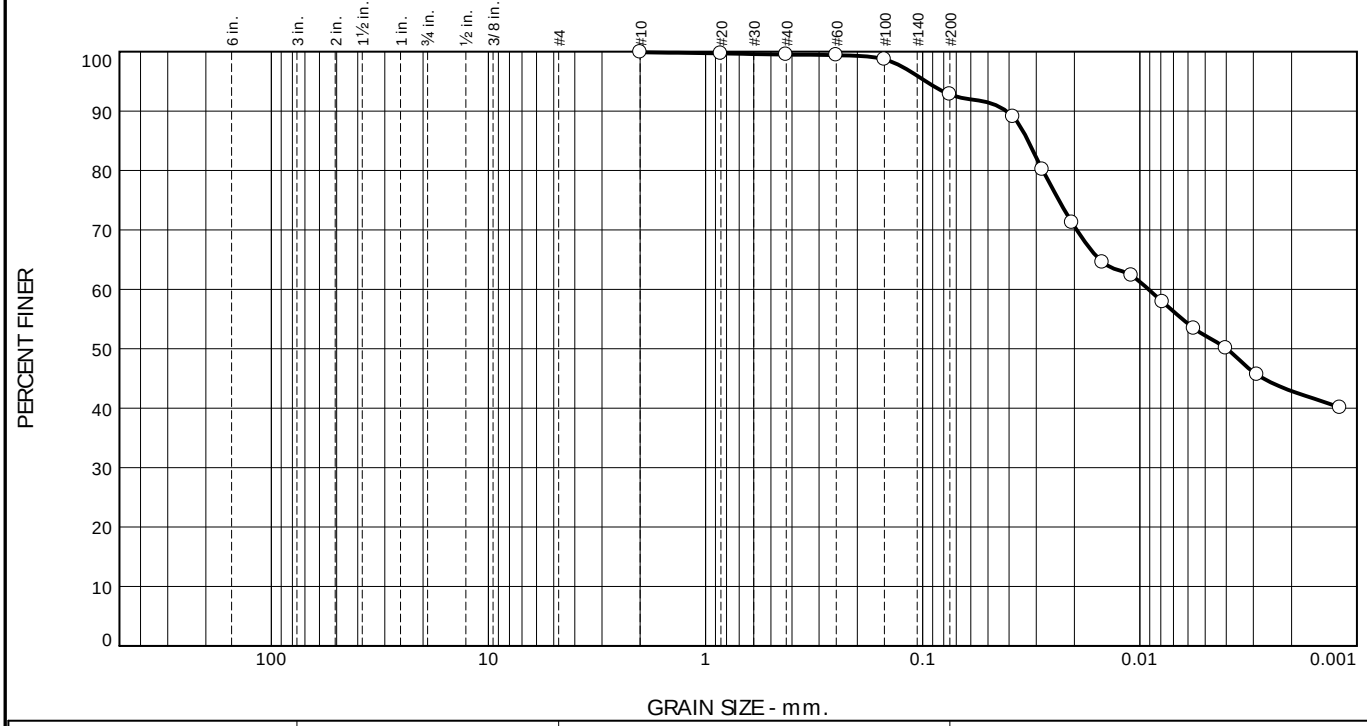
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	0.0022
D_{80}	0.0114
D_{85}	0.0189
D_{90}	0.0312
D_{95}	0.1000

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.4	6.7	49.9	42.9

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.7		
#40	99.5		
#60	99.4		
#100	98.7		
#200	92.8		
0.0383 mm.	89.1		
0.0281 mm.	80.2		
0.0205 mm.	71.2		
0.0149 mm.	64.6		
0.0109 mm.	62.3		
0.0079 mm.	57.9		
0.0056 mm.	53.4		
0.0040 mm.	50.1		
0.0029 mm.	45.6		
0.0012 mm.	40.1		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-071023-S-MTK-Source Clay 35

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 59 PI= 40

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(41)

Coefficients

D_{90}= 0.0411 D_{85}= 0.0327 D_{60}= 0.0091
D_{50}= 0.0040 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/25/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 35

Date Sampled: 07/10/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 35
Material Description: Brown Fat Clay
12599404-071023-S-MTK-Source Clay 35
Sample Date: 07/10/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 59
PI: 40 **USCS Classification:** CH
AASHTO Classification: A-7-6(41)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/25/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.7
#40	99.5
#60	99.4
#100	98.7
#200	92.8

Hydrometer Test Data (ASTM D7928)

Test Date: 11/13/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 55.00
Hygroscopic moisture correction:
Moist weight and tare = 512.80
Dry weight and tare = 447.10
Tare weight = 172.80
Hygroscopic moisture = 24.0%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	45.00	40.00	8.9	0.0383	89.1
2.00	23.5	41.00	36.00	9.5	0.0281	80.2
4.00	23.6	37.00	32.00	10.2	0.0205	71.2
8.00	23.6	34.00	29.00	10.7	0.0149	64.6
15.00	23.6	33.00	28.00	10.8	0.0109	62.3
30.00	23.5	31.00	26.00	11.2	0.0079	57.9
60.00	23.6	29.00	24.00	11.5	0.0056	53.4
120.00	23.8	27.50	22.50	11.7	0.0040	50.1
240.00	23.6	25.50	20.50	12.1	0.0029	45.6
1440.00	23.6	23.00	18.00	12.5	0.0012	40.1

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.4	6.7		49.9	42.9	92.8

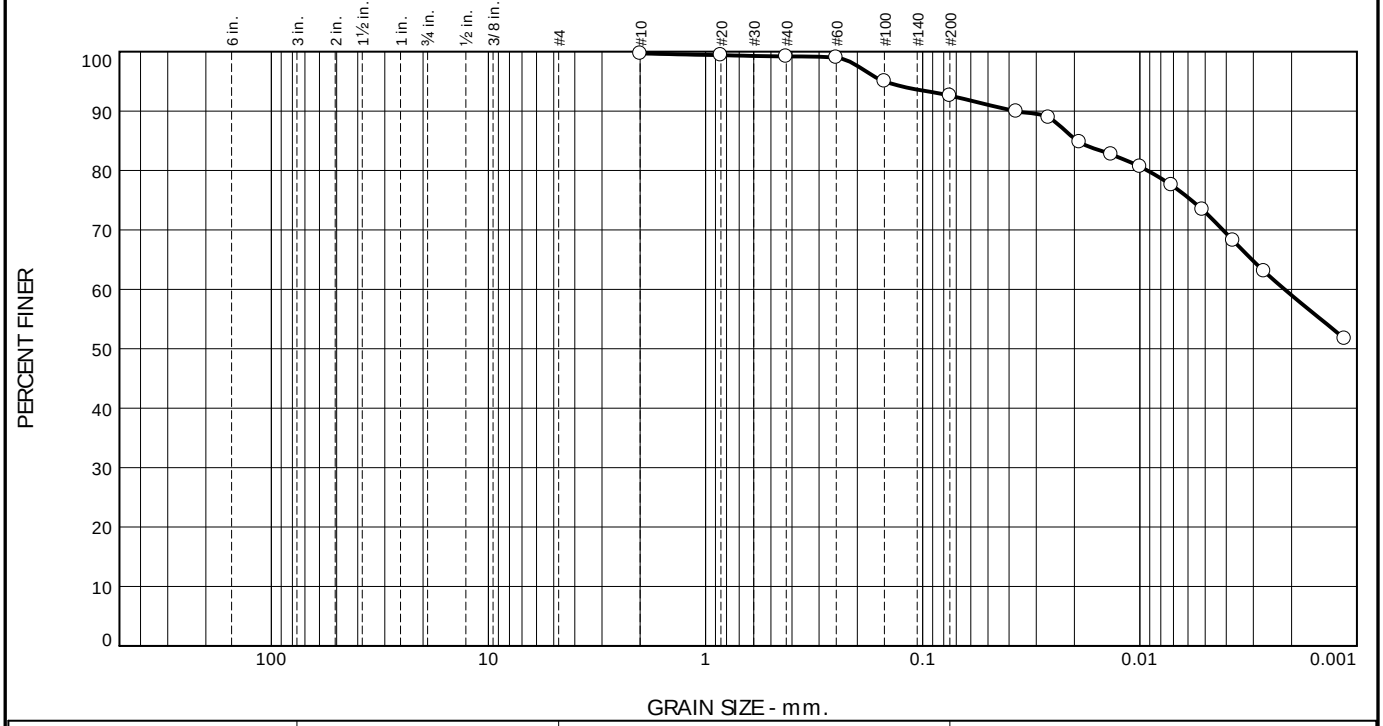
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0040
D_{60}	0.0091
D_{80}	0.0280
D_{85}	0.0327
D_{90}	0.0411
D_{95}	0.0966

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.5	6.6	33.6	59.0

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.7		
#20	99.4		
#40	99.2		
#60	99.0		
#100	95.0		
#200	92.6		
0.0371 mm.	90.0		
0.0263 mm.	88.9		
0.0190 mm.	84.8		
0.0136 mm.	82.7		
0.0100 mm.	80.7		
0.0072 mm.	77.6		
0.0051 mm.	73.4		
0.0037 mm.	68.2		
0.0027 mm.	63.1		
0.0011 mm.	51.7		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-071323-S-MTK-Source Clay 36

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 63 PI= 44

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(45)

Coefficients

D_{90}= 0.0375 D_{85}= 0.0194 D_{60}= 0.0022
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/27/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 36

Date Sampled: 07/13/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 36
Material Description: Brown Fat Clay
12599404-071323-S-MTK-Source Clay 36
Sample Date: 07/13/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 63
PI: 44 **USCS Classification:** CH
AASHTO Classification: A-7-6(45)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/27/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.7
#20	99.4
#40	99.2
#60	99.0
#100	95.0
#200	92.6

Hydrometer Test Data (ASTM D7928)

Test Date: 11/13/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.7
Weight of hydrometer specimen (gms.) = 59.99
Hygroscopic moisture correction:
Moist weight and tare = 454.60
Dry weight and tare = 393.10
Tare weight = 155.00
Hygroscopic moisture = 25.8%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	48.50	43.50	8.3	0.0371	90.0
2.00	23.6	48.00	43.00	8.4	0.0263	88.9
4.00	23.6	46.00	41.00	8.7	0.0190	84.8
8.00	23.6	45.00	40.00	8.9	0.0136	82.7
15.00	23.6	44.00	39.00	9.0	0.0100	80.7
30.00	23.6	42.50	37.50	9.3	0.0072	77.6
60.00	23.6	40.50	35.50	9.6	0.0051	73.4
120.00	23.5	38.00	33.00	10.0	0.0037	68.2
240.00	23.6	35.50	30.50	10.4	0.0027	63.1
1440.00	23.6	30.00	25.00	11.3	0.0011	51.7

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.5	6.6		33.6	59.0	92.6

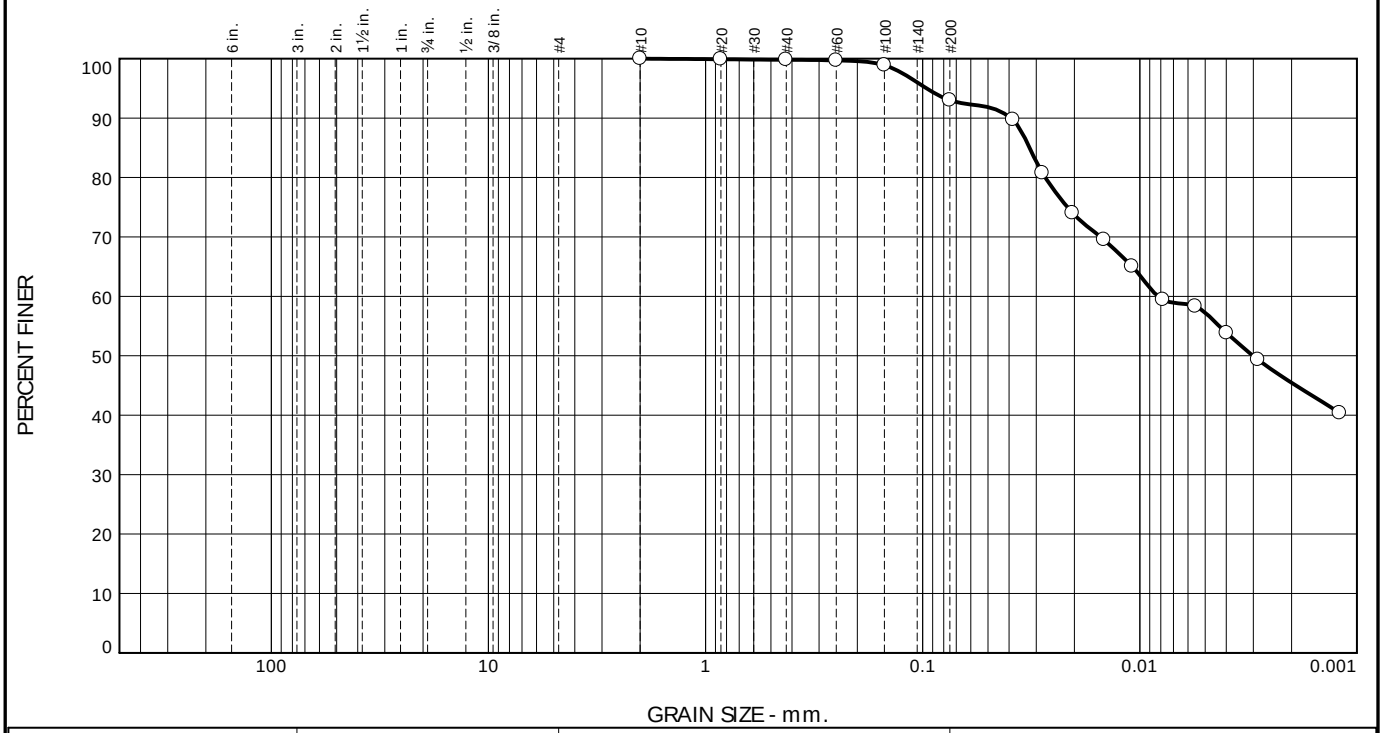
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	
D_{60}	0.0022
D_{80}	0.0092
D_{85}	0.0194
D_{90}	0.0375
D_{95}	0.1500

Fineness Modulus

0.07

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	6.8	47.5	45.5

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	100.0		
#20	99.9		
#40	99.8		
#60	99.7		
#100	98.9		
#200	93.0		
0.0383 mm.	89.7		
0.0281 mm.	80.7		
0.0204 mm.	74.0		
0.0146 mm.	69.5		
0.0109 mm.	65.0		
0.0078 mm.	59.4		
0.0056 mm.	58.3		
0.0040 mm.	53.8		
0.0029 mm.	49.3		
0.0012 mm.	40.4		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-071823-S-MTK-Source Clay 37

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 64 PI= 45

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(46)

Coefficients

D_{90}= 0.0392 D_{85}= 0.0322 D_{60}= 0.0082
D_{50}= 0.0030 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 10/27/23

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 37

Date Sampled: 07/18/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 37
Material Description: Brown Fat Clay
12599404-071823-S-MTK-Source Clay 37
Sample Date: 07/18/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 64
PI: 45 **USCS Classification:** CH
AASHTO Classification: A-7-6(46)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 10/27/23 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	100.0
#20	99.9
#40	99.8
#60	99.7
#100	98.9
#200	93.0

Hydrometer Test Data (ASTM D7928)

Test Date: 11/13/23 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer specimen (gms.) = 55.00
Hygroscopic moisture correction:
Moist weight and tare = 518.50
Dry weight and tare = 452.90
Tare weight = 187.80
Hygroscopic moisture = 24.7%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	45.00	40.00	8.9	0.0383	89.7
2.00	23.6	41.00	36.00	9.5	0.0281	80.7
4.00	23.5	38.00	33.00	10.0	0.0204	74.0
8.00	23.6	36.00	31.00	10.3	0.0146	69.5
15.00	23.6	34.00	29.00	10.7	0.0109	65.0
30.00	23.6	31.50	26.50	11.1	0.0078	59.4
60.00	23.6	31.00	26.00	11.2	0.0056	58.3
120.00	23.6	29.00	24.00	11.5	0.0040	53.8
240.00	23.6	27.00	22.00	11.8	0.0029	49.3
1440.00	23.5	23.00	18.00	12.5	0.0012	40.4

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.2	6.8	7.0	47.5	45.5	93.0

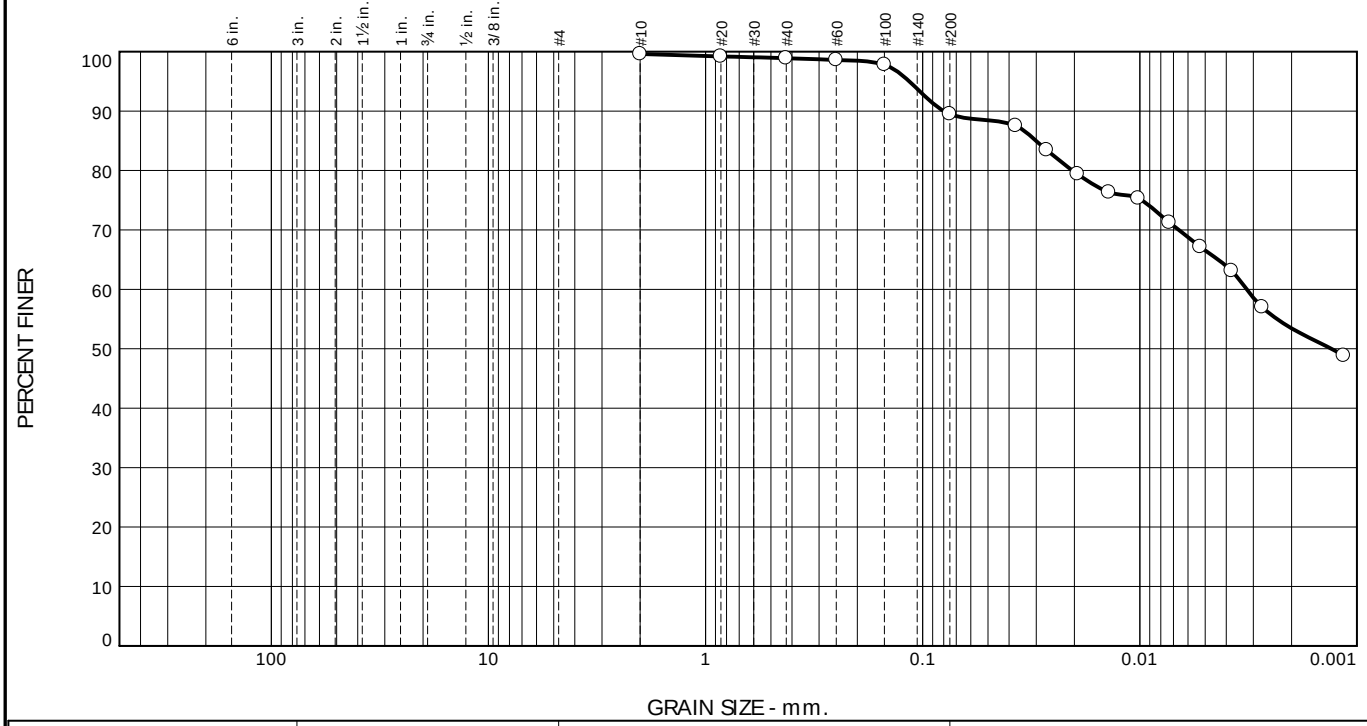
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0030
D_{60}	0.0082
D_{80}	0.0272
D_{85}	0.0322
D_{90}	0.0392
D_{95}	0.0960

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.7	9.4	36.1	53.4

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.6		
#20	99.2		
#40	98.9		
#60	98.6		
#100	97.8		
#200	89.5		
0.0372 mm.	87.5		
0.0269 mm.	83.5		
0.0193 mm.	79.4		
0.0139 mm.	76.3		
0.0102 mm.	75.3		
0.0073 mm.	71.2		
0.0053 mm.	67.2		
0.0038 mm.	63.1		
0.0027 mm.	57.0		
0.0012 mm.	48.9		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-072623-S-MTK-Source Clay 38

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 56 PI= 37

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(36)

Coefficients

D_{90}= 0.0801 D_{85}= 0.0300 D_{60}= 0.0032
D_{50}= 0.0013 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/17/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 38

Date Sampled: 07/26/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

1/ 3/ 2024

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 38
Material Description: Brown Fat Clay
12599404-072623-S-MTK-Source Clay 38
Sample Date: 07/26/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 56
PI: 37 **USCS Classification:** CH
AASHTO Classification: A-7-6(36)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/17/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.6
#20	99.2
#40	98.9
#60	98.6
#100	97.8
#200	89.5

Hydrometer Test Data (ASTM D7928)

Test Date: 11/20/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.6
Weight of hydrometer specimen (gms.) = 59.98
Hygroscopic moisture correction:
Moist weight and tare = 433.50
Dry weight and tare = 383.20
Tare weight = 173.20
Hygroscopic moisture = 24.0%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	48.00	43.00	8.4	0.0372	87.5
2.00	23.5	46.00	41.00	8.7	0.0269	83.5
4.00	23.6	44.00	39.00	9.0	0.0193	79.4
8.00	23.5	42.50	37.50	9.3	0.0139	76.3
15.00	23.6	42.00	37.00	9.4	0.0102	75.3
30.00	23.6	40.00	35.00	9.7	0.0073	71.2
60.00	23.5	38.00	33.00	10.0	0.0053	67.2
120.00	23.6	36.00	31.00	10.3	0.0038	63.1
240.00	23.6	33.00	28.00	10.8	0.0027	57.0
1440.00	23.5	29.00	24.00	11.5	0.0012	48.9

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.7	9.4		36.1	53.4	89.5

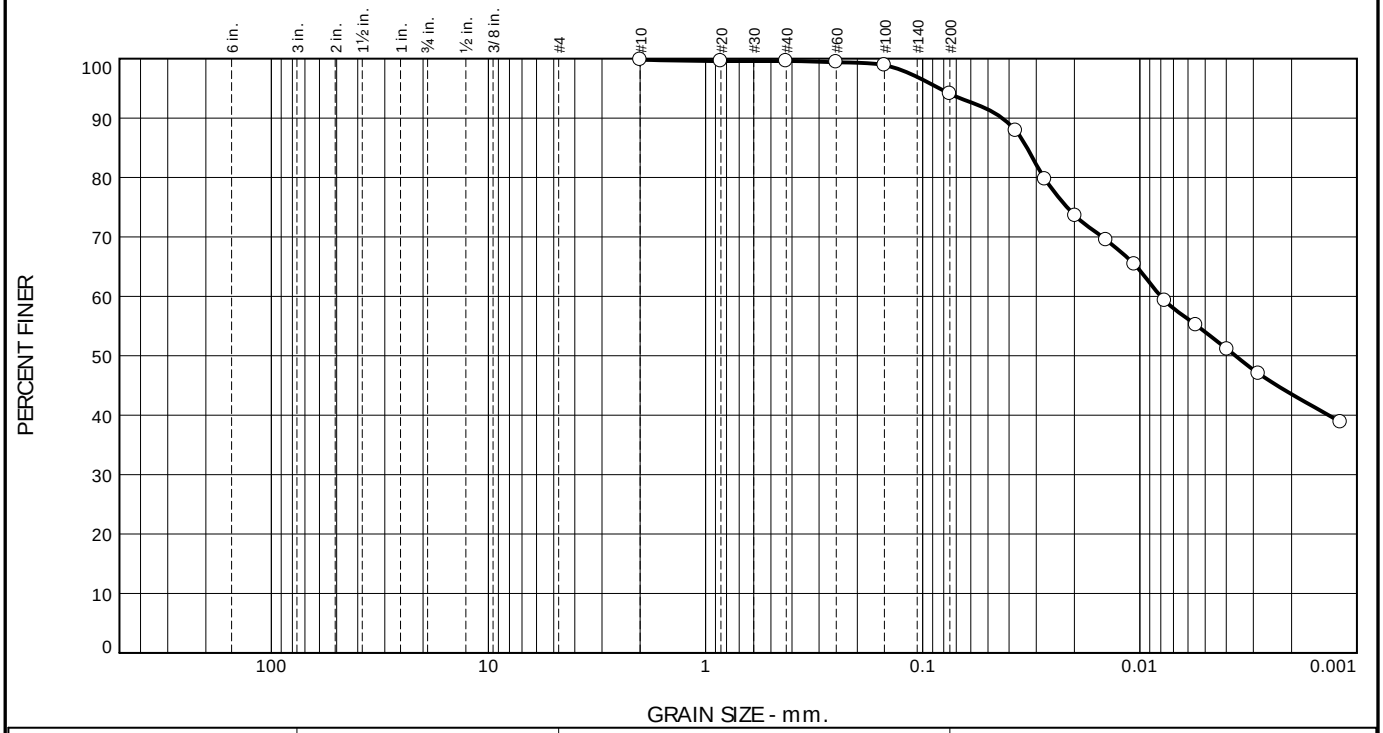
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0013
D_{60}	0.0032
D_{80}	0.0204
D_{85}	0.0300
D_{90}	0.0801
D_{95}	0.1152

Fineness Modulus

0.05

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.2	5.5	50.6	43.5

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.8		
#20	99.6		
#40	99.6		
#60	99.4		
#100	98.9		
#200	94.1		
0.0372 mm.	87.9		
0.0274 mm.	79.7		
0.0199 mm.	73.6		
0.0143 mm.	69.5		
0.0106 mm.	65.4		
0.0077 mm.	59.3		
0.0055 mm.	55.2		
0.0040 mm.	51.1		
0.0028 mm.	47.0		
0.0012 mm.	38.8		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-080123-S-MTK-Source Clay 39

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 57 PI= 38

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(39)

Coefficients

D_{90}= 0.0430 D_{85}= 0.0330 D_{60}= 0.0080
D_{50}= 0.0036 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/17/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch MAnager

Sample Number: Clay 39

Date Sampled: 08/01/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 39
Material Description: Brown Fat Clay
12599404-080123-S-MTK-Source Clay 39
Sample Date: 08/01/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 57
PI: 38 **USCS Classification:** CH
AASHTO Classification: A-7-6(39)
Checked By: W. Bonner **Title:** Branch MAnager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/17/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.8
#20	99.6
#40	99.6
#60	99.4
#100	98.9
#200	94.1

Hydrometer Test Data (ASTM D7928)

Test Date: 11/20/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer specimen (gms.) = 59.99
Hygroscopic moisture correction:
Moist weight and tare = 439.00
Dry weight and tare = 388.20
Tare weight = 178.70
Hygroscopic moisture = 24.2%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	48.00	43.00	8.4	0.0372	87.9
2.00	23.6	44.00	39.00	9.0	0.0274	79.7
4.00	23.6	41.00	36.00	9.5	0.0199	73.6
8.00	23.6	39.00	34.00	9.9	0.0143	69.5
15.00	23.6	37.00	32.00	10.2	0.0106	65.4
30.00	23.6	34.00	29.00	10.7	0.0077	59.3
60.00	23.6	32.00	27.00	11.0	0.0055	55.2
120.00	23.6	30.00	25.00	11.3	0.0040	51.1
240.00	23.5	28.00	23.00	11.7	0.0028	47.0
1440.00	23.6	24.00	19.00	12.3	0.0012	38.8

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.2	5.5		50.6	43.5	94.1

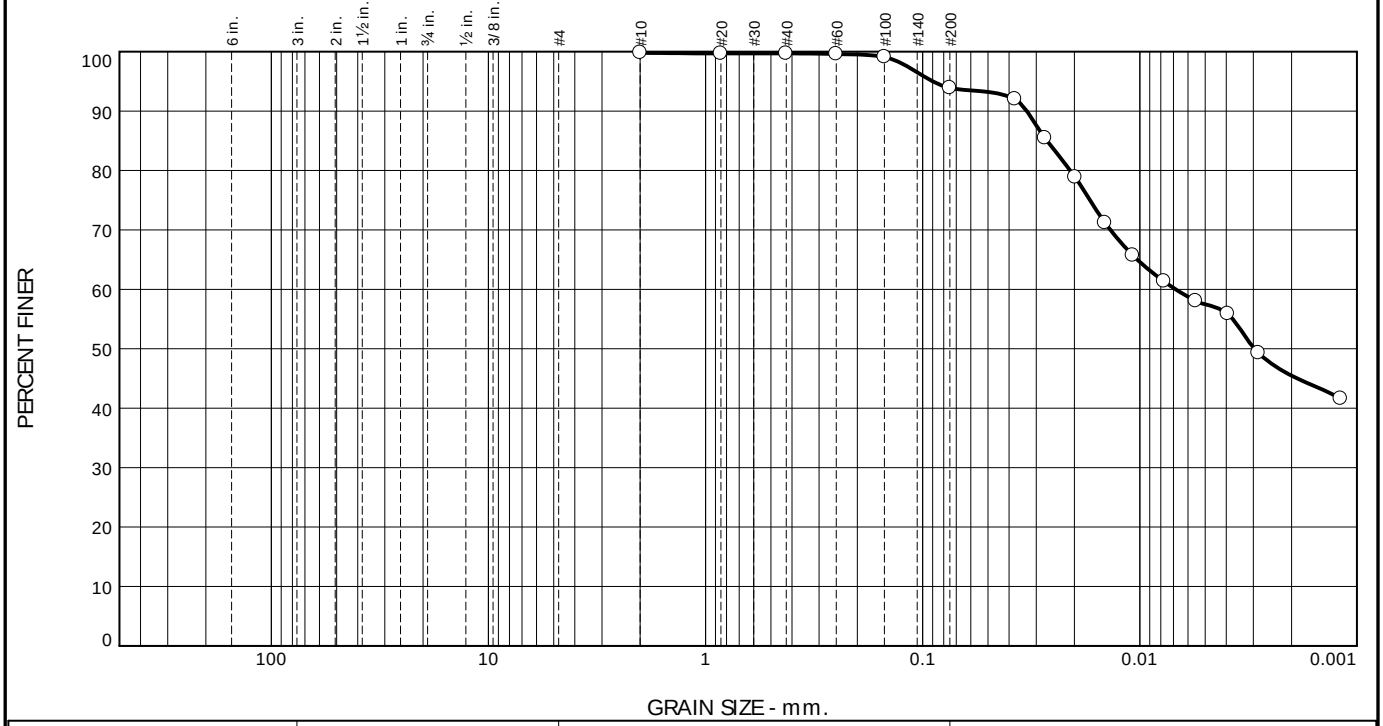
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0013
D_{50}	0.0036
D_{60}	0.0080
D_{80}	0.0277
D_{85}	0.0330
D_{90}	0.0430
D_{95}	0.0838

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.1	5.8	48.4	45.5

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.8		
#20	99.7		
#40	99.7		
#60	99.6		
#100	99.1		
#200	93.9		
0.0376 mm.	92.0		
0.0274 mm.	85.4		
0.0199 mm.	78.9		
0.0145 mm.	71.2		
0.0108 mm.	65.7		
0.0077 mm.	61.3		
0.0055 mm.	58.1		
0.0039 mm.	55.9		
0.0028 mm.	49.3		
0.0012 mm.	41.6		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-080723-S-MTK-Source Clay 40

Atterberg Limits (ASTM D 4318)

PL= 18 LL= 55 PI= 37

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(38)

Coefficients

D_{90}= 0.0331 D_{85}= 0.0268 D_{60}= 0.0068
D_{50}= 0.0030 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/17/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 40

Date Sampled: 08/07/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 40
Material Description: Brown Fat Clay
12599404-080723-S-MTK-Source Clay 40
Sample Date: 08/07/2023 **Date Received:** 10/12/2023
PL: 18 **LL:** 55
PI: 37 **USCS Classification:** CH
AASHTO Classification: A-7-6(38)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/17/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.8
#20	99.7
#40	99.7
#60	99.6
#100	99.1
#200	93.9

Hydrometer Test Data (ASTM D7928)

Test Date: 11/20/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer specimen (gms.) = 56.00
Hygroscopic moisture correction:
Moist weight and tare = 459.90
Dry weight and tare = 408.80
Tare weight = 198.70
Hygroscopic moisture = 24.3%
Table of composite correction values:

Temp., deg. C:	23.5	23.7
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	47.00	42.00	8.5	0.0376	92.0
2.00	23.6	44.00	39.00	9.0	0.0274	85.4
4.00	23.6	41.00	36.00	9.5	0.0199	78.9
8.00	23.5	37.50	32.50	10.1	0.0145	71.2
15.00	23.6	35.00	30.00	10.5	0.0108	65.7
30.00	23.5	33.00	28.00	10.8	0.0077	61.3
60.00	23.6	31.50	26.50	11.1	0.0055	58.1
120.00	23.6	30.50	25.50	11.3	0.0039	55.9
240.00	23.6	27.50	22.50	11.7	0.0028	49.3
1440.00	23.7	24.00	19.00	12.3	0.0012	41.6

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.1	5.8		48.4	45.5	93.9

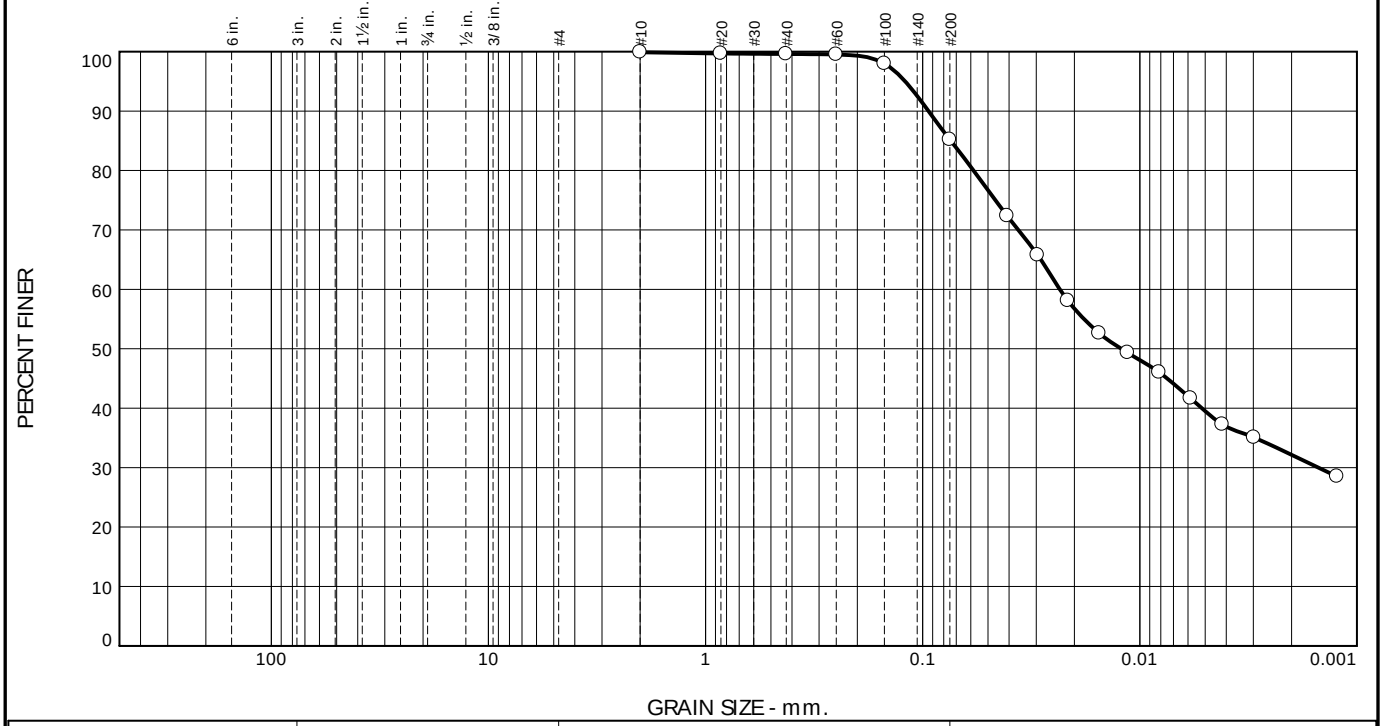
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0030
D_{60}	0.0068
D_{80}	0.0209
D_{85}	0.0268
D_{90}	0.0331
D_{95}	0.0899

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.3	14.4	53.0	32.2

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.7		
#40	99.6		
#60	99.5		
#100	98.0		
#200	85.2		
0.0408 mm.	72.3		
0.0295 mm.	65.8		
0.0214 mm.	58.1		
0.0154 mm.	52.6		
0.0114 mm.	49.3		
0.0081 mm.	46.0		
0.0058 mm.	41.7		
0.0042 mm.	37.3		
0.0030 mm.	35.1		
0.0012 mm.	28.5		

* (no specification provided)

Material Description

Brown Clay w/ Sand
12599404-081123-S-MTK-Source Clay 41

Atterberg Limits (ASTM D 4318)

PL= 17 LL= 50 PI= 33

Classification

USCS (D 2487)= CH/CL AASHTO (M 145)= A-7-6(29)

Coefficients

D_{90}= 0.0940 D_{85}= 0.0742 D_{60}= 0.0234
D_{50}= 0.0121 D_{30}= 0.0015 D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/17/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 41

Date Sampled: 08/11/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 41
Material Description: Brown Clay w/ Sand
12599404-081123-S-MTK-Source Clay 41
Sample Date: 08/11/2023 **Date Received:** 10/12/2023
PL: 17 **LL:** 50
PI: 33 **USCS Classification:** CH/CL
AASHTO Classification: A-7-6(29)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/17/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.7
#40	99.6
#60	99.5
#100	98.0
#200	85.2

Hydrometer Test Data (ASTM D7928)

Test Date: 11/28/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 54.99
Hygroscopic moisture correction:
Moist weight and tare = 455.10
Dry weight and tare = 408.40
Tare weight = 196.40
Hygroscopic moisture = 22.0%
Table of composite correction values:

Temp., deg. C:	23.4	23.8
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.5	38.00	33.00	10.0	0.0408	72.3
2.00	23.5	35.00	30.00	10.5	0.0295	65.8
4.00	23.5	31.50	26.50	11.1	0.0214	58.1
8.00	23.8	29.00	24.00	11.5	0.0154	52.6
15.00	23.8	27.50	22.50	11.7	0.0114	49.3
30.00	23.5	26.00	21.00	12.0	0.0081	46.0
60.00	23.5	24.00	19.00	12.3	0.0058	41.7
120.00	23.8	22.00	17.00	12.6	0.0042	37.3
240.00	23.4	21.00	16.00	12.8	0.0030	35.1
1440.00	23.8	18.00	13.00	13.3	0.0012	28.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.3	14.4		53.0	32.2	85.2

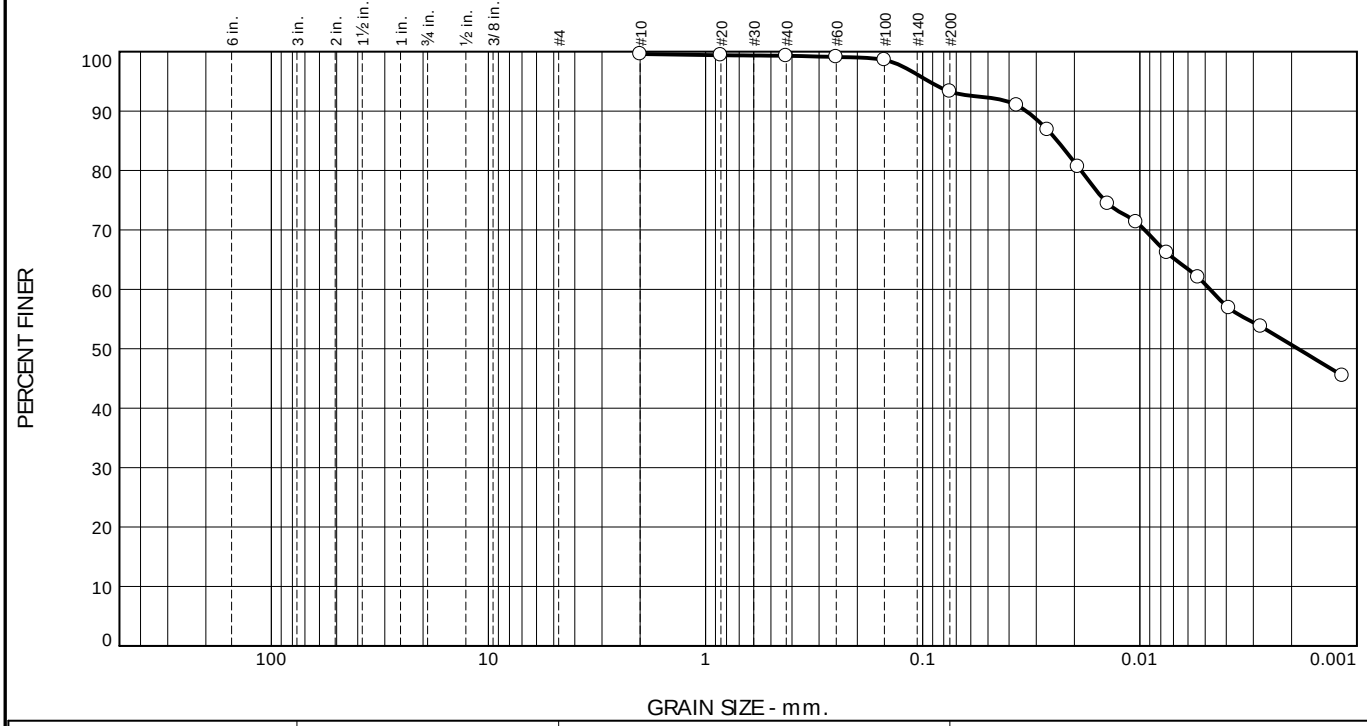
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	0.0015
D_{40}	0.0052
D_{50}	0.0121
D_{60}	0.0234
D_{80}	0.0584
D_{85}	0.0742
D_{90}	0.0940
D_{95}	0.1204

Fineness Modulus

0.03

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.3	6.0	42.6	50.7

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.6		
#20	99.4		
#40	99.3		
#60	99.1		
#100	98.6		
#200	93.3		
0.0368 mm.	91.0		
0.0266 mm.	86.8		
0.0193 mm.	80.6		
0.0140 mm.	74.4		
0.0104 mm.	71.3		
0.0075 mm.	66.2		
0.0054 mm.	62.0		
0.0039 mm.	56.9		
0.0028 mm.	53.8		
0.0012 mm.	45.5		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-081523-S-MTK-Source Clay 42

Atterberg Limits (ASTM D 4318)

PL= 22 LL= 68 PI= 46

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(48)

Coefficients

D_{90}= 0.0333 D_{85}= 0.0240 D_{60}= 0.0047
D_{50}= 0.0019 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/17/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 42

Date Sampled: 08/15/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 42
Material Description: Brown Fat Clay
12599404-081523-S-MTK-Source Clay 42
Sample Date: 08/15/2023 **Date Received:** 10/12/2023
PL: 22 **LL:** 68
PI: 46 **USCS Classification:** CH
AASHTO Classification: A-7-6(48)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/17/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.6
#20	99.4
#40	99.3
#60	99.1
#100	98.6
#200	93.3

Hydrometer Test Data (ASTM D7928)

Test Date: 11/28/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.6
Weight of hydrometer specimen (gms.) = 59
Hygroscopic moisture correction:
Moist weight and tare = 434.30
Dry weight and tare = 385.90
Tare weight = 183.00
Hygroscopic moisture = 23.9%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.7	49.00	44.00	8.2	0.0368	91.0
2.00	23.6	47.00	42.00	8.5	0.0266	86.8
4.00	23.9	44.00	39.00	9.0	0.0193	80.6
8.00	23.6	41.00	36.00	9.5	0.0140	74.4
15.00	23.5	39.50	34.50	9.8	0.0104	71.3
30.00	23.5	37.00	32.00	10.2	0.0075	66.2
60.00	23.5	35.00	30.00	10.5	0.0054	62.0
120.00	23.5	32.50	27.50	10.9	0.0039	56.9
240.00	23.7	31.00	26.00	11.2	0.0028	53.8
1440.00	23.5	27.00	22.00	11.8	0.0012	45.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.3	6.0		42.6	50.7	93.3

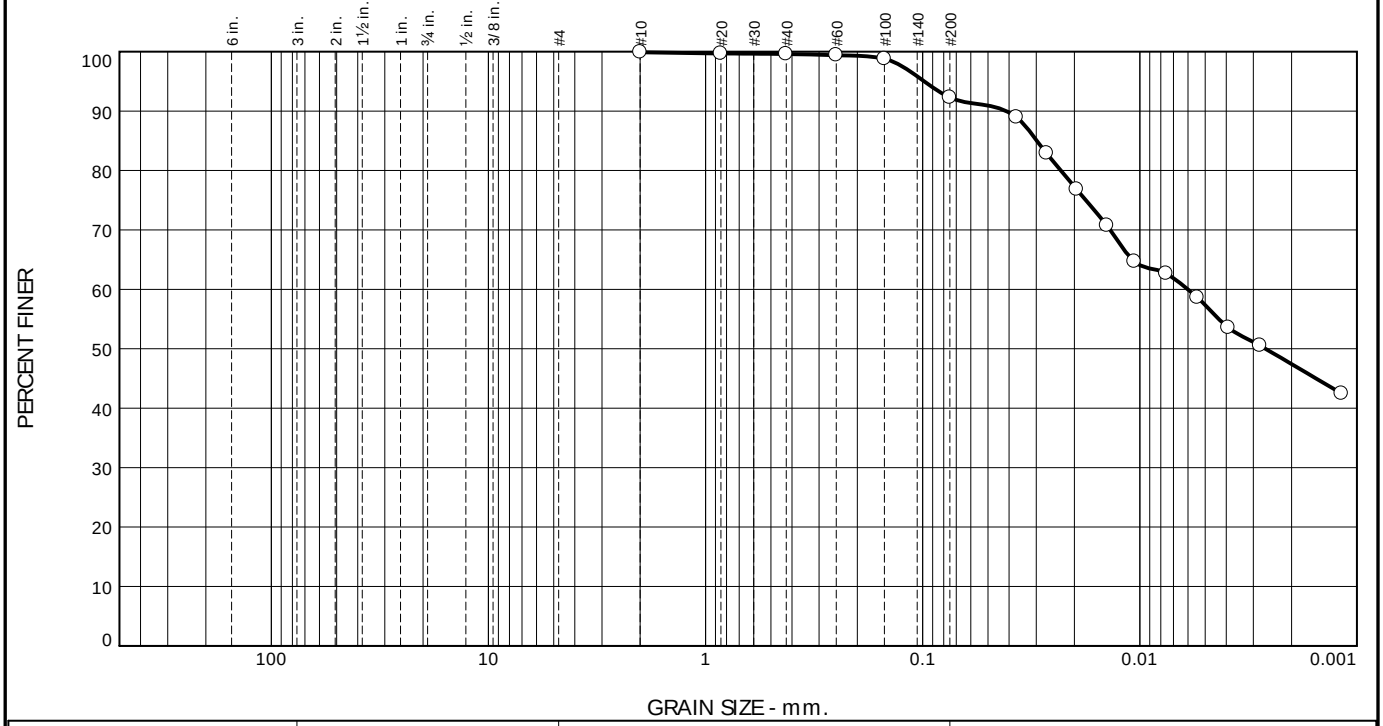
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0019
D_{60}	0.0047
D_{80}	0.0187
D_{85}	0.0240
D_{90}	0.0333
D_{95}	0.0936

Fineness Modulus

0.03

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.3	7.3	44.9	47.4

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.7		
#40	99.6		
#60	99.4		
#100	98.8		
#200	92.3		
0.0369 mm.	89.0		
0.0269 mm.	82.9		
0.0195 mm.	76.8		
0.0142 mm.	70.8		
0.0106 mm.	64.7		
0.0076 mm.	62.7		
0.0054 mm.	58.6		
0.0039 mm.	53.6		
0.0028 mm.	50.5		
0.0012 mm.	42.5		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-082123-S-MTK-Source Clay 43

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 61 PI= 42

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(42)

Coefficients

D_{90}= 0.0412 D_{85}= 0.0298 D_{60}= 0.0060
D_{50}= 0.0026 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 43

Date Sampled: 08/21/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 43
Material Description: Brown Fat Clay
12599404-082123-S-MTK-Source Clay 43
Sample Date: 08/21/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 61
PI: 42 **USCS Classification:** CH
AASHTO Classification: A-7-6(42)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.7
#40	99.6
#60	99.4
#100	98.8
#200	92.3

Hydrometer Test Data (ASTM D7928)

Test Date: 11/28/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 59.99
Hygroscopic moisture correction:
Moist weight and tare = 405.70
Dry weight and tare = 359.20
Tare weight = 154.90
Hygroscopic moisture = 22.8%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.5	49.00	44.00	8.2	0.0369	89.0
2.00	23.5	46.00	41.00	8.7	0.0269	82.9
4.00	23.5	43.00	38.00	9.2	0.0195	76.8
8.00	23.5	40.00	35.00	9.7	0.0142	70.8
15.00	23.6	37.00	32.00	10.2	0.0106	64.7
30.00	23.6	36.00	31.00	10.3	0.0076	62.7
60.00	23.5	34.00	29.00	10.7	0.0054	58.6
120.00	23.5	31.50	26.50	11.1	0.0039	53.6
240.00	23.6	30.00	25.00	11.3	0.0028	50.5
1440.00	23.5	26.00	21.00	12.0	0.0012	42.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.3	7.3		44.9	47.4	92.3

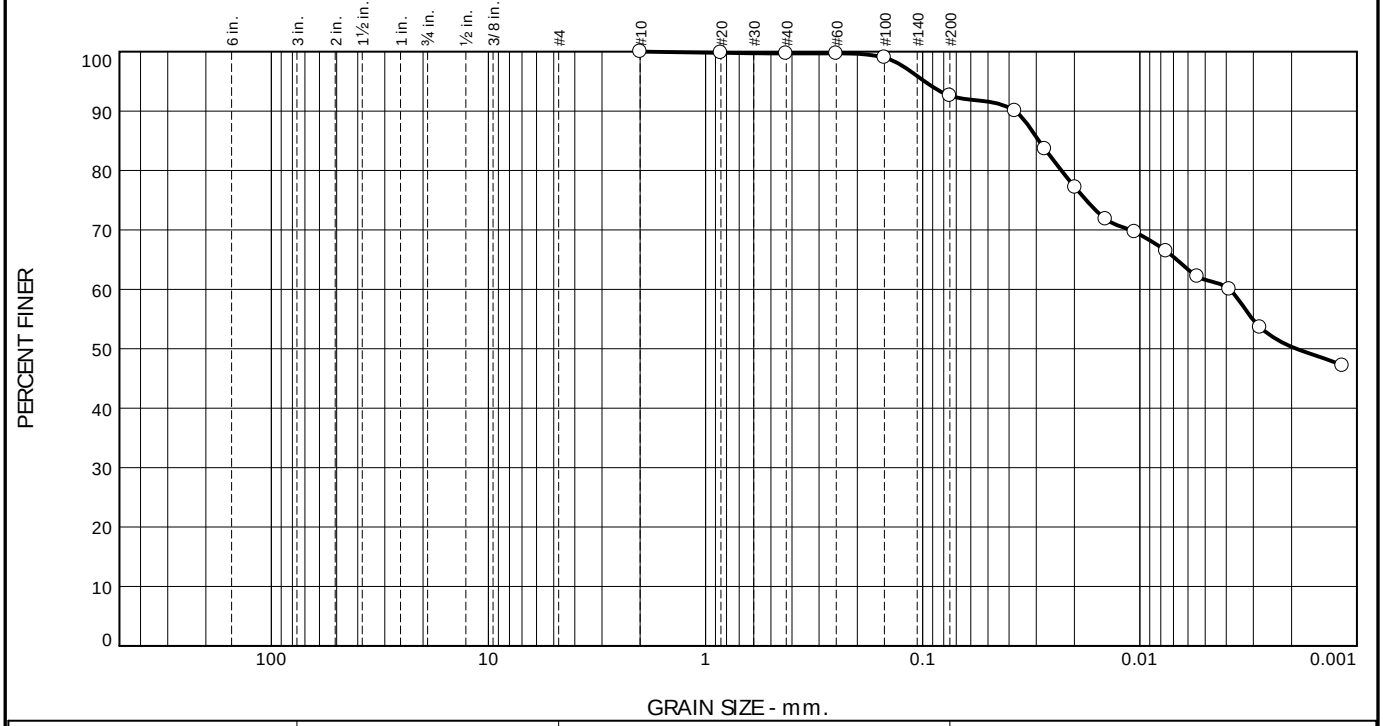
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0026
D_{60}	0.0060
D_{80}	0.0231
D_{85}	0.0298
D_{90}	0.0412
D_{95}	0.0985

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.3	7.1	42.3	50.3

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	100.0		
#20	99.8		
#40	99.7		
#60	99.7		
#100	99.0		
#200	92.6		
0.0376 mm.	90.0		
0.0274 mm.	83.6		
0.0199 mm.	77.2		
0.0144 mm.	71.8		
0.0106 mm.	69.7		
0.0076 mm.	66.5		
0.0054 mm.	62.2		
0.0039 mm.	60.0		
0.0028 mm.	53.6		
0.0012 mm.	47.2		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-082523-S-MTK-Source Clay 44

Atterberg Limits (ASTM D 4318)

PL= 21 LL= 66 PI= 45

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(46)

Coefficients

D_{90}= 0.0375 D_{85}= 0.0292 D_{60}= 0.0039
D_{50}= 0.0019 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 44

Date Sampled: 08/25/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 44
Material Description: Brown Fat Clay
12599404-082523-S-MTK-Source Clay 44
Sample Date: 08/25/2023 **Date Received:** 10/12/2023
PL: 21 **LL:** 66
PI: 45 **USCS Classification:** CH
AASHTO Classification: A-7-6(46)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	100.0
#20	99.8
#40	99.7
#60	99.7
#100	99.0
#200	92.6

Hydrometer Test Data (ASTM D7928)

Test Date: 11/30/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 100.0
Weight of hydrometer specimen (gms.) = 56.99
Hygroscopic moisture correction:
Moist weight and tare = 434.50
Dry weight and tare = 385.90
Tare weight = 179.40
Hygroscopic moisture = 23.5%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.7	47.00	42.00	8.5	0.0376	90.0
2.00	23.5	44.00	39.00	9.0	0.0274	83.6
4.00	23.6	41.00	36.00	9.5	0.0199	77.2
8.00	23.5	38.50	33.50	9.9	0.0144	71.8
15.00	23.6	37.50	32.50	10.1	0.0106	69.7
30.00	23.6	36.00	31.00	10.3	0.0076	66.5
60.00	23.6	34.00	29.00	10.7	0.0054	62.2
120.00	23.5	33.00	28.00	10.8	0.0039	60.0
240.00	23.6	30.00	25.00	11.3	0.0028	53.6
1440.00	23.5	27.00	22.00	11.8	0.0012	47.2

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	0.3	7.1	7.4	42.3	50.3	92.6

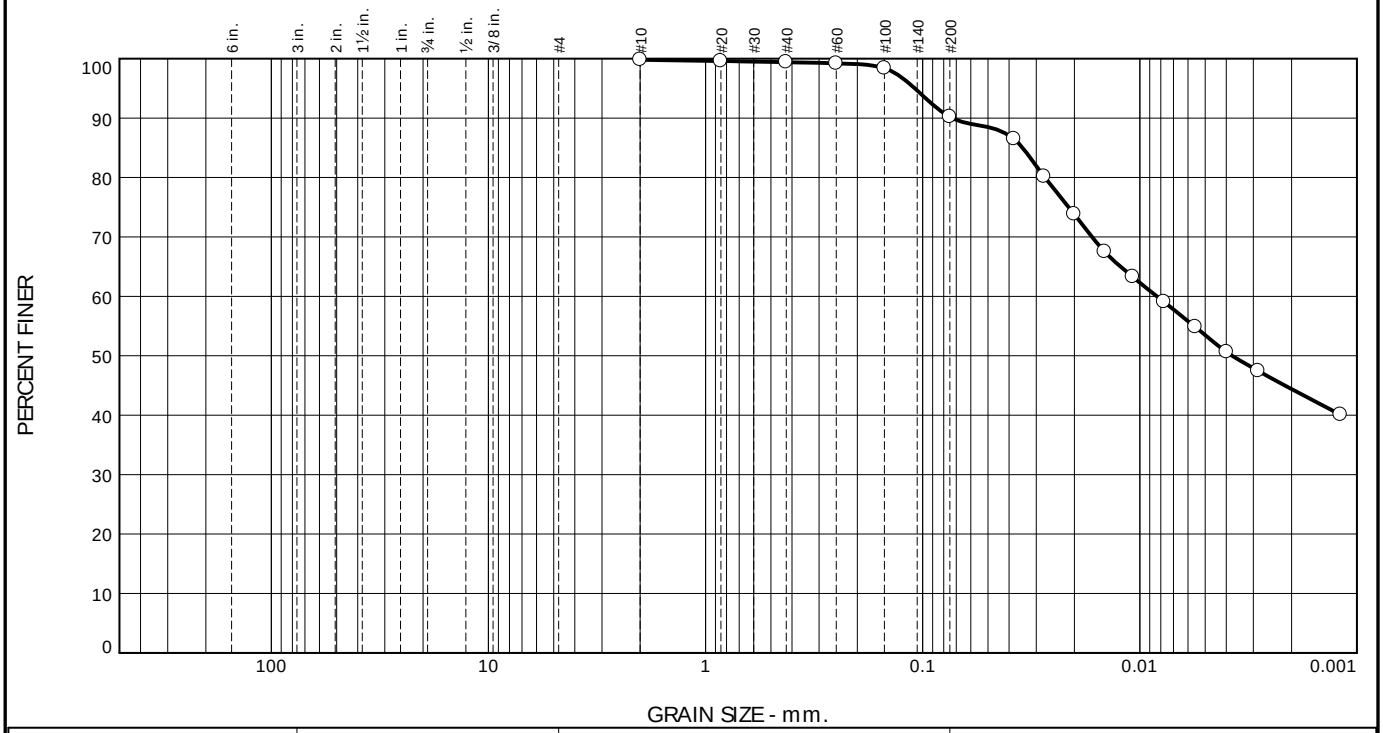
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0019
D_{60}	0.0039
D_{80}	0.0230
D_{85}	0.0292
D_{90}	0.0375
D_{95}	0.0980

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.4	9.2	45.8	44.4

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.8		
#20	99.6		
#40	99.4		
#60	99.2		
#100	98.4		
#200	90.2		
0.0380 mm.	86.5		
0.0276 mm.	80.2		
0.0201 mm.	73.8		
0.0145 mm.	67.5		
0.0108 mm.	63.3		
0.0077 mm.	59.1		
0.0056 mm.	54.8		
0.0040 mm.	50.6		
0.0028 mm.	47.5		
0.0012 mm.	40.1		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-083023-S-MTK-Source Clay 45

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 58 PI= 39

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(38)

Coefficients

D_{90}= 0.0732 D_{85}= 0.0346 D_{60}= 0.0083
D_{50}= 0.0038 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 45

Date Sampled: 08/30/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 45
Material Description: Brown Fat Clay
12599404-083023-S-MTK-Source Clay 45
Sample Date: 08/30/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 58
PI: 39 **USCS Classification:** CH
AASHTO Classification: A-7-6(38)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.8
#20	99.6
#40	99.4
#60	99.2
#100	98.4
#200	90.2

Hydrometer Test Data (ASTM D7928)

Test Date: 11/30/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer specimen (gms.) = 57.00
Hygroscopic moisture correction:
Moist weight and tare = 440.20
Dry weight and tare = 395.30
Tare weight = 189.60
Hygroscopic moisture = 21.8%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	46.00	41.00	8.7	0.0380	86.5
2.00	23.6	43.00	38.00	9.2	0.0276	80.2
4.00	23.5	40.00	35.00	9.7	0.0201	73.8
8.00	23.6	37.00	32.00	10.2	0.0145	67.5
15.00	23.6	35.00	30.00	10.5	0.0108	63.3
30.00	23.6	33.00	28.00	10.8	0.0077	59.1
60.00	23.6	31.00	26.00	11.2	0.0056	54.8
120.00	23.6	29.00	24.00	11.5	0.0040	50.6
240.00	23.5	27.50	22.50	11.7	0.0028	47.5
1440.00	23.5	24.00	19.00	12.3	0.0012	40.1

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.4	9.2		45.8	44.4	90.2

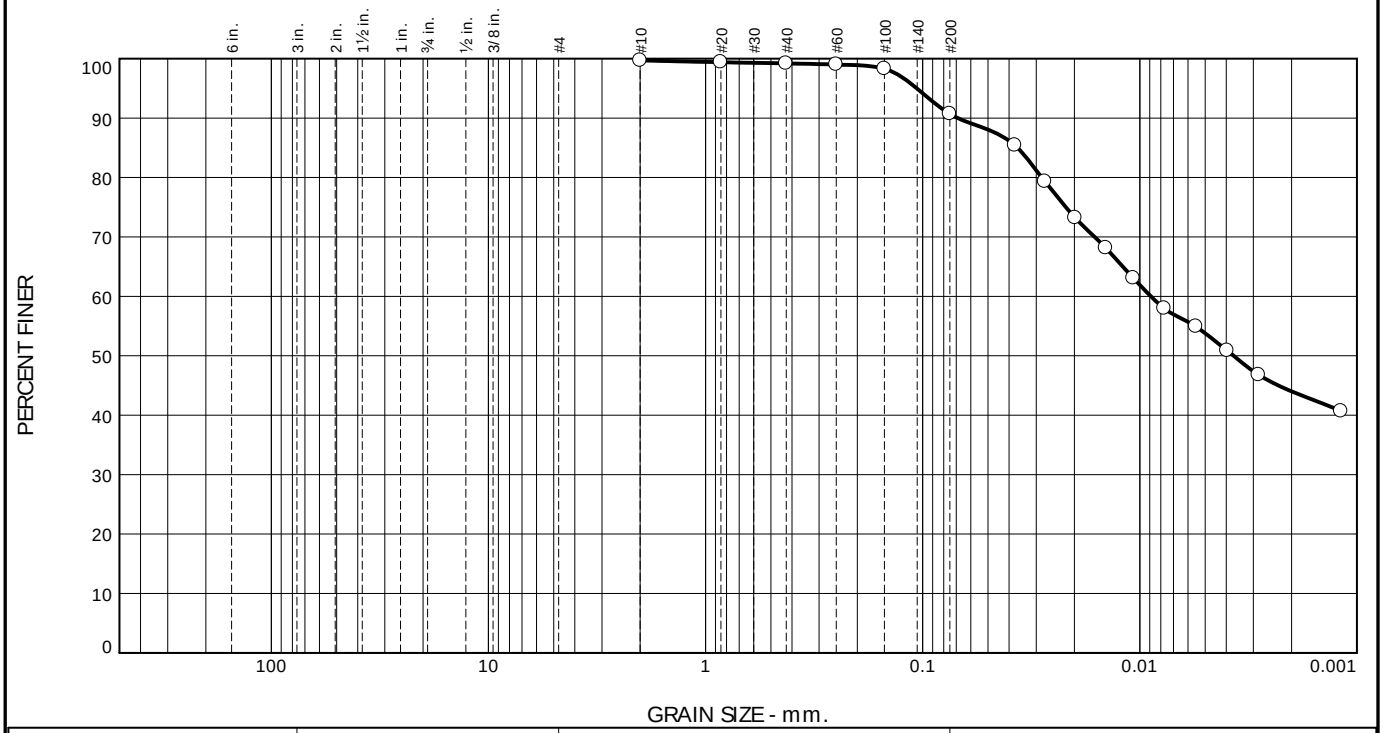
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0038
D_{60}	0.0083
D_{80}	0.0274
D_{85}	0.0346
D_{90}	0.0732
D_{95}	0.1087

Fineness Modulus

0.03

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.5	8.5	46.7	44.0

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.7		
#20	99.4		
#40	99.2		
#60	99.0		
#100	98.3		
#200	90.7		
0.0376 mm.	85.4		
0.0274 mm.	79.3		
0.0199 mm.	73.2		
0.0143 mm.	68.1		
0.0107 mm.	63.1		
0.0077 mm.	58.0		
0.0055 mm.	54.9		
0.0040 mm.	50.9		
0.0028 mm.	46.8		
0.0012 mm.	40.7		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-090123-S-MTK-Source Clay 46

Atterberg Limits (ASTM D 4318)

PL= 19 LL= 61 PI= 42

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(41)

Coefficients

D_{90}= 0.0689 D_{85}= 0.0365 D_{60}= 0.0089
D_{50}= 0.0037 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 46

Date Sampled: 09/01/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 46
Material Description: Brown Fat Clay
12599404-090123-S-MTK-Source Clay 46
Sample Date: 09/01/2023 **Date Received:** 10/12/2023
PL: 19 **LL:** 61
PI: 42 **USCS Classification:** CH
AASHTO Classification: A-7-6(41)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.7
#20	99.4
#40	99.2
#60	99.0
#100	98.3
#200	90.7

Hydrometer Test Data (ASTM D7928)

Test Date: 11/30/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.7
Weight of hydrometer specimen (gms.) = 59.00
Hygroscopic moisture correction:
Moist weight and tare = 440.80
Dry weight and tare = 395.50
Tare weight = 187.00
Hygroscopic moisture = 21.7%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	47.00	42.00	8.5	0.0376	85.4
2.00	23.6	44.00	39.00	9.0	0.0274	79.3
4.00	23.6	41.00	36.00	9.5	0.0199	73.2
8.00	23.6	38.50	33.50	9.9	0.0143	68.1
15.00	23.5	36.00	31.00	10.3	0.0107	63.1
30.00	23.5	33.50	28.50	10.8	0.0077	58.0
60.00	23.5	32.00	27.00	11.0	0.0055	54.9
120.00	23.6	30.00	25.00	11.3	0.0040	50.9
240.00	23.6	28.00	23.00	11.7	0.0028	46.8
1440.00	23.6	25.00	20.00	12.2	0.0012	40.7

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.5	8.5		46.7	44.0	90.7

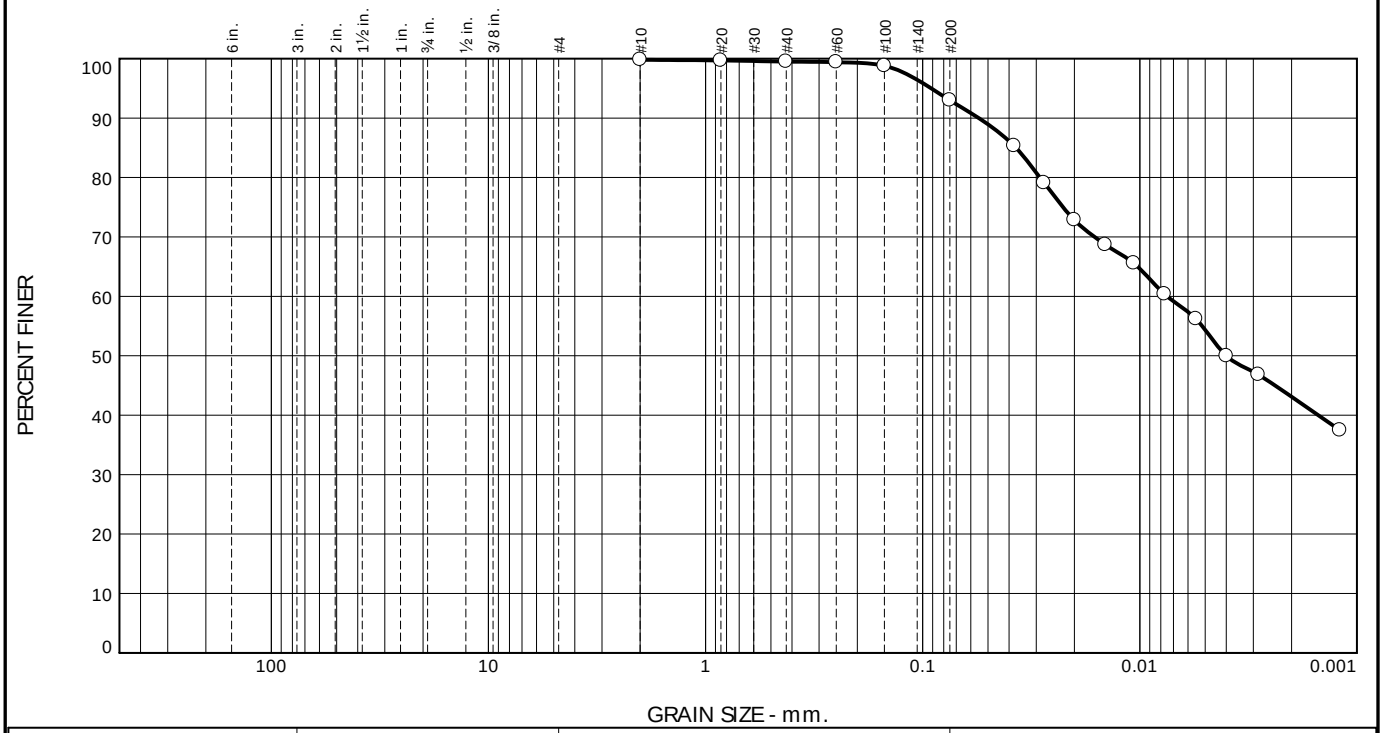
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0037
D_{60}	0.0089
D_{80}	0.0283
D_{85}	0.0365
D_{90}	0.0689
D_{95}	0.1064

Fineness Modulus

0.04

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.3	6.5	49.9	43.1

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.8		
#20	99.7		
#40	99.5		
#60	99.4		
#100	98.8		
#200	93.0		
0.0379 mm.	85.3		
0.0276 mm.	79.1		
0.0200 mm.	72.8		
0.0144 mm.	68.7		
0.0106 mm.	65.6		
0.0077 mm.	60.4		
0.0055 mm.	56.2		
0.0040 mm.	50.0		
0.0028 mm.	46.8		
0.0012 mm.	37.5		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-090623-S-MTK-Source Clay 47

Atterberg Limits (ASTM D 4318)

PL= 20 LL= 63 PI= 43

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(44)

Coefficients

D_{90}= 0.0552 D_{85}= 0.0371 D_{60}= 0.0075
D_{50}= 0.0040 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 47

Date Sampled: 09/06/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 47
Material Description: Brown Fat Clay
12599404-090623-S-MTK-Source Clay 47
Sample Date: 09/06/2023 **Date Received:** 10/12/2023
PL: 20 **LL:** 63
PI: 43 **USCS Classification:** CH
AASHTO Classification: A-7-6(44)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.8
#20	99.7
#40	99.5
#60	99.4
#100	98.8
#200	93.0

Hydrometer Test Data (ASTM D7928)

Test Date: 12/05/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.8
Weight of hydrometer specimen (gms.) = 59.00
Hygroscopic moisture correction:
Moist weight and tare = 431.80
Dry weight and tare = 382.60
Tare weight = 181.20
Hygroscopic moisture = 24.4%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.7	46.00	41.00	8.7	0.0379	85.3
2.00	23.6	43.00	38.00	9.2	0.0276	79.1
4.00	23.6	40.00	35.00	9.7	0.0200	72.8
8.00	23.6	38.00	33.00	10.0	0.0144	68.7
15.00	23.6	36.50	31.50	10.3	0.0106	65.6
30.00	23.5	34.00	29.00	10.7	0.0077	60.4
60.00	23.6	32.00	27.00	11.0	0.0055	56.2
120.00	23.5	29.00	24.00	11.5	0.0040	50.0
240.00	23.6	27.50	22.50	11.7	0.0028	46.8
1440.00	23.6	23.00	18.00	12.5	0.0012	37.5

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.3	6.5		49.9	43.1	93.0

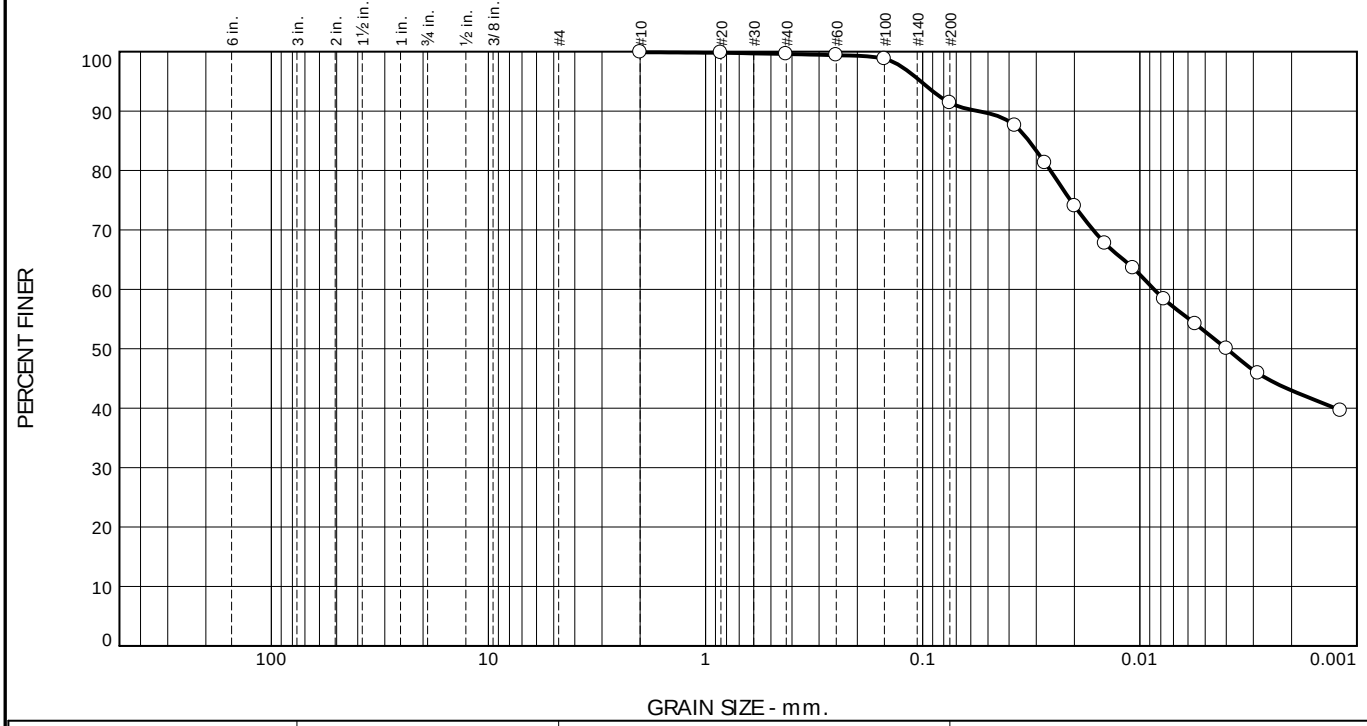
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0015
D_{50}	0.0040
D_{60}	0.0075
D_{80}	0.0289
D_{85}	0.0371
D_{90}	0.0552
D_{95}	0.0914

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				0.3	8.2	48.4	43.0

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.9		
#20	99.8		
#40	99.6		
#60	99.4		
#100	98.8		
#200	91.4		
0.0376 mm.	87.6		
0.0274 mm.	81.3		
0.0200 mm.	74.0		
0.0145 mm.	67.8		
0.0107 mm.	63.6		
0.0077 mm.	58.4		
0.0056 mm.	54.2		
0.0040 mm.	50.0		
0.0029 mm.	45.9		
0.0012 mm.	39.6		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-091423-S-MTK-Source Clay 48

Atterberg Limits (ASTM D 4318)

PL= 18 LL= 59 PI= 41

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(40)

Coefficients

D_{90}= 0.0555 D_{85}= 0.0324 D_{60}= 0.0086
D_{50}= 0.0040 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/2/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 48

Date Sampled: 09/14/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 48
Material Description: Brown Fat Clay
12599404-091423-S-MTK-Source Clay 48
Sample Date: 09/14/2023 **Date Received:** 10/2/2023
PL: 18 **LL:** 59
PI: 41 **USCS Classification:** CH
AASHTO Classification: A-7-6(40)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.9
#20	99.8
#40	99.6
#60	99.4
#100	98.8
#200	91.4

Hydrometer Test Data (ASTM D7928)

Test Date: 12/05/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.9
Weight of hydrometer specimen (gms.) = 57.99
Hygroscopic moisture correction:
Moist weight and tare = 423.70
Dry weight and tare = 377.80
Tare weight = 172.60
Hygroscopic moisture = 22.4%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.6	47.00	42.00	8.5	0.0376	87.6
2.00	23.6	44.00	39.00	9.0	0.0274	81.3
4.00	23.5	40.50	35.50	9.6	0.0200	74.0
8.00	23.5	37.50	32.50	10.1	0.0145	67.8
15.00	23.6	35.50	30.50	10.4	0.0107	63.6
30.00	23.5	33.00	28.00	10.8	0.0077	58.4
60.00	23.6	31.00	26.00	11.2	0.0056	54.2
120.00	23.5	29.00	24.00	11.5	0.0040	50.0
240.00	23.6	27.00	22.00	11.8	0.0029	45.9
1440.00	23.5	24.00	19.00	12.3	0.0012	39.6

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					0.3	8.2		48.4	43.0	91.4

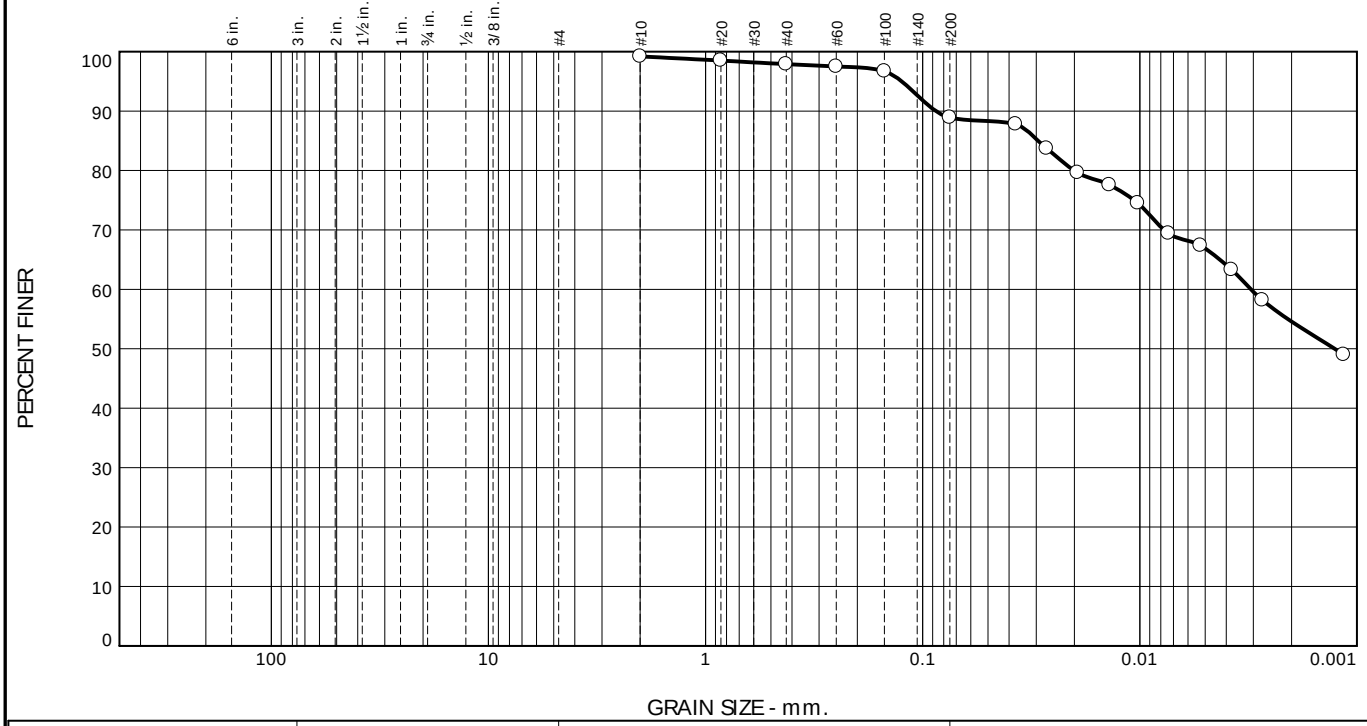
Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	0.0013
D_{50}	0.0040
D_{60}	0.0086
D_{80}	0.0258
D_{85}	0.0324
D_{90}	0.0555
D_{95}	0.1021

Fineness Modulus

0.02

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
				1.3	9.0	34.3	54.6

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	99.2		
#20	98.5		
#40	97.9		
#60	97.5		
#100	96.7		
#200	88.9		
0.0373 mm.	87.8		
0.0268 mm.	83.7		
0.0193 mm.	79.6		
0.0138 mm.	77.6		
0.0102 mm.	74.5		
0.0074 mm.	69.4		
0.0053 mm.	67.4		
0.0038 mm.	63.3		
0.0027 mm.	58.2		
0.0012 mm.	49.0		

* (no specification provided)

Material Description

Brown Fat Clay
12599404-091823-S-MTK-Source Clay 49

Atterberg Limits (ASTM D 4318)

PL= 17 LL= 55 PI= 38

Classification

USCS (D 2487)= CH AASHTO (M 145)= A-7-6(36)

Coefficients

D_{90}= 0.0870 D_{85}= 0.0294 D_{60}= 0.0031
D_{50}= 0.0013 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Date Received: 10/12/2023 **Date Tested:** 11/21/2023

Tested By: D. Johnson

Checked By: W. Bonner

Title: Branch Manager

Sample Number: Clay 49

Date Sampled: 09/18/2023

TOLUNAY-WONG ENGINEERS

Client: GHD Services Inc.

Project: San Jacinto Southern Impoundment
PO# 12599404

Project No: 23.83.001 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA **1/3/2024**

Client: GHD Services Inc.
Project: San Jacinto Southern Impoundment
PO# 12599404
Project Number: 23.83.001
Sample Number: Clay 49
Material Description: Brown Fat Clay
12599404-091823-S-MTK-Source Clay 49
Sample Date: 09/18/2023 **Date Received:** 10/12/2023
PL: 17 **LL:** 55
PI: 38 **USCS Classification:** CH
AASHTO Classification: A-7-6(36)
Checked By: W. Bonner **Title:** Branch Manager

Sieve Test Data (ASTM D6913 & D1140)

Test Date: 11/21/2023 **Technician:** D. Johnson

Sieve Opening Size	Percent Passing
#10	99.2
#20	98.5
#40	97.9
#60	97.5
#100	96.7
#200	88.9

Hydrometer Test Data (ASTM D7928)

Test Date: 12/05/2023 **Technician:** D. Johnson

Percent passing #10 based upon complete sample = 99.2
Weight of hydrometer specimen (gms.) = 59.99
Hygroscopic moisture correction:
Moist weight and tare = 419.90
Dry weight and tare = 369.60
Tare weight = 167.20
Hygroscopic moisture = 24.9%
Table of composite correction values:

Temp., deg. C:	23.4	23.9
Comp. corr.:	-5.00	-5.00

Meniscus correction only = 0.25
Specific gravity of solids = 2.7
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 - 0.164 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	23.5	48.00	43.00	8.4	0.0373	87.8
2.00	23.6	46.00	41.00	8.7	0.0268	83.7
4.00	23.6	44.00	39.00	9.0	0.0193	79.6
8.00	23.6	43.00	38.00	9.2	0.0138	77.6
15.00	23.6	41.50	36.50	9.4	0.0102	74.5
30.00	23.5	39.00	34.00	9.9	0.0074	69.4
60.00	23.6	38.00	33.00	10.0	0.0053	67.4
120.00	23.6	36.00	31.00	10.3	0.0038	63.3
240.00	23.6	33.50	28.50	10.8	0.0027	58.2
1440.00	23.5	29.00	24.00	11.5	0.0012	49.0

Results

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
					1.3	9.0		34.3	54.6	88.9

Distribution Data

Val	Diameter (mm.)
D_5	
D_{10}	
D_{15}	
D_{20}	
D_{30}	
D_{40}	
D_{50}	0.0013
D_{60}	0.0031
D_{80}	0.0201
D_{85}	0.0294
D_{90}	0.0870
D_{95}	0.1248

Fineness Modulus

0.09

Appendix H

Asbestos Documentation

EMSL Analytical, Inc.

5950 Fairbanks N. Houston Rd. Houston, TX 77040

Tel/Fax: (713) 686-3635 / (713) 686-3645

http://www.EMSL.com / houstonlab@emsl.com

EMSL Order: 152109507
Customer ID: CONE53A
Customer PO: 11215131
Project ID:

Attention: GHD Consulting Services, Inc.
11451 Katy Freeway
Suite 400
Houston, TX 77079

Project: 11215131

Phone: (713) 731-6615
Fax:
Received Date: 12/07/2021 11:20 AM
Analysis Date: 12/08/2021 - 12/09/2021
Collected Date: 12/07/2021

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
11215131-WRAP-01-Wrap *152109507-0001*	Wrap-01	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11215131-WRAP-01-Insulation *152109507-0001A*	Wrap-01	Beige Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
11215131-WRAP-02 *152109507-0002*	Wrap-02	White/Beige Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
11215131-WRAP-03 *152109507-0003*	Wrap-03	Beige Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
11215131-WRAP-04-Wrap *152109507-0004*	Wrap-04	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11215131-WRAP-04-Insulation *152109507-0004A*	Wrap-04	Brown/White/Beige Fibrous Heterogeneous	80% Glass	20% Non-fibrous (Other)	None Detected
11215131-WRAP-05-Wrap *152109507-0005*	Wrap-05	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11215131-WRAP-05-Insulation *152109507-0005A*	Wrap-05	Brown/White/Beige Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected
11215131-WRAP-06-Wrap *152109507-0006*	Wrap-06	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11215131-WRAP-06-Insulation *152109507-0006A*	Wrap-06	Brown/White/Beige Fibrous Homogeneous	90% Glass	10% Non-fibrous (Other)	None Detected

Initial report from: 12/09/2021 10:34:24

EMSL Analytical, Inc.
5950 Fairbanks N. Houston Rd. Houston, TX 77040
Tel/Fax: (713) 686-3635 / (713) 686-3645
http://www.EMSL.com / houstonlab@emsl.com

EMSL Order:	152109507
Customer ID:	CONE53A
Customer PO:	11215131
Project ID:	

Analyst(s)

Heather Graff (4)
Rushing Leika (6)

Michelle Leggett, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Houston, TX NVLAP Lab Code 102106-0, AZ 0925, CO AL-15355, LA 04126, TX 300159

Initial report from: 12/09/2021 10:34:24

EMSL Analytical, Inc.

18369 Petroleum Drive Baton Rouge, LA 70809

Tel/Fax: (225) 755-1920 / (225) 755-1989

http://www.EMSL.com / batonrougelab@emsl.com

EMSL Order:	252200048
Customer ID:	CONE53A
Customer PO:	340-002997
Project ID:	

Attention:	Meagan Willis	**Phone:**	(713) 907-3710
	GHD Consulting Services, Inc.	**Fax:**	
	11451 Katy Freeway	**Received Date:**	01/06/2022 8:55 AM
	Suite 400	**Analysis Date:**	01/06/2022
	Houston, TX 77079	**Collected Date:**	01/05/2022
Project:	11215131		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
SJ-HA01-001 *252200048-0001*	Kitchen - Ceiling Tile	Tan Fibrous Homogeneous	40% Cellulose 30% Glass	30% Non-fibrous (Other)	None Detected
SJ-HA01-002 *252200048-0002*	Bathroom - Ceiling Tile	Tan Fibrous Homogeneous	40% Cellulose 30% Glass	30% Non-fibrous (Other)	None Detected
SJ-HA01-003 *252200048-0003*	Office - Ceiling Tile	Tan Fibrous Homogeneous	50% Cellulose 15% Glass	35% Non-fibrous (Other)	None Detected
SJ-HA02-001 *252200048-0004*	Entryway - Flooring/Mastic	Brown/Tan/White Fibrous Heterogeneous	5% Cellulose	80% Non-fibrous (Other)	15% Chrysotile
SJ-HA02-002 *252200048-0005*	Office Closet - Flooring/Mastic				Positive Stop (Not Analyzed)
SJ-HA02-003 *252200048-0006*	Kitchen Closet - Flooring/Mastic				Positive Stop (Not Analyzed)
SJ-HA03-001 *252200048-0007*	Entrance - Tar Paper	Brown/Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
SJ-HA03-002 *252200048-0008*	Entrance - Tar Paper	Brown/Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
SJ-HA03-003 *252200048-0009*	West Face of Building - Tar Paper	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
SJ-HA04-001 *252200048-0010*	NW Window - Window Caulk	Gray/White/Clear Non-Fibrous Heterogeneous		100% Non-fibrous (Other)	None Detected
SJ-HA04-002 *252200048-0011*	SW Window - Window Caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-HA04-003 *252200048-0012*	WS Window - Window Caulk	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
SJ-HA05-001-Shingle *252200048-0013*	South Edge - Roof Shingle/Tar Paper	Brown/Black Fibrous Homogeneous	5% Cellulose 10% Glass	85% Non-fibrous (Other)	None Detected
SJ-HA05-001-Tar Paper *252200048-0013A*	South Edge - Roof Shingle/Tar Paper	Brown/Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
SJ-HA05-002-Shingle *252200048-0014*	SE Corner - Roof Shingle/Tar Paper	Brown/Black Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
SJ-HA05-002-Tar Paper *252200048-0014A*	SE Corner - Roof Shingle/Tar Paper	Brown/Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected

Initial report from: 01/06/2022 14:55:06

EMSL Analytical, Inc.
18369 Petroleum Drive Baton Rouge, LA 70809
Tel/Fax: (225) 755-1920 / (225) 755-1989
http://www.EMSL.com / batonrougelab@emsl.com

EMSL Order:	252200048
Customer ID:	CONE53A
Customer PO:	340-002997
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
SJ-HA05-003-Shingle *252200048-0015*	West Edge - Roof Shingle/Tar Paper	Black Fibrous Homogeneous	15% Glass	85% Non-fibrous (Other)	None Detected
SJ-HA05-003-Tar Paper *252200048-0015A*	West Edge - Roof Shingle/Tar Paper	Black Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected

Analyst(s)
Haley Young (5)
Joshua Vu (11)

Jamie Laginess, Laboratory Operations Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Baton Rouge, LA NVLAP Lab Code 200375-0, LELAP 01950, TX 300238

Initial report from: 01/06/2022 14:55:06

DANGER
POTENTIALLY CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD
DATE
SAMPLE
BLDG 1051
FLOOR
ROOM#
SAMPLED BY
HANDLE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

DANGER
POTENTIALLY CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER AND LUNG DISEASE HAZARD.
SJ-HA02-002
SAMPLE:
DATE: 1955
BLDG. NO. OR LOCATION:
HANDLE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

DANGER
POTENTIALLY CONTAINS
ASBESTOS FIBERS AVOID
CREATING DUST CANCER
AND LUNG DISEASE HAZARD
DATE
SAMPLE
BLDG
ROOM
DISPOSE OF IN
ACCORDANCE WITH LOCAL
STATE OR FEDERAL
REGULATIONS

ARC Houston
6827 Signat Dr.
Houston, TX 77041

CLOSEOUT REPORT

22-04-149 - 18350 Market Street
06/25/2024

Created By
FIELDFLŌ

www.fieldflo.com

ARC Houston
6827 Signat Dr.
Houston, TX 77041

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Houston, TX 77041

Project Details

Summarized Project Details

Details

Project Number	22-04-149	Project Bid Number	
Project Name	18350 Market Street	Supervisor	Jose Luna
Project Manager	Chandler Mistich	Client	CG Enviromental

Project Site

Address	18350 Market Street	Cross Street	
City	Channelview	State	Texas
ZIP Code	77530	County	
Name of Contact		Phone	

Dates & Times

Start Date	12/15/2022	End Date	12/16/2022

Scope of Work

The proper removal and disposal of approximatley 1,000 SF of asbestos containing materials in Flooring and mastic, located throughout the building. Work will be completed under negative pressure, with Criticals in place, inverted prep for the ceiling, and splash guards for the walls.

Client Info

Name	CG Enviromental	Contact Name	Dennis Auldridge
Address	5255 Teague Road	City	Fort Worth
State	Texas	ZIP Code	76140
Phone	817-908-2685	Fax	

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PSI / JHA / SPA

Company	Date & Time	Job No./Permit No.
ARC Houston	12/15/2022 09:15 AM	22-04-149
Project	**Task Location**	**Muster / Meeting Point**
18350 Market Street	Old house	Parking lot
Job Site Address	**Nearest Hospital**	**Nearest Hospital Address**
18350 Market Street	Salazi medical clinic	1826 wirt rd

Review these items with the crew at the site of the task and check the blocks that apply to the work.

Environmental Hazards

- [ ] Spill Potential/Containment
- [ ] HAZMAT / TDG Storage
- [ ] Weather / Conditions
- [x] SDS Reviewed for Hazardous Materials
- [x] Ventilation Required
- [x] Heat Stress / Cold Exposure
- [ ] Lighting Levels Too Low
- [x] Housekeeping

Ergonomics Hazards / Material Handling

- [ ] Working In a Tight Area
- [ ] Part of Body in Line of Fire
- [ ] Working Above Your Head
- [x] Pinch Points Identified
- [ ] Repetitive Motion

Work at Height Hazards

- [x] Barricades Flagging, and Sign in place
- [x] Hole Coverings in Place
- [x] Protect from Falling Items
- [x] Powered Platforms
- [ ] Others working overhead / Below
- [x] Fall Arrest Systems
- [x] Ladders

Activity Hazards

- [ ] Welding/Grinding
- [ ] Burn / Heat Sources
- [ ] Compressed Gasses
- [ ] Working on / Near Energized Equipment
- [ ] Electrical Cords / Tools - Condition
- [x] Equipment/ Tools Inspected
- [ ] Critical Lift Meeting Required
- [ ] Energy Isolation
- [x] Airborne Particles
- [x] Open Hole(s) / Leading Edge (s)
- [ ] Mobile Equipment / Vehicle
- [ ] Rigging
- [ ] Excavation / Underground Work Hazards
- [ ] Confined Space

Access / Egress Hazards

- [ ] Scaffold (Inspected and Tagged)
- [x] Slip / Trip Potential Identified
- [ ] Required Permits in Place
- [ ] Excavations
- [ ] Walkways / roadways

Personal Limitations / Hazards

- [ ] Clear Instructions Provided
- [x] Trained To Use Tool and Perform Task
- [ ] Distractions in Work Area
- [ ] Working Alone (Communication)
- [ ] Lift Too Heavy / Awkward Position
- [ ] External Noise Level
- [ ] Physical Limitations
- [x] First Aid Requirements

PPE Requirements

- [ ] Goggles / Fectoggles/ Spoggles
- [ ] Face Shield
- [x] Gloves (Kevlar or Leather)
- [ ] Coverall (Fire Retardant - FRC)
- [ ] Hearing Protection
- [x] Respirator
- [ ] Harness / Lanyards
- [x] Reflective Vest
- [x] Footwear (Condition / Application)
- [x] Safety Glasses
- [ ] Welding Hood
- [x] Tyvex Suit
- [ ] Retractable Lanyard
- [x] Hard Hat
- [ ] 4 Gas Monitor
- [ ] Cut resistant sleeves (Kevlar or Approved Equivalent)

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Other

Risk Rank Table/*Nivel de Riesgo*

RISK OUTCOME/*RIESGO*	Risk Rank
High/*Alto*	(8-10)
Significant/*Significante*	(6-7)
Moderate/*Moderado*	(5)
Low/*Bajo*	(2-3-4)

Likelihood / *Probabilidad*	Consequence/Consecuencia				
	Insignificant/*No Importante* 1	Minor/*Menor* 2	Moderate/*Moderado* 3	Major/*Mayor* 4	Catastrophic/*Catastrofico* 5
Almost Certain/*Casi Cierto* 5	6	7	8	9	10
Likely/*Probable* 4	5	6	7	8	9
Possible/*Possible* 3	4	5	6	7	8
Unlikely/*Improbable* 2	3	4	5	6	7
Rare/*Raro* 1	2	3	4	5	6

Identify the task steps and hazards, and then identify the plans to eliminate or control the hazards

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TASK STEPS	HAZARD	CONTROL	RISK RATING
Load Out	• Slips, trips, falls • Back strain or sprain • Employee/pedestrian struck by buggy/cart	• Maintain clear and designated pathway to and from work area • Use proper lifting techniques – lift with legs, not with back. • 2 man lift as needed. Use Lull where applicable • Use carts/buggies as needed Stop at corners. Use spotter as needed. Go slow. Announce yourself at corners.	1

Weather

Current

Temperature

52F

Clear Sky
67% Humidity

Forecast

Temperature

49F 61F

Sky Is Clear
46% Humidity

	Yes	No	
1. I have reviewed the weather conditions with the crew?	☒	☐	Yes selected on 12/15/2022 @ 09:27 AM
2. I have reviewed the road conditions with the crew?	☒	☐	Yes selected on 12/15/2022 @ 09:27 AM

Current

Heat Index

50F

Forecast

Heat Index

59F

	Yes	No	
3. I have reviewed the OSHA Heat Index?	☒	☐	Yes selected on 12/15/2022 @ 09:27 AM

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Houston, TX 77041

By signing with your pin below: You acknowledge and understand the **safety instructions** you've been given and that you will follow all of the required procedures and safety rules. You acknowledge that you have arrived for your shift injury free and must notify supervision or the safety department on site of any injury/accident or near miss that you had during your shift. You also verify that you are not showing any symptoms such as fever, cough or shortness of breath. you have not been in contact with anyone known to have COVID-19 and you have not traveled to any area with widespread concern of coronavirus.

	Initial After:
Worker	Verified

Supervisor:	Jose Luna	VERIFIED by Jose Luna 12/15/2022 09:16:00
Auditor:	Jose Luna	VERIFIED by Jose Luna 12/15/2022 09:16:00

	Adequate	Inadequate		Adequate	Inadequate
1. Task Description	☒	☐	6. Reviewed / Signed by PSI / JHA Lead	☒	☐
2. Hazard Identification	☒	☐	7. Muster / Assembly Point Identified	☒	☐
3. Hazard Controls	☒	☐	8. Tools and Equipments Inspected	☒	☐
4. All Sections Implemented	☒	☐	9. PSI / JHA at Task Location	☒	☐
5. Workers' Names Legible	☒	☐			

Comments

Evacuation Plan

Note

ARC Houston
6827 Signat Dr.
Houston, TX 77041

Daily Log

Project Name:	18350 Market Street	**Project Number:**	22-04-149	**Shift Start:**	7 30
Day:	Thursday	**Date:**	12/15/2022	**Shift End:**	
Supervisor:	Jose Luna (**VERIFIED** by Jose Luna - 12/15/2022 01:29 PM)			**Project Manager:**	Chandler Mistich

Daily Log
Remove floor linoleum with ACM using wet methods

Visitors to site
Mark

Status at quitting time
Good

Inspections made / Tests performed
Good

Tracking
Daily Bag Count:
10

Project to date bag count:
10

Container #:
1

Bag in Container by date:
10

Unusual Conditions or Problems & Action Taken
None

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6827 Signat Dr.
Houston, TX 77041

Daily Field Report

Job Name: 18350 Market Street
Job Number: 22-04-149
Date: 12/15/2022
Supervisor: Jose Luna
Project Manager: Chandler Mistich

Scope of Work

Scope Received: **Scope Date:** **Structure:**

Brief Description of Original Scope:

The proper removal and disposal of approximatley 1,000 SF of asbestos containing materials in Flooring and mastic, located throughout the building. Work will be completed under negative pressure, with Criticals in place, inverted prep for the ceiling, and splash guards for the walls.

Work Completed Today

Complete

End of Shift Review

What went right?	Everything
What can be improved?	Good
Incident	No
Near Miss	No
Stop Work	No

Goals for Tomorrow

-

Goals for the Week

-

Action Required

-

Project Notes or Special Considerations

-

Meeting Log

-

Visitors

Mark

Workflow

-

Bulk Equipment in use this Day (if applicable)

-

ACM:	**Lead:**	**Mold:**
Detected:	**Detected:**	**Detected:**
Date Tested: Survey Date:	**Date Tested:**	**Date Tested:**

Notes related to Environmental testing if applicable:

Estimated Completion Date: 12/15/2022

Days Remaining on Project (including Demobilization):

RRP and/or Abatement Procedures

Activities Done Today: install criticals, removal, establish negative pressure, bag out, final clean / decontamination, clearance, tear down, construct containment, demob

Cleaning Verification	**Exterior - Visual completed - no visible paint chips present** - NO **Interior** - YES		
Work Area Locations:	Bathroom	Kitchen	Basement
# of cleaning cloths utilized (1 per 40ft2 floor and 1 per sill):			
What cleaning verification did you pass on:	N/A	N/A	N/A

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Houston, TX 77041

Certificates

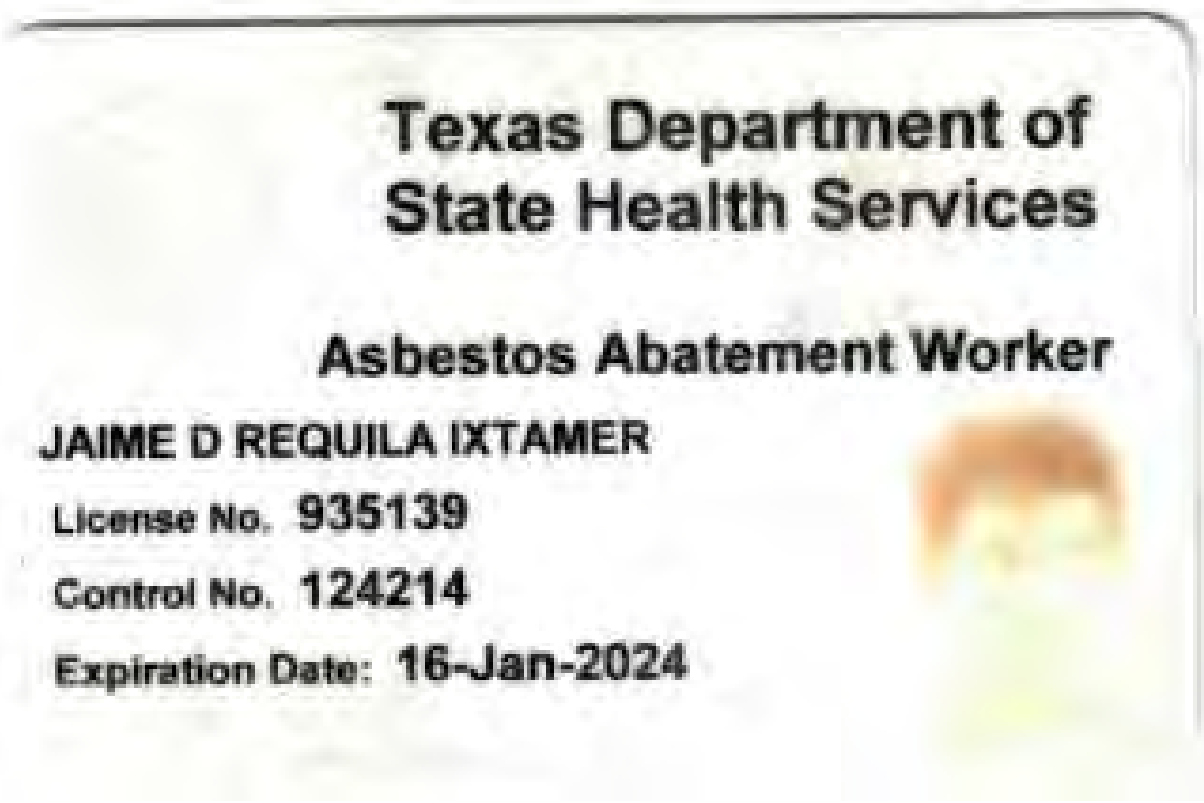
Asbestos Worker Lic

Gustavo Areas

ARC Houston
6827 Signat Dr.
Houston, TX 77041

Asbestos Worker Lic

Jaime Requila



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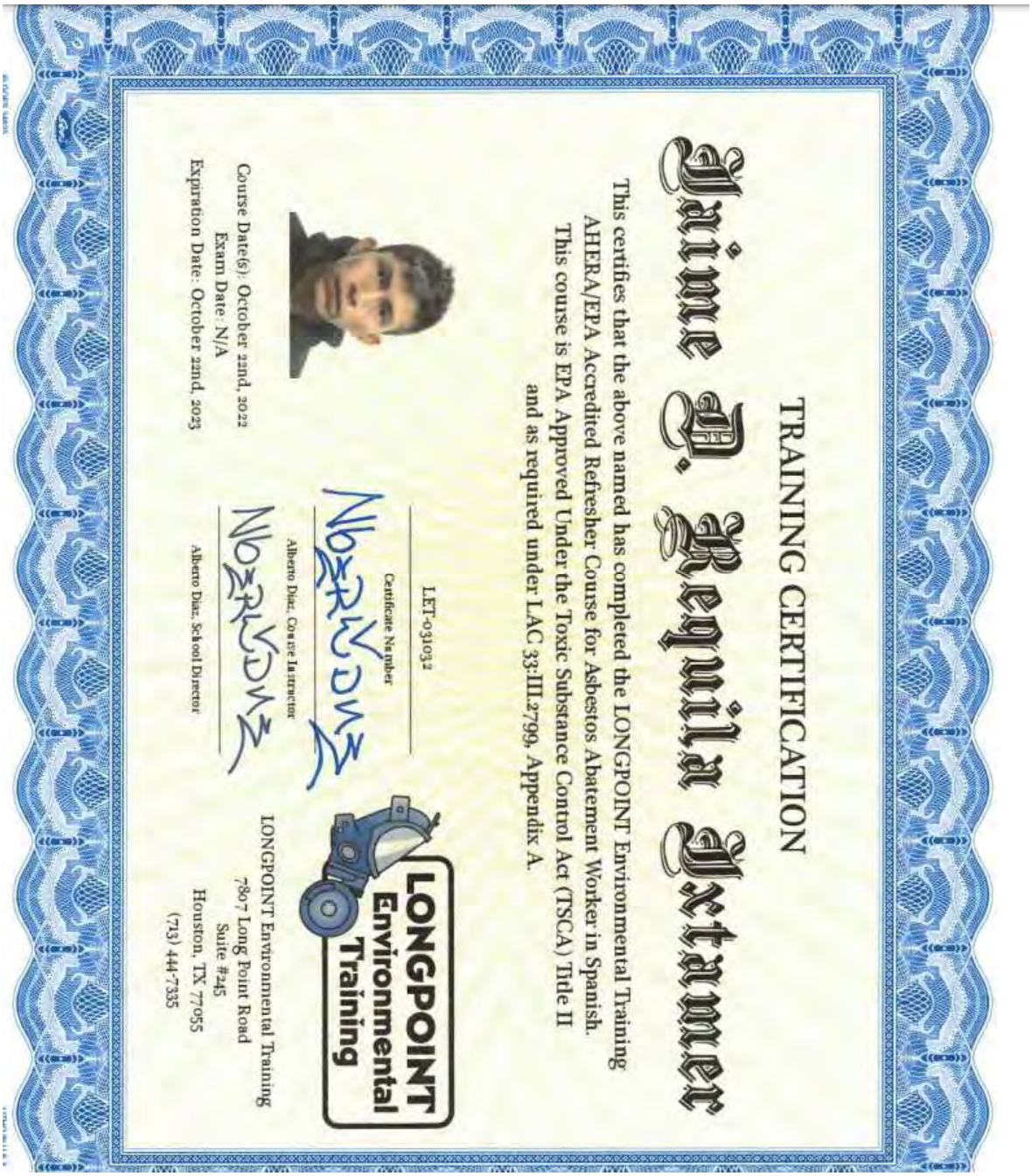
Houston, TX 77041

Asbestos Cert

Jaime Requila



TRAINING CERTIFICATION

Jaime D. Requila Antamer

This certifies that the above named has completed the LONGPOINT Environmental Training AHERA/EPA Accredited Refresher Course for Asbestos Abatement Worker in Spanish. This course is EPA Approved Under the Toxic Substance Control Act (TSCA) Title II and as required under LAC 33:III.2799, Appendix A.

LET-031032
Certificate Number

Alberto Diaz, Course Instructor

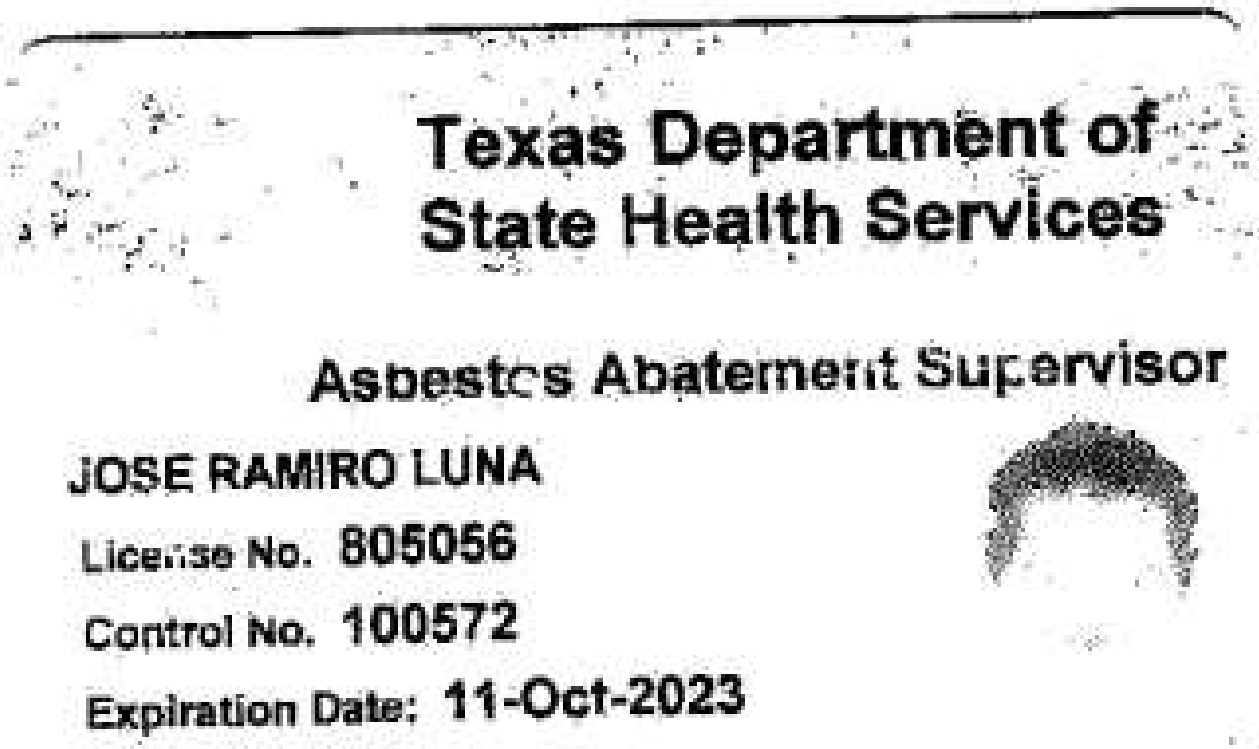
Alberto Diaz, School Director

LONGPOINT Environmental Training
7807 Long Point Road
Suite #245
Houston, TX 77055
(713) 444-7335

Course Date(s): October 22nd, 2022
Exam Date: N/A
Expiration Date: October 22nd, 2023

Asbestos Supervisor Lic

Jose Luna



Texas Department of
State Health Services

Asbestos Abatement Supervisor

JOSE RAMIRO LUNA

License No. 805056

Control No. 100572

Expiration Date: 11-Oct-2023

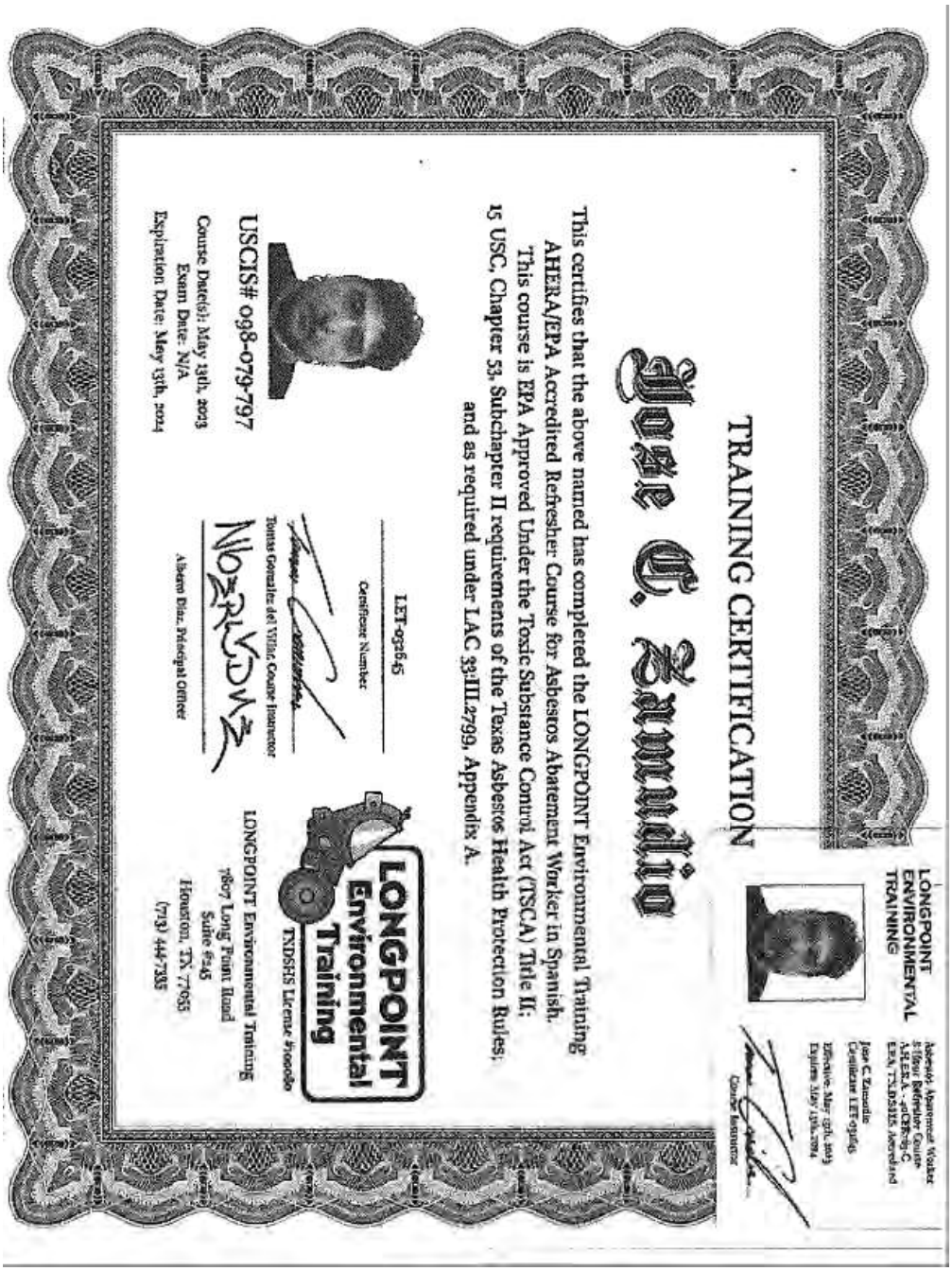
ARC Houston
6827 Signat Dr.
Houston, TX 77041

Asbestos Worker Lic

Jose Zamudio

Asbestos Cert

Jose Zamudio



TRAINING CERTIFICATION

Jose C. Zamudio

This certifies that the above named has completed the LONGPOINT Environmental Training AHERA/EPA Accredited Refresher Course for Asbestos Abatement Worker in Spanish.

This course is EPA Approved Under the Toxic Substance Control Act (TSCA) Title II; 15 USC, Chapter 53, Subchapter II requirements of the Texas Asbestos Health Protection Rules; and as required under LAC 33:III.2799, Appendix A.

LET-032645
Certificate Number

Tomas Gonzalez del Villar, Course Instructor

Alberto Diaz, Principal Officer

LONGPOINT Environmental Training
TXDSHS License #10008

LONGPOINT Environmental Training
7807 Long Point Road
Suite #245
Houston, TX 77055
(713) 444-7335

USCIS# 098-079-797

Course Date(s): May 13th, 2023
Exam Date: N/A
Expiration Date: May 13th, 2024

LONGPOINT ENVIRONMENTAL TRAINING

Asbestos Abatement Worker
8 Hour Refresher Course
AHERA - 40CFR-Sig-C
EPA, TXDSHS Accredited

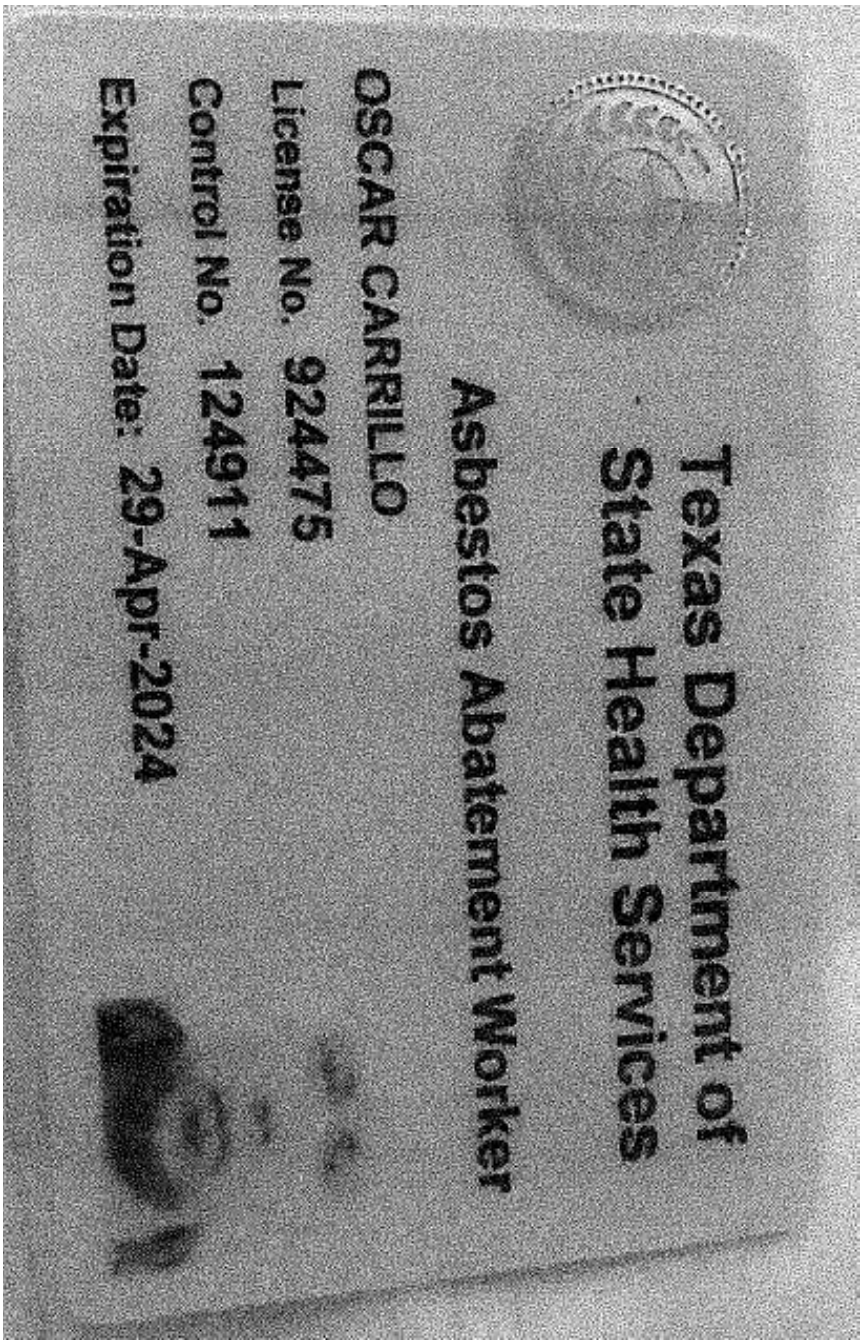
Jose C. Zamudio
Certificate LET-032645
Effective: May 13th, 2023
Expires: May 13th, 2024

Course Instructor

ARC Houston
6827 Signat Dr.
Houston, TX 77041

Asbestos Worker Lic

Oscar Carrillo



ARC Houston
6827 Signat Dr.
Houston, TX 77041

Asbestos Cert

Oscar Carrillo

LONGPOINT ENVIRONMENTAL TRAINING

Asbestos Abatement Worker Refresher Course
A.H.E.R.A. - 40CFR763.C
E.P.A. D.S.H.S. Accredited

Effective: January 29th, 2022
Expires: January 29th, 2023

Oscar Carrillo
SS# 402-20-1812

Course Instructor

TRAINING CERTIFICATION

Oscar Carrillo

This certifies that the above named has completed the LONGPOINT Environmental Training AHERA/EPA Accredited Refresher Course for Asbestos Abatement Worker in Spanish. This course is EPA Approved Under the Toxic Substance Control Act (TSCA) Title II and as required under LAC 33:III.2799, Appendix A.

Course Date(s): January 29th, 2022
Exam Date: N/A
Expiration Date: January 29th, 2023

LET-025742
Certificate Number

Alberto Diaz, Course Instructor

Alberto Diaz, School Director

LONGPOINT Environmental Training

LONGPOINT Environmental Training
7807 Long Point Road
Suite #245
Houston, TX 77055
(713) 444-7335

7) 37520 | 37100 Split load #425

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of	3. Emergency Response Phone 713-849-7738	4. Waste Tracking Number 02-21-2023A

GENERATOR

5. Generator's Name and Mailing Address
ARC Abatement Inc. 6827 Signat Dr Houston TX 77041
(713)-849-7738 Houston TX 77041

Generator's Site Address (if different than mailing address)
Home on Property 22-04-149
18311 Market Street Channelview TX 77530
(713)849-7738

Generator's Phone:

6. Transporter 1 Company Name
ARC Abatement 6827 signat dr Houston TX

U.S. EPA ID Number 40-0105

7. Transporter 2 Company Name
N/A

U.S. EPA ID Number N/A

8. Designated Facility Name and Site Address
Waste Management Atascosita- (281)-466-6545- H – 1309 3623 Wilson Road, Humble, Texas 77396

U.S. EPA ID Number

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	RQ, Asbestos, 9, NA2212, PGIII Friable				Y	
2.	Non-Friable RACM "Regulated	10	BA	~~10~~ 1 ~~bags~~	T Y	
3.						
4.						

13. Special Handling Instructions and Additional Information

Disposal must be in accordance with TCEQ 30 TAC 330.136 or other handling plan approved in writing by TCEQ/DSHS. Friable AT107648 NON-FRIABLE – AT107649TX

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Jose Ramiro Luna — Signature — Month 12 Day 15 Year 22

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Sebastian Mass — Signature — Month 2 Day 21 Year 23

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month 2 Day 21 Year 23

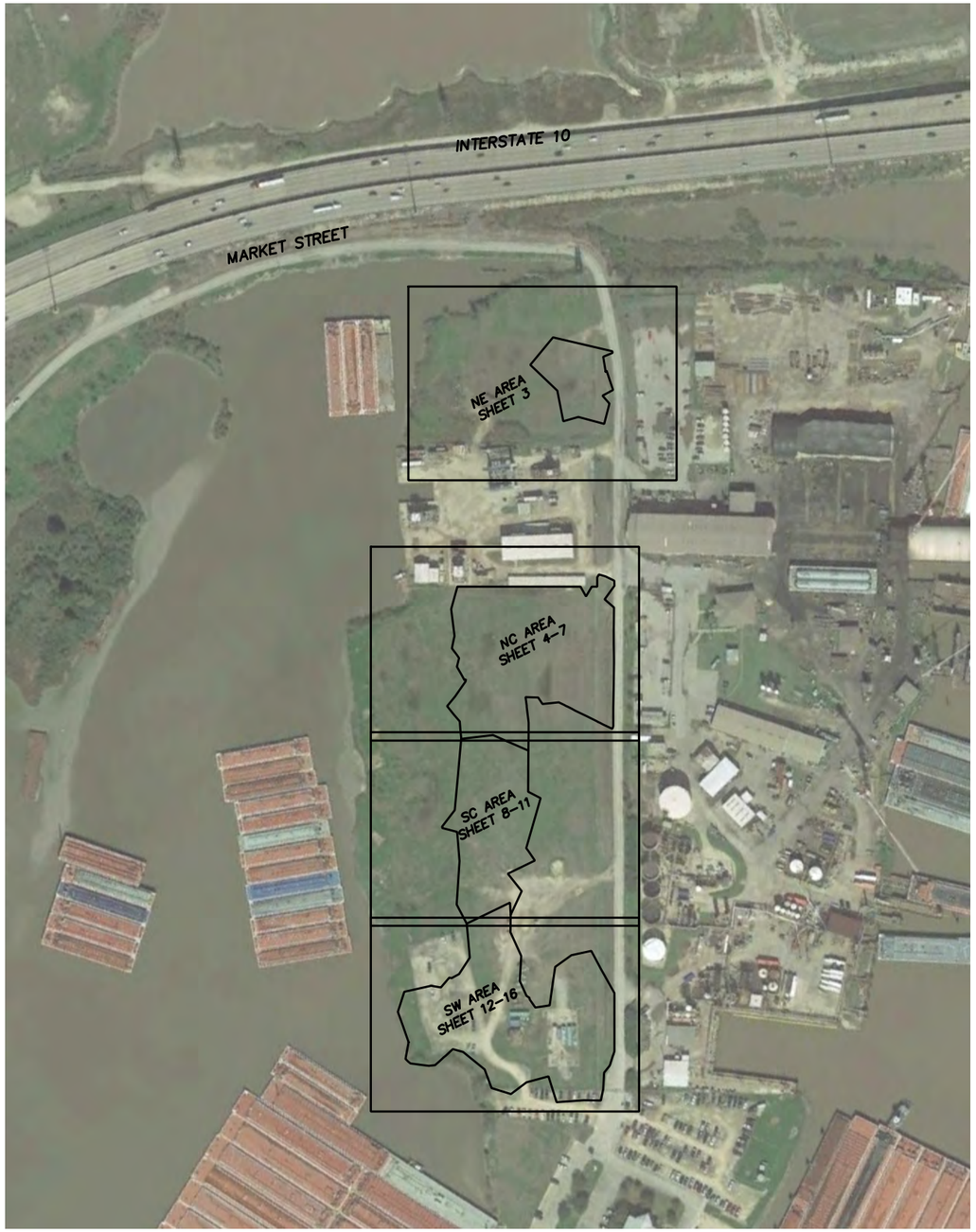
169-BLC-O 5 11977 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

Appendix I

Survey Data for As-Builts

BOTTOM OF EXCAVATION SURVEY POINTS
OF
SAN JACINTO RIVER
WASTE PITS
HARRIS COUNTY, TEXAS
FOR
GHD SERVICES



NOTES:

1. HORIZONTAL CONTROL AND VERTICAL CONTROL IS REFERENCED TO HARRIS COUNTY FLOODPLAIN REFERENCE MARK "070085" www.harriscountyfrm.org
   NAD 83 TEXAS SOUTH CENTRAL ZONE 4204 & NAVD 88 DATUM, UNITS ARE EXPRESSED IN FEET
   NORTH 13856382.64
   EAST 3211801.42
   ELEVATION 4.66 FT
2. STANDARD FIELD CALIBRATIONS FOR EQUIPMENT WERE PERFORMED. THIS SURVEY AND ACCURACY RESULTS ARE WITHIN MANUFACTURER'S SPECIFICATIONS.
3. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE OF FIELD SURVEY AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.

CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS STANDARDS AND SPECIFICATIONS FOR A CATEGORY 6 SURVEY. THE INFORMATION PROVIDED BY MORRISON SURVEYING, INC. WAS REVIEWED FOR QUALITY ASSURANCE/QUALITY CONTROL UNDER MY SUPERVISION ON THIS DAY.

08/09/2024

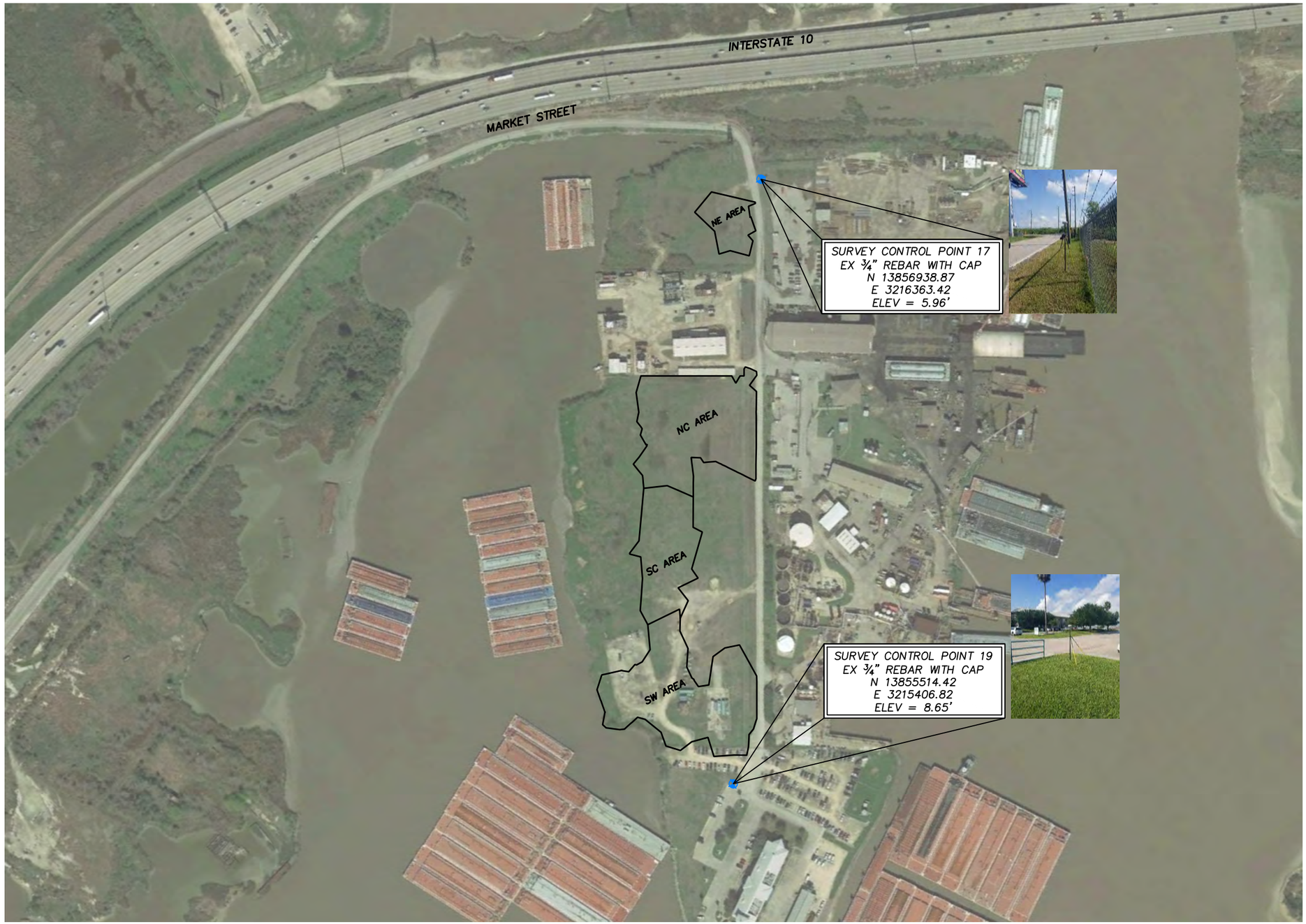
TRUE LINE CONSTRUCTION LAYOUT AND LAND SURVEYING
BY: MICHAEL K. WILLIAMS
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS NO. 6616

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
P.O. BOX 71 SULPHUR, LA 70664-0071
480 N. CITIES SERVICE HWY. SULPHUR, LA 70663
PHONE: (337) 625-1050
E-MAIL: jdm@morrisonsi.com

true line
CONSTRUCTION LAYOUT AND LAND SURVEYING
WWW.TRUELINELAYOUT.COM
804 N. Storts Street Phone: (830) 699-6640
Pearsall, Texas 78147 TBPELS Firm #10194329

PROJECT NO.: 221222	DATE: AUGUST 7, 2024
SCALE: 1" = 300'	SHEET: 1 OF 17



STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
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804 N. Storts Street Bath, Texas 78147
Phone: (512) 692-6940 TBPELS Firm #10194329

SURVEY CONTROL POINTS
SAN JACINTO RIVER
WASTE PITS
HARRIS COUNTY, TEXAS
FOR
GHD SERVICES

BY	REVISIONS	DATE

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 300'
SHEET: 2 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL ONE

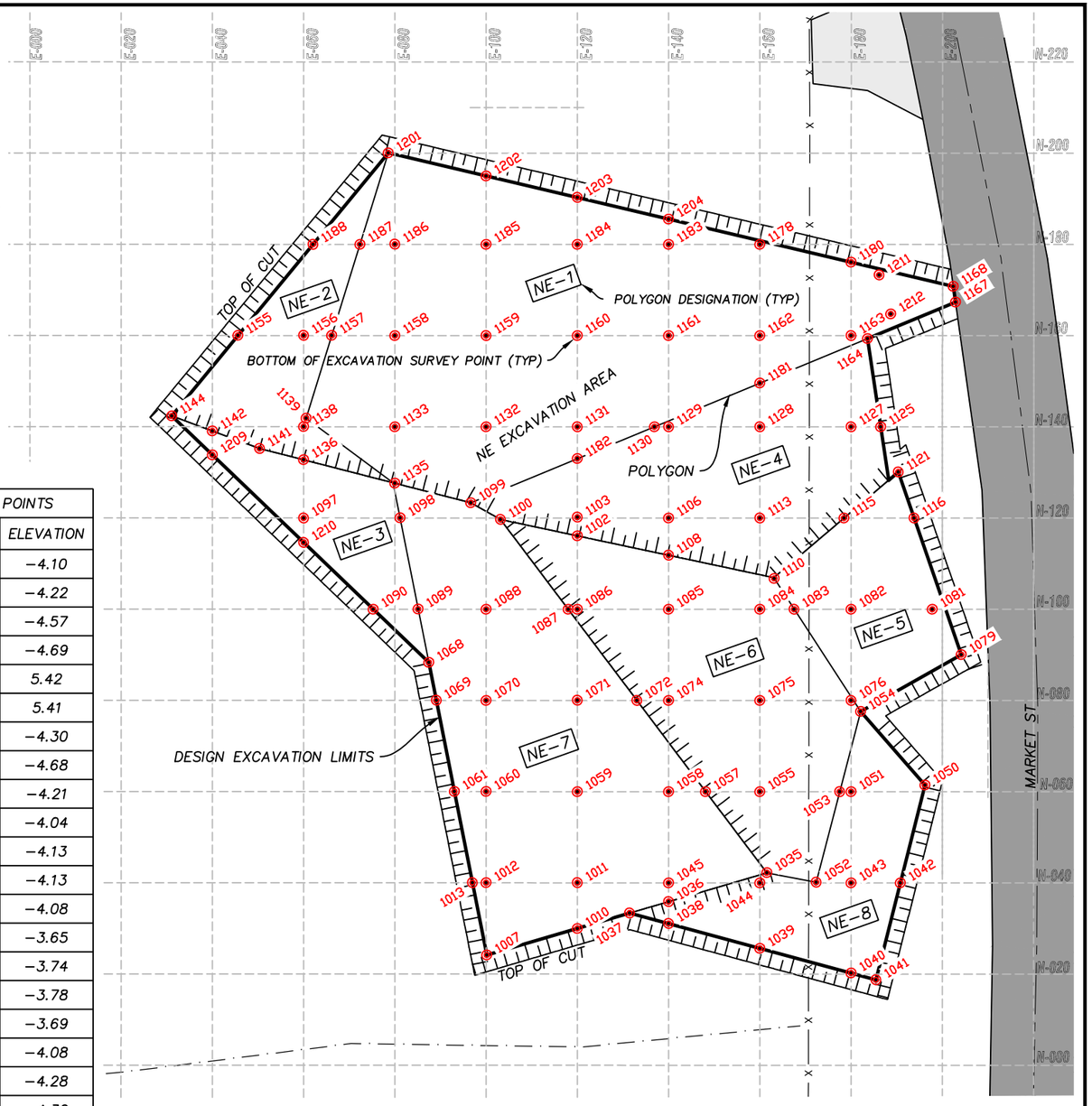
BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
1007	13856819.69	3216151.95	−0.51
1010	13856814.38	3216171.92	−0.80
1011	13856822.93	3216177.11	−0.78
1012	13856833.31	3216160.01	−0.64
1013	13856834.85	3216157.47	−0.60
1035	13856803.27	3216213.75	−2.41
1036	13856809.03	3216192.06	−1.02
1037	13856811.31	3216183.47	−0.74
1038	13856804.91	3216189.56	−0.46
1039	13856789.89	3216203.85	−0.49
1040	13856774.88	3216218.13	−0.24
1041	13856770.79	3216222.02	−0.41
1042	13856786.20	3216237.63	−0.56
1043	13856791.80	3216228.40	−0.27
1044	13856802.18	3216211.30	−0.87
1045	13856812.55	3216194.20	−1.07
1050	13856801.72	3216253.34	−1.41
1051	13856808.90	3216238.78	−0.98
1052	13856795.87	3216221.90	−2.26
1053	13856810.19	3216236.64	−2.10
1054	13856822.84	3216249.65	−2.21
1055	13856819.27	3216221.68	−2.37
1057	13856825.44	3216211.52	−2.28
1058	13856829.65	3216204.58	−0.75
1059	13856840.03	3216187.48	−0.71
1060	13856850.41	3216170.39	−0.64
1061	13856854.01	3216164.45	−0.65
1068	13856881.12	3216174.33	−0.60
1069	13856873.17	3216171.43	−0.99
1070	13856867.50	3216180.76	−0.96
1071	13856857.13	3216197.86	−0.61
1072	13856850.35	3216209.02	−2.24
1074	13856846.75	3216214.96	−2.17
1075	13856836.37	3216232.05	−2.28
1076	13856826.00	3216249.15	−2.21
1079	13856822.03	3216274.98	2.40
1081	13856833.87	3216274.72	−0.62
1082	13856843.09	3216259.53	−2.28
1083	13856849.57	3216248.85	−2.24
1084	13856853.47	3216242.43	−2.19

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
1085	13856863.85	3216225.33	−2.12
1086	13856874.22	3216208.24	−2.06
1087	13856875.27	3216206.51	−2.13
1088	13856884.60	3216191.14	−0.75
1089	13856892.33	3216178.41	−0.73
1090	13856897.44	3216169.98	−0.58
1097	13856922.45	3216167.32	−0.48
1098	13856911.49	3216185.39	−0.62
1099	13856906.29	3216200.39	−4.03
1100	13856899.76	3216204.05	−4.06
1102	13856887.97	3216216.58	−4.06
1103	13856891.46	3216218.70	−4.08
1106	13856880.94	3216235.71	−4.37
1108	13856873.95	3216231.47	−4.35
1110	13856857.60	3216248.61	−4.19
1113	13856870.57	3216252.81	−4.16
1115	13856861.00	3216268.57	−4.21
1116	13856853.03	3216281.70	−2.10
1121	13856863.46	3216283.96	−3.36
1125	13856873.93	3216285.82	−4.66
1127	13856877.29	3216280.28	−4.44
1128	13856887.66	3216263.19	−4.20
1129	13856898.04	3216246.09	−4.10
1130	13856899.66	3216243.41	−4.08
1131	13856908.42	3216228.99	−4.06
1132	13856918.79	3216211.89	−4.06
1133	13856929.17	3216194.80	−4.01
1135	13856918.59	3216188.37	−4.09
1136	13856933.36	3216173.94	−4.09
1138	13856939.55	3216177.70	−4.11
1139	13856940.86	3216179.16	−4.08
1141	13856940.46	3216167.00	−3.87
1142	13856949.13	3216160.12	−3.77
1144	13856956.57	3216154.22	−3.81
1155	13856964.12	3216175.76	−3.98
1156	13856956.65	3216188.08	−3.93
1157	13856953.45	3216193.35	−3.97
1158	13856946.27	3216205.17	−3.86
1159	13856935.89	3216222.27	−4.05
1160	13856925.52	3216239.37	−4.36

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
1161	13856915.14	3216256.46	−4.10
1162	13856904.76	3216273.56	−4.22
1163	13856894.38	3216290.66	−4.57
1164	13856891.96	3216293.40	−4.69
1167	13856888.79	3216314.01	5.42
1168	13856892.01	3216315.40	5.41
1178	13856921.86	3216283.94	−4.30
1180	13856908.14	3216299.01	−4.68
1181	13856895.85	3216268.16	−4.21
1182	13856902.45	3216225.37	−4.04
1183	13856932.24	3216266.84	−4.13
1184	13856942.61	3216249.74	−4.13
1185	13856952.99	3216232.65	−4.08
1186	13856963.37	3216215.55	−3.65
1187	13856967.34	3216209.00	−3.74
1188	13856972.68	3216200.20	−3.78
1201	13856981.27	3216224.70	−3.69
1202	13856965.80	3216240.42	−4.08
1203	13856951.39	3216255.07	−4.28
1204	13856936.97	3216269.72	−4.36
1209	13856944.64	3216157.40	−1.27
1210	13856917.86	3216164.54	−0.49
1211	13856902.55	3216302.79	−2.47
1212	13856893.93	3216300.54	−1.40



NOTE:

NE AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 7,700 CU. YDS.

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION,
INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
P.O. BOX 71 SULPHUR, LA 70664-0071
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804 N Storts Street Phone: (903) 639-6940
Paris, Texas 75460 TBPELS Firm #10194329

NE AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 300'
SHEET: 3 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL ONE

EXCAVATED SLOPE SURVEY POINTS ADDED AT GHD CONSTRUCTION DIRECTIVE

TOP OF CUT

DESIGN EXCAVATION LIMITS

DESIGN TOE OF CUT

NC-1 NC-2 NC-3 NC-4 NC-5 NC-6 NC-7 NC-8A NC-8B NC-9 NC-10 NC-11 NC-12 NC-13 NC-14 NC-15 NC-16 NC-17 NC-18 NC-19 NC-28 NC-29 NC-30 NC-33 NC-36

POLYGON

DESIGN TOP OF CUT

DESIGN TOE OF CUT

MARKET ST

BOTTOM OF EXCAVATION SURVEY POINT (TYP)

NC EXCAVATION AREA

POLYGON DESIGNATION (TYP)

DESIGN EXCAVATION LIMITS

*SEE SHEETS 6, 7 & 8 FOR POINT VALUES

NOTE:

NC AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 34,900 CU. YDS.

STATE OF TEXAS REGISTERED MICHAEL K. WILLIAMS 6616 PROFESSIONAL LAND SURVEYOR

08/09/2024

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
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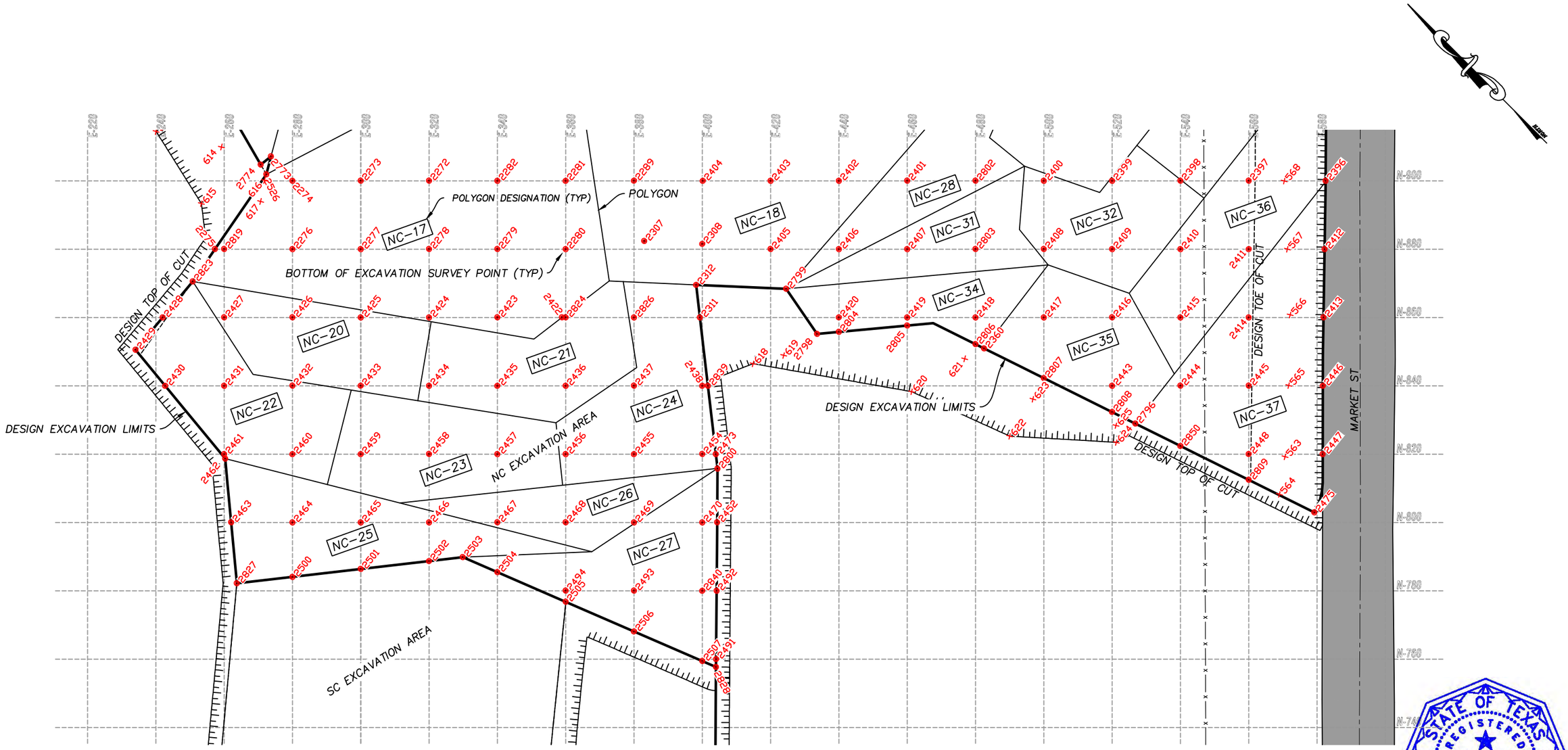
Perth, Texas 78147 TBPELS Firm #10194329

NC AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 4 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL TWO



*SEE SHEETS 6, 7 & 8 FOR POINT VALUES

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

NOTE:

NC AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 34,900 CU. YDS.

DESIGNED:	PREPARED BY **MORRISON SURVEYING, INC.** G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS P.O. BOX 71 SULPHUR, LA 70664-0071 480 N. CITIES SERVICE HWY. SULPHUR, LA 70663 PHONE: (337) 625-1050 E-MAIL: jdm@morrisonsi.com	true line CONSTRUCTION LAYOUT AND LAND SURVEYING WWW.TRUELINELAYOUT.COM 804 N. Storts Street Poth, Texas 78147 Phone: (830) 699-6640 TBPELS Firm #10194329	**NC AREA SAN JACINTO RIVER WASTE PITS BOTTOM OF EXCAVATION SURVEY POINTS**	BY	REVISIONS
DRAWN: HME					
CHECKED: DOM					
APPROVED: MKW					
F.B. No.:					

PROJECT NO.: 221222	DATE: AUGUST 7, 2024
SCALE: 1" = 30'	SHEET: 5 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL TWO

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2016	13856487.47	3216032.98	6.23
2017	13856504.01	3216043.01	6.56
2019	13856500.70	3216054.97	6.46
2020	13856493.21	3216060.83	6.28
2021	13856479.73	3216069.77	6.11
2022	13856470.26	3216064.66	5.97
2026	13856481.09	3216042.25	0.50
2029	13856475.51	3216012.86	−1.90
2032	13856463.61	3216032.49	−3.49
2033	13856482.06	3216002.39	−1.82
2036	13856484.35	3215998.29	−2.00
2037	13856494.72	3215981.18	−2.23
2038	13856505.09	3215964.08	−2.56
2039	13856515.45	3215946.98	−2.89
2040	13856525.82	3215929.87	−3.24
2041	13856535.77	3215913.47	−3.44
2042	13856546.56	3215895.67	−3.74
2043	13856556.92	3215878.56	−1.44
2044	13856567.29	3215861.46	−1.63
2045	13856577.66	3215844.36	−1.33
2046	13856588.03	3215827.26	−1.04
2047	13856598.39	3215810.15	−0.93
2054	13856619.13	3215775.95	−0.53
2058	13856624.35	3215767.34	−0.42
2059	13856615.07	3215782.64	−2.62
2060	13856600.90	3215767.44	−1.92
2061	13856610.17	3215752.14	0.27
2062	13856605.55	3215747.18	0.50
2063	13856597.03	3215763.29	−1.73
2064	13856593.14	3215741.65	0.69
2065	13856574.73	3215733.45	0.57
2066	13856554.09	3215724.25	−1.20
2067	13856594.86	3215777.40	−2.10
2068	13856580.57	3215762.39	−1.71
2069	13856566.40	3215747.18	0.16
2073	13856554.03	3215778.99	−1.80
2074	13856554.06	3215751.18	−1.56
2075	13856554.04	3215767.57	−1.75
2076	13856560.07	3215757.62	−1.54
2077	13856574.25	3215772.82	−1.84

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2078	13856588.42	3215788.02	−2.21
2090	13856581.29	3215799.78	−0.32
2091	13856570.92	3215816.89	−0.58
2092	13856560.56	3215833.99	−0.51
2093	13856550.19	3215851.09	−0.81
2094	13856539.82	3215868.20	−0.64
2095	13856529.45	3215885.30	−2.49
2099	13856498.56	3215936.74	−2.04
2100	13856487.17	3215953.22	−1.74
2101	13856475.80	3215969.72	−1.56
2111	13856456.88	3216005.02	−1.66
2112	13856446.51	3216022.12	−3.46
2117	13856429.41	3216011.76	−3.68
2118	13856439.78	3215994.65	−1.68
2119	13856448.29	3215977.85	−1.24
2120	13856460.51	3215960.45	−1.28
2121	13856470.88	3215943.34	−1.35
2122	13856481.25	3215926.24	−1.76
2123	13856491.61	3215909.14	−2.15
2127	13856514.13	3215876.01	−2.21
2128	13856529.40	3215864.29	−2.00
2129	13856524.22	3215857.55	−2.01
2130	13856535.56	3215843.13	−1.95
2137	13856543.45	3215823.62	−0.05
2138	13856553.82	3215806.52	−0.31
2139	13856564.19	3215789.42	0.03
2140	13856539.75	3215791.14	−1.88
2141	13856529.16	3215800.16	−2.07
2143	13856526.35	3215813.26	0.12
2144	13856516.41	3215829.66	−1.95
2146	13856505.61	3215847.46	−1.71
2147	13856495.25	3215864.56	−1.71
2148	13856484.88	3215881.67	−1.64
2149	13856474.51	3215898.77	−1.67
2150	13856464.14	3215915.87	−1.67
2151	13856453.78	3215932.98	−1.23
2152	13856443.41	3215950.08	−1.19
2158	13856433.04	3215967.18	−1.38
2161	13856389.21	3216013.75	5.53
2165	13856412.31	3216001.39	−3.97

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2166	13856383.56	3216010.22	5.55
2169	13856405.57	3215973.92	−2.09
2170	13856415.94	3215956.82	−1.28
2171	13856426.31	3215939.71	−1.10
2174	13856436.67	3215922.61	−1.20
2175	13856447.04	3215905.51	−1.38
2176	13856457.41	3215888.40	−1.63
2177	13856467.78	3215871.30	−1.56
2178	13856477.95	3215853.88	−1.58
2179	13856488.51	3215837.10	−1.78
2181	13856500.01	3215818.13	−1.70
2182	13856509.25	3215802.89	0.18
2183	13856512.52	3215797.48	−1.71
2184	13856519.22	3215786.43	−1.68
2185	13856529.98	3215768.68	−1.85
2186	13856550.72	3215734.48	−1.30
2187	13856540.35	3215751.58	−1.66
2190	13856540.84	3215712.18	−1.38
2191	13856533.61	3215724.11	−1.52
2192	13856523.25	3215741.21	−1.89
2193	13856512.88	3215758.32	−1.70
2194	13856502.51	3215775.42	−1.67
2195	13856492.14	3215792.52	−1.62
2196	13856450.67	3215860.93	−1.47
2197	13856440.31	3215878.04	−1.26
2198	13856429.94	3215895.14	−1.52
2199	13856419.57	3215912.24	−1.34
2200	13856409.20	3215929.34	−1.23
2201	13856398.83	3215946.45	−1.53
2202	13856378.10	3215980.65	−4.16
2203	13856366.38	3215999.99	5.50
2219	13856461.04	3215843.83	−1.45
2242	13856475.04	3215782.15	−1.65
2243	13856485.41	3215765.05	−1.66
2245	13856478.67	3215737.58	−1.78
2246	13856468.31	3215754.68	−1.56
2247	13856461.57	3215727.21	−1.64
2248	13856471.94	3215710.11	−1.50
2249	13856516.51	3215713.74	−1.75
2250	13856499.41	3215703.37	−1.55

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2269	13856452.44	3215741.80	−1.45
2272	13856434.10	3215733.95	−1.37
2273	13856444.47	3215716.84	−1.63
2274	13856454.83	3215699.74	−1.45
2275	13856449.50	3215669.96	−1.36
2276	13856437.73	3215689.37	−1.49
2277	13856427.36	3215706.48	−1.59
2278	13856417.00	3215723.58	−1.40
2279	13856406.63	3215740.68	−1.16
2280	13856396.26	3215757.79	−1.08
2281	13856413.36	3215768.15	−0.99
2282	13856423.73	3215751.05	−1.16
2283	13856440.83	3215761.42	−1.28
2284	13856447.57	3215788.89	−1.46
2285	13856430.47	3215778.52	−1.21
2286	13856454.31	3215816.36	−1.36
2287	13856437.20	3215805.99	−1.25
2288	13856420.10	3215795.62	−1.10
2289	13856403.02	3215785.27	−1.02
2291	13856409.73	3215812.73	−0.93
2292	13856426.83	3215823.10	−0.98
2293	13856443.94	3215833.46	−1.13
2299	13856416.47	3215840.20	−0.98
2300	13856433.57	3215850.56	−1.16
2307	13856386.34	3215778.69	−1.01
2308	13856376.83	3215792.78	−0.99
2311	13856358.77	3215781.05	−0.79
2312	13856367.51	3215785.04	−0.81
2346	13856357.29	3215897.88	−1.25
2352	13856386.20	3215890.13	−1.12
2360	13856307.86	3215847.49	−1.20
2373	13856423.20	3215867.67	−1.27
2374	13856412.83	3215884.77	−1.24
2375	13856402.47	3215901.87	−1.30
2376	13856392.10	3215918.98	−1.25
2377	13856381.73	3215936.08	−1.78
2378	13856371.36	3215953.18	−2.84
2379	13856361.00	3215970.29	−4.40
2380	13856349.17	3215989.79	5.76
2381	13856332.05	3215979.45	5.99

08/09/2024

*SEE SHEETS 4 & 5 FOR POINT LOCATION

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
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Pflugerville, Texas 78660 TBPELS Firm #10194329

NC AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 6 OF 17

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2382	13856343.89	3215959.92	−4.31
2383	13856354.26	3215942.82	−3.10
2384	13856364.63	3215925.71	−1.74
2385	13856375.00	3215908.61	−1.20
2386	13856395.73	3215874.40	−1.21
2387	13856406.10	3215857.30	−1.15
2388	13856399.36	3215829.83	−1.11
2389	13856389.00	3215846.93	−1.04
2390	13856378.63	3215864.04	−1.09
2391	13856368.26	3215881.14	−1.15
2392	13856347.53	3215915.34	−1.58
2393	13856337.16	3215932.45	−2.96
2394	13856326.79	3215949.55	−4.14
2395	13856315.04	3215968.94	6.15
2396	13856298.02	3215958.43	6.29
2397	13856309.69	3215939.18	−3.95
2398	13856320.06	3215922.08	−2.81
2399	13856330.42	3215904.98	−1.41
2400	13856340.79	3215887.87	−1.36
2401	13856361.53	3215853.67	−1.19
2402	13856371.89	3215836.56	−1.10
2403	13856382.26	3215819.46	−1.14
2404	13856392.55	3215802.48	−0.95
2405	13856365.16	3215809.10	−1.03
2406	13856354.79	3215826.20	−1.07
2407	13856344.42	3215843.30	−1.19
2408	13856323.69	3215877.51	−1.39
2409	13856313.32	3215894.61	−1.44
2410	13856302.95	3215911.71	−2.76
2411	13856292.58	3215928.82	−3.93
2412	13856281.07	3215947.81	6.39
2413	13856264.13	3215937.18	6.48
2414	13856275.48	3215918.45	−3.84
2415	13856285.85	3215901.34	−2.74
2416	13856296.22	3215884.24	−1.39
2417	13856306.58	3215867.14	−1.32
2418	13856316.95	3215850.04	−1.20
2419	13856327.32	3215832.93	−1.14
2420	13856337.69	3215815.83	−1.14
2422	13856379.71	3215746.51	−1.13

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2423	13856389.53	3215730.32	−1.22
2424	13856399.89	3215713.21	−1.48
2425	13856410.26	3215696.11	−1.79
2426	13856420.63	3215679.01	−1.58
2427	13856431.00	3215661.90	−1.49
2428	13856440.33	3215646.50	−1.28
2429	13856436.35	3215634.84	−1.42
2430	13856422.83	3215636.78	−1.44
2431	13856413.89	3215651.54	−1.49
2432	13856403.53	3215668.64	−1.65
2433	13856393.16	3215685.74	−1.63
2434	13856382.79	3215702.84	−1.48
2435	13856372.42	3215719.95	−1.27
2436	13856362.05	3215737.05	−1.04
2437	13856351.69	3215754.15	−0.83
2438	13856341.32	3215771.26	−0.62
2443	13856279.11	3215873.88	−1.36
2444	13856268.75	3215890.98	−2.63
2445	13856258.38	3215908.08	−3.81
2446	13856247.12	3215926.65	6.60
2447	13856230.04	3215916.25	6.74
2448	13856241.28	3215897.71	−3.83
2452	13856304.86	3215754.24	−0.54
2454	13856324.22	3215760.89	−0.64
2455	13856334.58	3215743.79	−0.84
2456	13856344.95	3215726.68	−1.02
2457	13856355.32	3215709.58	−1.28
2458	13856365.69	3215692.48	−1.03
2459	13856376.05	3215675.37	−1.31
2460	13856386.42	3215658.27	−1.57
2461	13856396.79	3215641.17	−1.52
2462	13856395.49	3215640.73	−1.59
2463	13856378.63	3215632.55	−1.34
2464	13856369.32	3215647.90	−1.26
2465	13856358.95	3215665.01	−1.07
2466	13856348.58	3215682.11	−1.09
2467	13856338.22	3215699.21	−1.24
2468	13856327.85	3215716.32	−1.08
2469	13856317.48	3215733.42	−0.70
2470	13856307.11	3215750.52	−0.50

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2473	13856322.15	3215764.30	−0.70
2475	13856216.71	3215905.29	6.63
2491	13856270.81	3215733.25	−0.70
2492	13856287.83	3215743.75	−0.54
2493	13856300.38	3215723.05	−0.67
2494	13856310.75	3215705.95	−0.98
2500	13856355.67	3215639.63	−1.07
2501	13856347.28	3215657.93	−0.96
2502	13856338.89	3215676.23	−1.07
2503	13856334.75	3215685.27	−1.19
2504	13856325.77	3215691.67	−1.26
2505	13856307.98	3215704.27	−0.95
2506	13856290.20	3215716.88	−0.73
2507	13856272.41	3215729.49	−0.65
2523	13856496.26	3215694.99	−1.50
2524	13856509.41	3215708.63	−1.80
2525	13856534.38	3215706.29	−1.46
2526	13856460.42	3215694.18	−1.34
2763	13856584.92	3215755.21	0.38
2764	13856567.82	3215744.84	0.38
2765	13856506.14	3215730.84	−1.84
2766	13856489.04	3215720.48	−1.62
2769	13856501.98	3215892.04	−2.20
2770	13856519.08	3215902.40	−2.33
2771	13856508.72	3215919.51	−2.45
2772	13856587.96	3215787.52	−2.14
2773	13856464.18	3215698.07	−1.44
2774	13856463.70	3215694.25	−1.42
2775	13856481.31	3215694.65	−1.41
2784	13856549.61	3215890.62	−3.77
2785	13856536.54	3215873.60	−2.64
2786	13856563.86	3215872.16	−1.61
2787	13856557.45	3215761.95	−0.06
2788	13856536.72	3215796.15	−0.94
2789	13856502.24	3215795.83	−1.67
2790	13856486.02	3215808.29	−1.63
2793	13856456.60	3216032.42	−3.73
2796	13856266.14	3215873.95	−1.39
2798	13856336.89	3215807.86	−0.98
2799	13856352.82	3215806.98	−0.88

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2800	13856318.24	3215762.50	−0.67
2802	13856351.16	3215870.77	−1.34
2803	13856334.06	3215860.40	−1.28
2804	13856334.08	3215813.64	−1.04
2805	13856325.28	3215831.70	−1.18
2806	13856310.25	3215845.97	−1.10
2807	13856291.40	3215857.93	−1.26
2808	13856272.54	3215869.89	−1.39
2809	13856234.83	3215893.80	−3.83
2810	13856471.41	3215826.73	−1.68
2813	13856388.47	3215963.55	−2.68
2814	13856422.67	3215984.29	−1.76
2815	13856395.20	3215991.02	−3.99
2816	13856467.25	3215987.92	−1.34
2818	13856481.78	3215809.62	−1.60
2819	13856448.10	3215672.27	−1.38
2820	13856457.94	3215771.79	−1.49
2821	13856547.08	3215779.05	−1.96
2822	13856464.67	3215799.26	−1.56
2823	13856444.78	3215659.50	−1.34
2824	13856379.16	3215747.42	−1.07
2826	13856368.79	3215764.52	−0.85
2827	13856362.50	3215624.73	−1.18
2828	13856268.83	3215732.03	−0.77
2830	13856367.73	3215997.76	4.24
2831	13856350.63	3215987.39	4.36
2832	13856333.53	3215977.02	3.49
2839	13856340.46	3215772.67	−0.70
2840	13856290.01	3215740.15	−0.55
2850	13856253.68	3215881.85	−2.64
2863	13856371.48	3215991.57	−0.91
2864	13856354.47	3215981.06	−1.23
2865	13856337.37	3215970.68	−1.26

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

*SEE SHEETS 4 & 5 FOR POINT LOCATION

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
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480 N. CITIES SERVICE HWY. SULPHUR, LA 70663
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WWW.TRUELINELAYOUT.COM
504 N. Storts Street Phone: (830) 639-6640
Pflugerville, Texas 78691 TBPELS Firm #10194329

NC AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 7 OF 17

EXCAVATED SLOPE SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
500	13856601.44	3215836.82	5.96
501	13856599.56	3215836.52	3.31
502	13856591.62	3215835.09	−0.14
503	13856591.73	3215852.34	5.87
504	13856589.37	3215850.06	2.95
505	13856586.38	3215847.71	0.00
506	13856638.38	3215777.64	6.10
507	13856637.46	3215776.91	3.46
508	13856635.94	3215776.18	1.30
509	13856636.27	3215782.02	6.32
510	13856634.72	3215780.84	3.19
511	13856632.82	3215779.29	0.78
512	13856633.44	3215785.80	6.15
513	13856631.67	3215784.20	2.90
514	13856629.86	3215782.17	0.82
515	13856630.09	3215790.55	6.29
516	13856627.62	3215790.08	3.47
517	13856626.46	3215787.54	0.38
518	13856623.89	3215799.22	6.04
519	13856622.70	3215797.50	3.22
520	13856620.15	3215798.20	0.65
521	13856571.93	3215887.62	6.01
522	13856568.22	3215885.08	2.10
523	13856562.29	3215882.67	−0.62
524	13856568.74	3215892.88	6.02
525	13856562.24	3215905.37	5.97
526	13856558.02	3215902.56	2.36
527	13856554.35	3215901.18	−0.45
528	13856555.80	3215914.56	5.86
529	13856551.21	3215913.56	2.93
530	13856542.47	3215938.86	6.40
531	13856537.91	3215934.74	0.96
532	13856531.99	3215928.71	−2.86
533	13856531.67	3215957.23	6.78
534	13856525.95	3215953.75	1.18
535	13856518.82	3215946.64	−2.53
536	13856522.70	3215974.70	7.03
537	13856513.05	3215967.31	−0.70
539	13856511.56	3215991.59	7.46
540	13856504.73	3215988.07	0.13

EXCAVATED SLOPE SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
542	13856484.44	3216003.52	0.56
543	13856494.13	3216002.07	0.26
544	13856505.69	3216002.01	7.95
545	13856413.74	3216019.92	6.10
546	13856418.51	3216023.42	5.25
547	13856429.40	3216030.58	6.14
548	13856431.11	3216023.89	1.13
549	13856421.66	3216018.35	0.96
550	13856418.07	3216013.71	1.56
551	13856427.50	3216030.49	6.18
552	13856435.99	3216038.78	6.05
553	13856446.69	3216045.02	6.15
554	13856448.38	3216037.46	0.45
555	13856441.75	3216032.05	0.21
556	13856431.15	3216024.86	0.11
557	13856400.93	3216015.53	5.71
558	13856394.67	3216011.93	5.64
559	13856389.76	3216008.38	5.75
560	13856395.86	3216003.67	1.85
561	13856403.78	3216005.82	1.13
562	13856394.06	3216000.18	3.49
563	13856235.12	3215906.44	1.61
564	13856226.58	3215899.31	1.23
565	13856252.38	3215918.15	1.42
566	13856269.84	3215929.24	6.30
567	13856286.73	3215938.50	0.87
568	13856304.26	3215948.06	3.78
569	13856321.31	3215960.33	0.75
570	13856620.20	3215806.97	6.00
571	13856617.53	3215804.32	2.54
572	13856615.34	3215803.46	0.24
573	13856616.61	3215812.82	6.24
574	13856614.31	3215811.18	3.34
575	13856612.12	3215808.98	0.23
576	13856613.19	3215818.68	6.35
577	13856610.99	3215815.93	3.18
578	13856607.31	3215812.12	0.29
579	13856610.35	3215823.60	6.26
580	13856608.37	3215820.57	3.08
581	13856604.79	3215816.96	0.24

EXCAVATED SLOPE SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
582	13856604.25	3215833.51	6.11
583	13856602.86	3215829.90	2.68
584	13856600.00	3215826.48	0.31
585	13856491.78	3216037.89	6.42
586	13856490.01	3216042.00	3.78
587	13856485.13	3216042.77	2.47
588	13856481.72	3216040.35	2.54
589	13856503.60	3216047.90	6.53
590	13856499.50	3216051.52	5.64
591	13856500.82	3216053.63	6.47
592	13856497.19	3216059.16	6.01
593	13856494.35	3216059.61	6.20
594	13856493.33	3216055.57	4.35
595	13856490.43	3216061.65	5.68
596	13856483.95	3216058.10	1.10
597	13856478.49	3216064.20	4.91
598	13856471.93	3216059.27	2.25
599	13856413.89	3216015.44	1.36
600	13856409.88	3216021.83	5.62
601	13856409.10	3216013.03	0.91
602	13856405.62	3216019.09	5.60
603	13856404.90	3216010.52	1.32
604	13856402.77	3216017.24	5.66
605	13856386.14	3216003.22	1.29
606	13856536.47	3215703.57	9.18
607	13856535.88	3215704.89	5.04
608	13856535.26	3215706.29	−0.72
609	13856514.89	3215700.28	8.45
610	13856514.13	3215705.23	3.52
611	13856512.91	3215713.15	−1.65
612	13856493.15	3215685.70	9.15
613	13856487.88	3215673.09	9.13
614	13856474.06	3215687.08	8.84
615	13856462.96	3215673.50	9.09
616	13856459.18	3215692.81	2.80
617	13856454.49	3215688.62	7.82
618	13856339.13	3215787.36	9.23
619	13856336.59	3215796.26	9.19
620	13856308.06	3215822.80	9.55
621	13856308.25	3215841.06	6.75

EXCAVATED SLOPE SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
622	13856282.07	3215840.59	9.02
623	13856287.81	3215852.03	7.58
624	13856264.31	3215866.34	9.13
625	13856268.59	3215868.81	8.60

08/09/2024

*SEE SHEETS 4 & 5 FOR POINT LOCATION

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
P.O. BOX 71 SULPHUR, LA 70664-0071
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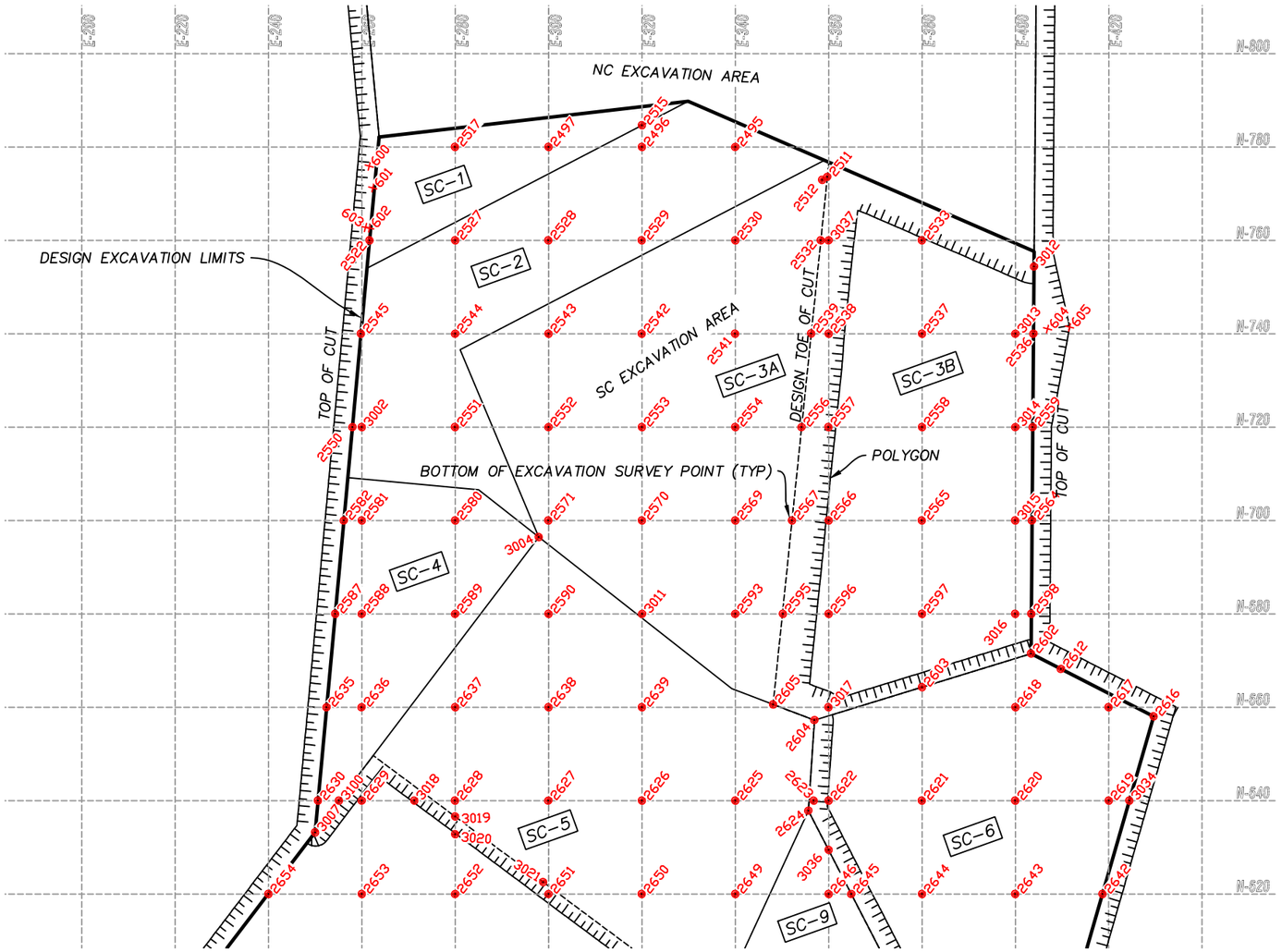
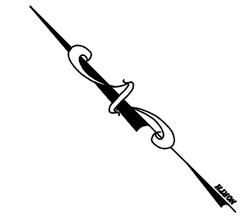
NC AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 8 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL TWO





08/09/2024

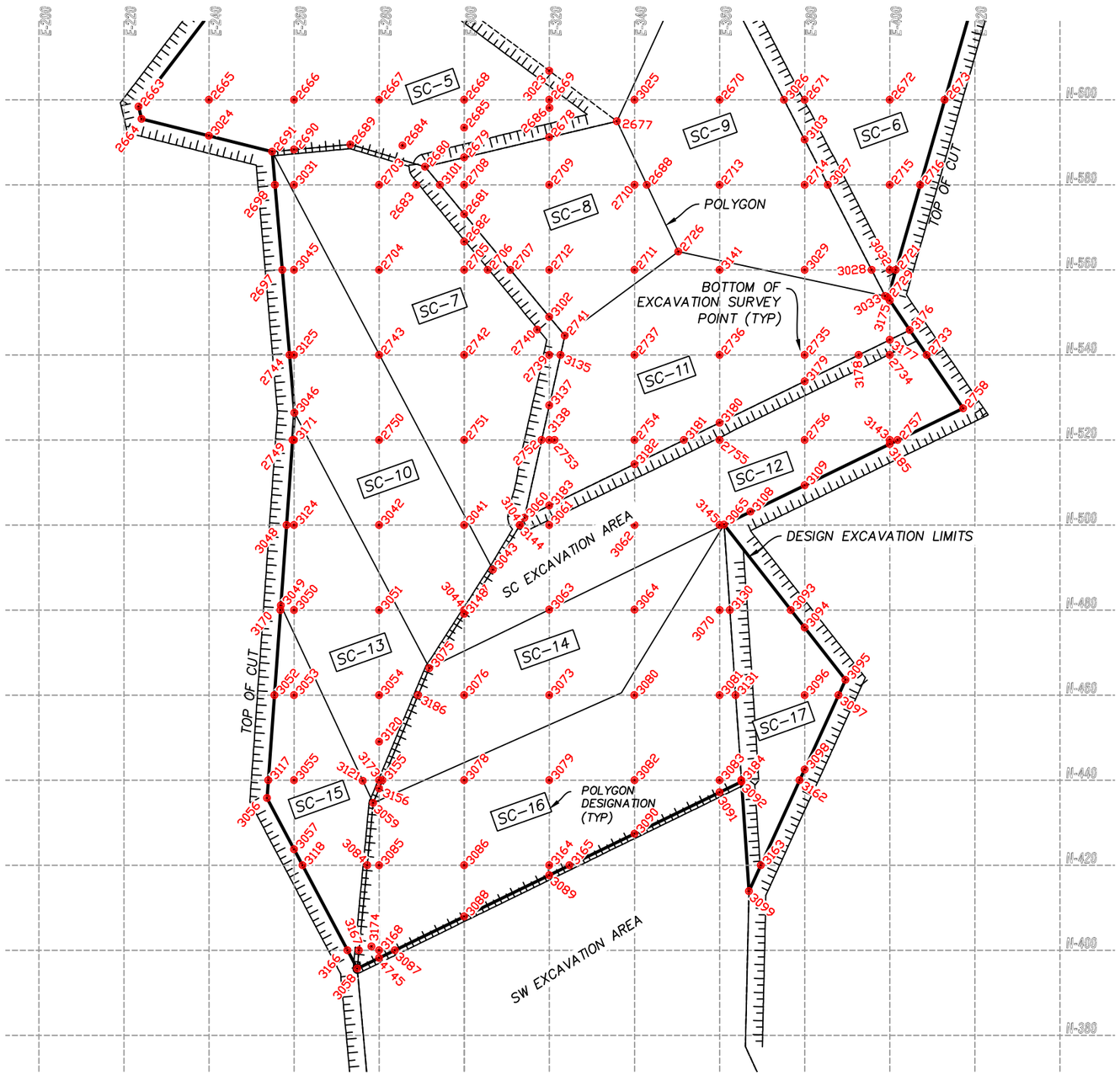
*SEE SHEETS 11 & 12 FOR POINT VALUES

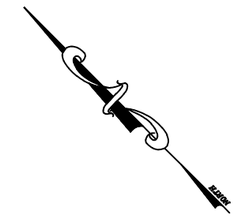
NOTE:

SC AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 19,700 CU. YDS.

DESIGNED:	PREPARED BY **MORRISON SURVEYING, INC.** G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS P.O. BOX 71 SULPHUR, LA 70664-0071 480 N. CITIES SERVICE HWY. SULPHUR, LA 70663 PHONE: (337) 625-1050 E-MAIL: jdm@morrisonsi.com true line CONSTRUCTION LAYOUT AND LAND SURVEYING WWW.TRUELINELAYOUT.COM 804 N. Storts Street Poth, Texas 78147 Phone: (830) 699-6640 TBPELS Firm #10194329	**SC AREA SAN JACINTO RIVER WASTE PITS BOTTOM OF EXCAVATION SURVEY POINTS**	BY	REVISIONS	PROJECT NO.: 221222	DATE: AUGUST 7, 2024
DRAWN: HME						
CHECKED: DOM					1" = 30'	9 OF 17
APPROVED: MKW					SCALE:	SHEET:
F.B. No.:						

SAN JACINTO SOUTH IMPOUNDMENT CELL THREE





08/09/2024

*SEE SHEETS 11 & 12 FOR POINT VALUES

NOTE:

SC AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 19,700 CU. YDS.

DESIGNED:	PREPARED BY: MORRISON SURVEYING, INC. G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS P.O. BOX 71 SULPHUR, LA 70664-0071 460 N. CITIES SERVICE HWY. SULPHUR, LA 70663 PHONE: (337) 625-1050 E-MAIL: jdm@morrisonsi.com	true line CONSTRUCTION LAYOUT AND LAND SURVEYING WWW.TRUELINELAYOUT.COM 804 N. Sports Street Phone: (830) 699-6640 Refugio, Texas 78147 TBPELS Firm #10194329	SC AREA SAN JACINTO RIVER WASTE PITS BOTTOM OF EXCAVATION SURVEY POINTS		PROJECT NO.: 221222 / DATE: AUGUST 7, 2024
DRAWN: HME					
CHECKED: DOM					SCALE: 1" = 30' / SHEET: 10 OF 17
APPROVED: MKW				BY: REVISIONS	
F.B. No.:					

SAN JACINTO SOUTH IMPOUNDMENT CELL THREE

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2495	13856321.11	3215688.84	−1.14
2496	13856331.48	3215671.74	−0.93
2497	13856341.85	3215654.64	−0.98
2511	13856305.41	3215702.40	−0.90
2512	13856305.45	3215701.14	−0.99
2515	13856335.47	3215674.16	−1.05
2517	13856352.22	3215637.54	−0.99
2522	13856344.61	3215611.50	−1.55
2527	13856335.11	3215627.17	−0.96
2528	13856324.75	3215644.27	−0.88
2529	13856314.38	3215661.37	−0.98
2530	13856304.01	3215678.48	−0.95
2532	13856294.51	3215694.16	−0.99
2533	13856283.28	3215712.68	2.70
2536	13856253.79	3215722.75	2.80
2537	13856266.17	3215702.32	2.75
2538	13856276.54	3215685.21	0.92
2539	13856278.51	3215682.06	−0.93
2541	13856286.91	3215668.11	−0.98
2542	13856297.28	3215651.01	−0.81
2543	13856307.64	3215633.90	−0.69
2544	13856318.01	3215616.80	−0.94
2545	13856328.46	3215599.56	−1.58
2550	13856312.31	3215587.62	−1.23
2551	13856300.91	3215606.43	−1.07
2552	13856290.54	3215623.54	−0.95
2553	13856280.17	3215640.64	−1.06
2554	13856269.80	3215657.74	−1.06
2556	13856262.43	3215669.90	−0.98
2557	13856259.44	3215674.84	1.90
2558	13856249.07	3215691.95	2.89
2559	13856236.76	3215712.25	2.94
2564	13856219.74	3215701.76	2.97
2565	13856231.97	3215681.58	2.92
2566	13856242.33	3215664.48	2.44
2567	13856246.40	3215657.77	−1.20
2569	13856252.70	3215647.37	−1.26
2570	13856263.07	3215630.27	−1.26
2571	13856273.44	3215613.17	−1.39
2580	13856283.80	3215596.06	−1.26

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2581	13856294.17	3215578.96	−1.12
2582	13856296.16	3215575.68	−1.15
2587	13856280.02	3215563.73	−2.14
2588	13856277.07	3215568.60	−2.11
2589	13856266.70	3215585.70	−1.61
2590	13856256.33	3215602.80	−1.16
2593	13856235.60	3215637.01	−0.97
2595	13856230.30	3215645.75	−0.86
2596	13856225.23	3215654.11	2.86
2597	13856214.86	3215671.21	3.20
2598	13856202.71	3215691.26	3.17
2602	13856195.47	3215686.79	1.58
2603	13856201.45	3215663.08	1.54
2604	13856207.35	3215639.72	−0.44
2605	13856214.82	3215633.90	−0.46
2612	13856189.34	3215690.57	1.50
2616	13856170.38	3215702.27	1.69
2617	13856177.03	3215695.05	1.65
2618	13856187.39	3215677.95	1.61
2619	13856159.92	3215684.68	1.92
2620	13856170.29	3215667.58	1.81
2621	13856180.66	3215650.48	1.57
2622	13856191.02	3215633.37	1.75
2623	13856192.68	3215630.64	0.21
2624	13856191.46	3215628.57	−0.36
2625	13856201.39	3215616.27	−0.38
2626	13856211.76	3215599.17	−0.84
2627	13856222.13	3215582.06	−1.07
2628	13856232.50	3215564.96	−1.61
2629	13856242.86	3215547.86	−0.61
2630	13856247.72	3215539.85	−2.31
2635	13856263.87	3215551.79	−2.09
2636	13856259.97	3215558.23	−1.98
2637	13856249.60	3215575.33	−1.64
2638	13856239.23	3215592.43	−1.09
2639	13856228.86	3215609.54	−0.90
2642	13856143.51	3215673.18	2.17
2643	13856153.19	3215657.21	1.97
2644	13856163.55	3215640.11	1.64
2645	13856171.40	3215627.17	−0.41

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2646	13856173.92	3215623.01	−0.43
2649	13856184.29	3215605.90	−0.45
2650	13856194.66	3215588.80	−0.80
2651	13856205.02	3215571.70	−0.51
2652	13856215.39	3215554.60	−0.29
2653	13856225.76	3215537.49	−0.75
2654	13856236.13	3215520.39	−1.29
2663	13856226.21	3215495.05	−1.69
2664	13856223.41	3215494.14	−1.75
2665	13856219.02	3215510.02	−1.49
2666	13856208.66	3215527.12	−0.86
2667	13856198.29	3215544.23	−0.20
2668	13856187.92	3215561.33	0.22
2669	13856177.55	3215578.43	0.56
2670	13856156.82	3215612.64	−0.28
2671	13856146.45	3215629.74	2.00
2672	13856136.08	3215646.84	2.03
2673	13856129.39	3215657.89	2.21
2677	13856165.02	3215589.42	−0.57
2678	13856170.02	3215573.87	−1.04
2679	13856176.33	3215554.30	−1.21
2680	13856179.24	3215545.26	−1.45
2681	13856164.91	3215547.38	−1.41
2682	13856159.40	3215544.04	0.42
2683	13856176.66	3215541.32	0.31
2684	13856186.24	3215543.36	−0.15
2685	13856182.33	3215557.94	0.17
2686	13856175.94	3215577.46	0.53
2688	13856148.56	3215587.68	−0.87
2689	13856192.83	3215533.00	−0.50
2690	13856198.65	3215521.06	−1.05
2691	13856200.92	3215516.39	−1.25
2697	13856175.89	3215504.01	−0.41
2698	13856193.89	3215512.91	−0.64
2703	13856181.19	3215533.86	0.11
2704	13856164.08	3215523.49	−0.06
2705	13856153.72	3215540.60	0.31
2706	13856150.86	3215545.30	0.32
2707	13856148.09	3215549.88	−1.61
2708	13856170.82	3215550.96	−1.34

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
2709	13856160.45	3215568.07	−1.21
2710	13856150.08	3215585.17	−1.02
2711	13856132.98	3215574.80	−1.39
2712	13856143.35	3215557.70	−1.50
2713	13856139.72	3215602.27	−0.71
2714	13856129.35	3215619.38	−0.38
2715	13856118.98	3215636.48	2.13
2716	13856115.27	3215642.60	2.27
2721	13856101.15	3215627.31	2.18
2726	13856131.30	3215585.85	−1.25
2729	13856096.56	3215622.35	0.16
2733	13856080.27	3215623.18	1.68
2734	13856084.77	3215615.74	1.56
2735	13856095.14	3215598.64	−0.37
2736	13856105.51	3215581.54	−1.19
2737	13856115.88	3215564.43	−1.43
2739	13856126.25	3215547.33	−0.35
2740	13856132.84	3215547.99	0.27
2741	13856128.25	3215552.82	−1.59
2742	13856136.61	3215530.23	0.11
2743	13856146.98	3215513.12	−0.29
2744	13856157.90	3215495.11	−0.59
2749	13856140.43	3215485.35	−0.83
2750	13856129.88	3215502.76	−0.26
2751	13856119.51	3215519.86	0.43
2752	13856110.09	3215535.41	−1.33
2753	13856108.52	3215537.99	−1.31
2754	13856098.77	3215554.07	−1.42
2755	13856088.41	3215571.17	0.34
2756	13856078.04	3215588.27	0.90
2757	13856066.70	3215606.99	1.51
2758	13856065.13	3215623.99	1.76
3002	13856311.27	3215589.33	−1.17
3004	13856271.51	3215609.57	−1.38
3007	13856242.26	3215535.82	−2.22
3011	13856245.94	3215619.95	−1.14
3012	13856266.03	3215730.30	0.98
3013	13856255.80	3215719.42	2.83
3014	13856238.70	3215709.05	2.99
3015	13856221.60	3215698.68	3.01

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

*SEE SHEETS 9 & 10 FOR POINT LOCATIONS

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
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Polk, Texas 78147 TBPELS Firm #10194329

SC AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 11 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL THREE

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
3016	13856204.50	3215688.32	3.21
3017	13856208.13	3215643.74	1.61
3018	13856237.03	3215557.49	−0.46
3019	13856229.61	3215563.22	−1.57
3020	13856226.37	3215561.25	−0.23
3021	13856207.82	3215572.05	−1.12
3023	13856183.38	3215581.97	−0.93
3024	13856211.79	3215505.64	−1.45
3025	13856167.19	3215595.54	−0.44
3026	13856148.95	3215625.62	−0.07
3027	13856126.51	3215624.06	−0.20
3028	13856104.07	3215622.50	−0.10
3029	13856112.25	3215609.01	−0.43
3031	13856191.55	3215516.76	−0.62
3032	13856101.88	3215626.11	1.92
3033	13856097.20	3215622.02	0.20
3034	13856157.63	3215688.47	2.00
3036	13856182.01	3215627.91	−0.31
3037	13856293.64	3215695.58	−0.15
3041	13856102.41	3215509.49	0.99
3042	13856112.77	3215492.39	−0.38
3043	13856089.98	3215509.81	0.55
3044	13856085.30	3215499.12	0.30
3045	13856174.45	3215506.39	−0.38
3046	13856145.68	3215489.07	−0.72
3048	13856124.06	3215473.77	−0.97
3049	13856108.60	3215462.83	−0.91
3050	13856106.04	3215464.92	−0.90
3051	13856095.67	3215482.02	−0.38
3052	13856091.33	3215450.60	−0.68
3053	13856088.94	3215454.55	−0.65
3054	13856078.57	3215471.65	−0.24
3055	13856071.83	3215444.18	−0.39
3056	13856071.52	3215436.58	−0.51
3057	13856057.97	3215435.78	−0.19
3058	13856026.26	3215433.90	0.56
3059	13856057.64	3215457.30	−0.46
3060	13856096.57	3215522.46	−0.60
3061	13856092.04	3215526.60	0.98
3062	13856081.67	3215543.70	0.64

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
3063	13856075.05	3215516.29	0.93
3064	13856064.68	3215533.40	0.75
3065	13856070.86	3215561.76	0.78
3070	13856054.20	3215550.43	0.97
3073	13856057.83	3215505.86	0.47
3075	13856077.92	3215485.05	−0.55
3076	13856068.20	3215488.76	−0.19
3078	13856051.10	3215478.39	0.03
3079	13856040.73	3215495.49	0.36
3080	13856047.47	3215522.96	0.82
3081	13856037.10	3215540.07	1.12
3082	13856030.36	3215512.60	0.79
3083	13856019.99	3215529.70	1.18
3084	13856045.83	3215448.49	−0.23
3085	13856044.36	3215450.92	−0.01
3086	13856034.00	3215468.02	0.42
3087	13856025.36	3215443.69	0.70
3088	13856023.69	3215461.78	0.90
3089	13856021.65	3215483.93	0.69
3090	13856019.61	3215506.08	0.95
3091	13856017.57	3215528.23	1.18
3092	13856017.05	3215533.94	1.20
3093	13856045.50	3215564.79	3.13
3094	13856040.32	3215565.41	3.28
3095	13856024.82	3215567.26	3.61
3096	13856026.73	3215557.17	3.51
3097	13856022.60	3215563.99	3.58
3098	13856011.80	3215548.12	3.50
3099	13855994.09	3215522.08	1.77
3100	13856245.39	3215543.69	−0.56
3101	13856173.79	3215546.07	−1.39
3102	13856133.91	3215551.98	−1.62
3103	13856138.44	3215624.88	−0.44
3104	13856095.64	3215520.66	0.32
3108	13856070.22	3215568.66	0.84
3109	13856068.93	3215582.75	0.98
3117	13856074.96	3215439.02	−0.50
3118	13856053.69	3215435.53	−0.01
3120	13856069.24	3215466.00	−0.18
3121	13856063.35	3215457.92	−0.10

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
3124	13856123.14	3215475.29	−0.90
3125	13856157.35	3215496.02	−0.53
3130	13856052.95	3215552.50	1.07
3131	13856035.14	3215543.29	1.20
3135	13856124.88	3215549.58	−1.66
3137	13856116.13	3215541.20	−1.72
3138	13856109.14	3215536.96	−1.23
3141	13856122.61	3215591.90	−1.18
3143	13856067.67	3215605.38	1.52
3144	13856095.64	3215520.66	0.34
3145	13856071.30	3215560.80	0.82
3147	13856085.01	3215499.60	0.06
3148	13856084.56	3215498.67	0.08
3155	13856061.05	3215461.97	−0.54
3156	13856059.83	3215460.30	−0.55
3162	13856010.23	3215545.81	3.50
3163	13855997.86	3215527.62	3.27
3164	13856023.63	3215485.12	0.68
3165	13856021.17	3215489.18	0.71
3166	13856031.12	3215434.19	0.74
3167	13856029.73	3215436.48	0.24
3168	13856027.26	3215440.55	0.60
3170	13856107.70	3215462.19	−0.99
3171	13856140.24	3215485.65	−0.97
3173	13856061.47	3215461.29	−0.10
3174	13856028.99	3215439.46	0.51
3175	13856095.73	3215622.39	0.13
3176	13856087.33	3215622.79	0.18
3177	13856087.81	3215617.58	0.17
3178	13856088.56	3215609.50	0.02
3179	13856089.85	3215595.43	−0.41
3180	13856091.89	3215573.28	−1.22
3181	13856092.75	3215564.01	−1.32
3182	13856093.93	3215551.13	−1.38
3183	13856095.97	3215528.98	−0.56
3184	13856017.33	3215534.09	1.26
3185	13856066.89	3215604.90	1.55
3186	13856073.84	3215479.46	−0.59
4745	13856025.73	3215439.63	0.47

EXCAVATED SLOPE SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
600	13856358.27	3215619.68	6.66
601	13856353.89	3215617.93	−0.50
602	13856346.90	3215612.89	1.32
603	13856347.44	3215612.18	6.82
604	13856253.16	3215725.88	9.38
605	13856251.02	3215730.11	9.43

08/09/2024

*SEE SHEETS 9 & 10 FOR POINT LOCATIONS

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS
P.O. BOX 71 SULPHUR, LA 70664-0071
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PHONE: (337) 625-1050
E-MAIL: jdm@morrisonsi.com

true line
CONSTRUCTION LAYOUT AND LAND SURVEYING
WWW.TRUELINELAYOUT.COM
804 N. Storrs Street Poth, Texas 78147
Phone: (830) 699-6640 TBPELS Firm #10194329

SC AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 12 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL THREE

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

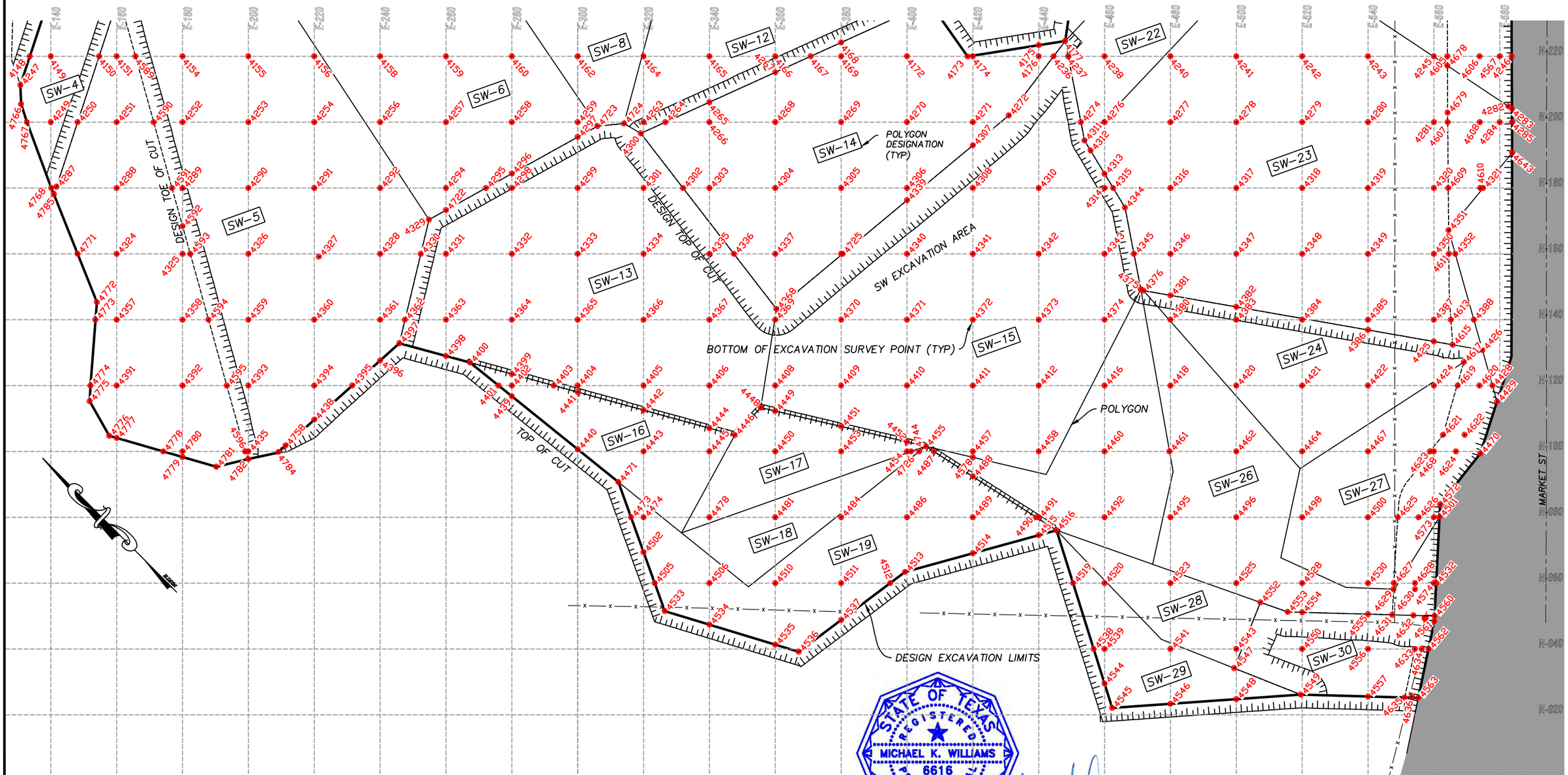
*SEE SHEETS 15, 16 & 17 FOR POINT VALUES

NOTE:

SW AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 32,300 CU. YDS.

DESIGNED:	PREPARED BY **MORRISON SURVEYING, INC.** G.P.S., BOUNDARY, TOPOGRAPHIC, SUBDIVISION, INDUSTRIAL, HYDROGRAPHIC AND PIPELINE SURVEYS P.O. BOX 71 SULPHUR, LA 70664-0071 480 N. CITIES SERVICE HWY. SULPHUR, LA 70663 PHONE: (337) 625-1050 E-MAIL: jdm@morrisonsi.com	**true line** CONSTRUCTION LAYOUT AND LAND SURVEYING WWW.TRUELINELAYOUT.COM 804 N. Sports Street Phone: (830) 699-6640 Refb, Texas 78147 TBPELS Firm #10194329	**SW AREA** **SAN JACINTO RIVER** **WASTE PITS** **BOTTOM OF EXCAVATION SURVEY POINTS**	BY	REVISIONS
DRAWN: HME					
CHECKED: DOM					
APPROVED: MKW				PROJECT NO.: 221222	DATE: AUGSUT 7, 2024
F.B. No.:				SCALE: 1" = 30'	SHEET: 13 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL FOUR



NOTE:

SW AREA – ESTIMATED EXCAVATED SOIL REMOVAL QUANTITY FROM JULY 2019 SURVEY – 32,300 CU. YDS.

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

*SEE SHEETS 15, 16 & 17 FOR POINT VALUES

DESIGNED:	
DRAWN:	HME
CHECKED:	DOM
APPROVED:	MKW
F.B. No.:	

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SW AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222	DATE: AUGUST 7, 2024
SCALE: 1" = 30'	SHEET: 14 OF 17

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
3058	13856026.26	3215433.90	0.56
3087	13856025.36	3215443.69	0.70
3088	13856023.69	3215461.78	0.90
3089	13856021.65	3215483.93	0.69
3090	13856019.61	3215506.08	0.95
3091	13856017.57	3215528.23	1.18
3092	13856017.05	3215533.94	1.20
3099	13855994.09	3215522.08	1.77
3100	13855999.53	3215524.88	1.59
4001	13855813.07	3215608.41	1.94
4002	13855825.88	3215616.21	1.85
4003	13855838.69	3215624.02	1.96
4004	13855802.67	3215625.49	1.40
4005	13855815.48	3215633.29	1.40
4006	13855835.61	3215629.08	1.80
4007	13855795.82	3215644.47	0.64
4008	13855792.40	3215642.34	0.70
4009	13855825.66	3215632.93	1.72
4010	13855815.72	3215636.77	1.31
4011	13855805.78	3215640.62	0.43
4012	13856013.26	3215502.23	1.47
4013	13856002.89	3215519.33	1.72
4014	13856016.89	3215457.65	1.54
4015	13856006.52	3215474.76	1.32
4016	13855996.16	3215491.86	1.51
4017	13855985.79	3215508.96	1.76
4018	13855982.38	3215514.58	1.72
4019	13856012.09	3215426.99	1.41
4020	13856010.16	3215430.18	1.44
4021	13855999.79	3215447.29	1.64
4022	13855989.42	3215464.39	1.46
4023	13855979.05	3215481.49	1.53
4024	13855968.69	3215498.60	1.87
4025	13855965.53	3215503.80	1.82
4026	13855994.04	3215418.20	1.34
4027	13855993.05	3215419.82	1.42
4028	13855982.69	3215436.92	1.77
4031	13855972.32	3215454.02	1.86
4034	13855961.95	3215471.12	1.89
4036	13855963.34	3215502.40	1.85
4039	13855951.58	3215488.23	1.83

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4040	13855944.30	3215500.25	2.02
4041	13855975.98	3215409.40	1.13
4045	13855965.58	3215426.55	1.73
4047	13855955.22	3215443.65	1.87
4048	13855944.85	3215460.76	1.81
4052	13855934.48	3215477.86	1.68
4053	13855930.20	3215498.65	1.84
4054	13855924.11	3215494.96	1.74
4055	13855922.41	3215497.77	1.76
4057	13855961.88	3215402.52	0.97
4058	13855958.85	3215399.08	0.78
4059	13855948.48	3215416.18	1.56
4061	13855938.11	3215433.29	1.53
4064	13855927.74	3215450.39	1.52
4067	13855917.38	3215467.49	1.56
4069	13855907.01	3215484.60	1.55
4070	13855909.49	3215496.31	1.67
4071	13855902.75	3215491.63	1.55
4072	13855949.34	3215376.18	0.44
4074	13855941.74	3215388.71	0.79
4076	13855931.38	3215405.82	1.25
4077	13855921.01	3215422.92	1.26
4079	13855910.64	3215440.02	1.42
4080	13855900.27	3215457.12	1.21
4082	13855889.91	3215474.23	1.27
4083	13855886.28	3215480.21	1.49
4084	13855944.31	3215365.62	0.31
4085	13855945.10	3215347.62	−0.11
4086	13855935.01	3215361.24	0.32
4087	13855924.64	3215378.34	0.55
4088	13855914.27	3215395.45	0.98
4090	13855903.91	3215412.55	1.13
4093	13855893.54	3215429.65	0.85
4094	13855883.17	3215446.76	1.06
4096	13855872.80	3215463.86	1.23
4097	13855869.82	3215468.78	1.18
4098	13855866.15	3215466.24	1.26
4099	13855948.52	3215343.84	−0.20
4100	13855945.38	3215344.14	−0.22
4102	13855971.93	3215248.51	−2.12
4103	13855966.86	3215263.61	−1.10

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4104	13855960.33	3215283.04	−0.92
4105	13855959.38	3215282.46	−0.90
4106	13855953.79	3215302.50	−0.76
4107	13855948.99	3215299.59	−0.89
4108	13855939.84	3215318.31	−0.76
4109	13855938.64	3215316.67	−0.70
4110	13855928.27	3215333.77	−0.52
4111	13855917.91	3215350.88	−0.01
4113	13855907.54	3215367.98	0.31
4115	13855897.17	3215385.08	0.62
4117	13855886.80	3215402.18	0.59
4118	13855876.44	3215419.29	0.76
4120	13855866.07	3215436.39	1.03
4121	13855855.70	3215453.49	1.25
4122	13855849.14	3215464.32	1.24
4123	13855962.93	3215238.02	−2.76
4124	13855952.64	3215254.99	−1.45
4125	13855942.27	3215272.10	−0.97
4126	13855934.52	3215290.78	−1.11
4127	13855932.51	3215296.76	−0.96
4128	13855931.91	3215289.20	−1.19
4130	13855921.54	3215306.30	−0.83
4131	13855911.17	3215323.40	−0.74
4132	13855900.80	3215340.51	−0.38
4134	13855890.44	3215357.61	0.24
4135	13855880.07	3215374.71	0.35
4136	13855869.70	3215391.82	0.50
4140	13855859.33	3215408.92	0.70
4142	13855848.96	3215426.02	1.14
4144	13855838.60	3215443.12	1.24
4145	13855831.91	3215462.36	1.36
4146	13855828.23	3215460.23	1.32
4147	13855825.70	3215465.19	1.44
4148	13855949.22	3215222.06	−3.22
4149	13855945.91	3215227.52	−2.83
4150	13855938.31	3215240.06	−3.97
4151	13855935.54	3215244.62	−3.65
4152	13855947.84	3215251.15	−3.47
4154	13855925.17	3215261.73	−1.07
4155	13855914.80	3215278.83	−1.14
4156	13855904.44	3215295.93	−0.96

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4158	13855894.07	3215313.04	−0.91
4159	13855883.70	3215330.14	−0.47
4160	13855873.33	3215347.24	−0.06
4162	13855862.96	3215364.34	0.34
4164	13855852.60	3215381.45	0.49
4165	13855842.23	3215398.55	0.84
4166	13855831.86	3215415.65	1.20
4167	13855826.29	3215424.84	−0.82
4168	13855825.08	3215434.93	−0.62
4169	13855821.49	3215432.76	−0.73
4170	13855822.47	3215456.74	−0.73
4171	13855821.57	3215464.22	−0.54
4172	13855811.13	3215449.86	−0.65
4173	13855801.55	3215465.55	−0.69
4174	13855800.76	3215466.96	−0.51
4175	13855793.29	3215485.82	0.02
4176	13855790.39	3215484.07	−0.05
4177	13855790.21	3215493.36	0.33
4178	13855802.17	3215503.21	2.52
4179	13855817.78	3215516.05	2.74
4180	13855823.72	3215520.94	2.74
4181	13855833.38	3215528.89	2.81
4182	13855848.99	3215541.73	2.84
4183	13855852.96	3215544.99	2.70
4184	13855854.80	3215569.89	2.52
4185	13855856.03	3215586.46	2.50
4186	13855853.87	3215592.71	2.31
4187	13855847.20	3215612.05	2.01
4188	13855842.20	3215626.53	1.89
4189	13855844.80	3215587.21	2.38
4190	13855834.44	3215604.32	2.05
4191	13855824.07	3215621.42	1.92
4192	13855821.56	3215625.56	1.80
4193	13855848.44	3215542.64	2.79
4194	13855838.07	3215559.74	2.59
4197	13855827.70	3215576.85	2.56
4198	13855817.33	3215593.95	1.99
4200	13855806.97	3215611.05	1.80
4201	13855798.82	3215624.49	1.33
4202	13855831.33	3215532.27	2.89
4204	13855820.97	3215549.38	2.90

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4205	13855810.60	3215566.48	2.65
4208	13855800.23	3215583.58	1.97
4209	13855789.86	3215600.68	1.61
4210	13855779.49	3215617.79	0.90
4211	13855775.94	3215623.65	3.46
4212	13855814.23	3215521.90	2.99
4213	13855803.86	3215539.01	3.08
4214	13855793.49	3215556.11	2.77
4215	13855783.13	3215573.21	1.90
4217	13855772.76	3215590.32	1.22
4218	13855762.39	3215607.42	0.81
4219	13855756.32	3215617.44	4.12
4220	13855753.07	3215622.80	7.31
4221	13855797.13	3215511.54	2.66
4223	13855786.76	3215528.64	3.03
4225	13855776.39	3215545.74	2.83
4228	13855766.02	3215562.85	1.82
4230	13855755.66	3215579.95	1.11
4232	13855745.29	3215597.05	0.65
4234	13855728.12	3215614.22	10.10
4235	13855733.08	3215617.19	10.10
4236	13855788.05	3215487.93	0.12
4237	13855785.75	3215491.72	2.27
4238	13855780.02	3215501.17	2.85
4240	13855769.66	3215518.27	2.76
4241	13855759.29	3215535.38	2.40
4242	13855748.92	3215552.48	1.81
4243	13855738.55	3215569.58	1.24
4245	13855728.19	3215586.68	0.66
4246	13855715.93	3215606.91	10.01
4247	13855943.22	3215215.08	−3.52
4249	13855928.80	3215217.15	−2.94
4250	13855924.60	3215224.09	−4.58
4251	13855918.44	3215234.26	−4.05
4252	13855908.07	3215251.36	−1.30
4253	13855897.70	3215268.46	−1.36
4254	13855887.33	3215285.57	−1.06
4256	13855876.96	3215302.67	−0.90
4257	13855866.60	3215319.77	−0.60
4258	13855856.23	3215336.88	−0.18
4259	13855845.86	3215353.98	0.15

*SEE SHEETS 13 & 14 FOR POINT LOCATIONS

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
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SW AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 15 OF 17

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4263	13855835.49	3215371.08	−0.14
4264	13855832.06	3215376.75	−1.40
4265	13855830.31	3215391.33	−1.23
4266	13855825.13	3215388.18	−1.16
4267	13855827.70	3215413.13	−0.90
4268	13855814.76	3215405.29	−0.99
4269	13855804.39	3215422.39	−0.95
4270	13855794.02	3215439.49	−0.78
4271	13855783.66	3215456.60	−0.67
4272	13855779.75	3215467.00	−0.85
4274	13855766.65	3215484.65	1.37
4276	13855762.92	3215490.80	1.52
4277	13855752.55	3215507.90	1.70
4278	13855742.19	3215525.01	1.93
4279	13855731.82	3215542.11	1.74
4280	13855721.45	3215559.21	1.37
4281	13855711.08	3215576.32	0.74
4282	13855703.50	3215598.15	9.45
4283	13855702.28	3215598.73	10.12
4284	13855700.72	3215593.42	7.84
4285	13855698.77	3215596.62	9.88
4287	13855911.17	3215208.46	−5.16
4288	13855901.33	3215223.89	−4.52
4289	13855890.96	3215240.99	−2.19
4290	13855880.60	3215258.10	−1.73
4291	13855870.23	3215275.20	−1.38
4292	13855859.86	3215292.30	−1.07
4294	13855849.49	3215309.40	−0.86
4295	13855843.21	3215319.77	−0.54
4296	13855842.87	3215328.78	−0.32
4297	13855842.00	3215351.64	0.15
4298	13855839.13	3215326.51	1.48
4299	13855828.76	3215343.61	1.98
4300	13855833.03	3215368.61	−1.60
4301	13855818.39	3215360.71	2.46
4302	13855812.18	3215370.97	−1.47
4303	13855808.02	3215377.82	−1.37
4304	13855797.66	3215394.92	−1.05
4305	13855787.29	3215412.02	−0.94
4306	13855776.92	3215429.12	−0.87
4307	13855777.63	3215452.94	−0.79

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4308	13855766.55	3215446.23	3.24
4310	13855756.19	3215463.33	3.28
4311	13855761.34	3215482.69	1.36
4312	13855757.75	3215482.68	1.37
4313	13855749.50	3215482.67	1.30
4314	13855745.82	3215480.43	2.54
4315	13855744.47	3215482.66	1.30
4316	13855735.45	3215497.54	1.67
4317	13855725.08	3215514.64	1.87
4318	13855714.72	3215531.74	1.66
4319	13855704.35	3215548.85	1.50
4320	13855693.98	3215565.95	0.88
4321	13855686.22	3215578.75	5.71
4324	13855884.23	3215213.52	−5.03
4325	13855873.86	3215230.62	−4.16
4326	13855863.49	3215247.73	−1.77
4327	13855851.68	3215265.57	−1.56
4328	13855842.76	3215281.93	−1.32
4329	13855843.97	3215300.02	−0.97
4330	13855836.36	3215292.48	−1.22
4331	13855832.39	3215299.04	1.02
4332	13855822.02	3215316.14	1.53
4333	13855811.66	3215333.24	1.90
4334	13855801.29	3215350.35	2.35
4335	13855790.92	3215367.45	1.66
4336	13855787.06	3215373.81	−1.24
4337	13855780.55	3215384.55	−1.18
4338	13855770.19	3215401.66	−1.20
4339	13855773.74	3215427.20	−0.92
4340	13855759.82	3215418.76	2.91
4341	13855749.45	3215435.86	3.36
4342	13855739.08	3215452.96	3.51
4343	13855728.71	3215470.07	3.53
4344	13855737.53	3215482.64	1.41
4345	13855724.09	3215477.70	1.59
4346	13855718.35	3215487.17	1.55
4347	13855707.98	3215504.27	1.80
4348	13855697.61	3215521.38	1.54
4349	13855687.24	3215538.48	1.48
4350	13855676.88	3215555.58	0.54
4351	13855680.71	3215563.14	0.48

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4352	13855673.50	3215561.15	0.66
4357	13855867.13	3215203.15	−5.58
4358	13855856.76	3215220.26	−4.61
4359	13855846.39	3215237.36	−2.04
4360	13855836.02	3215254.46	−1.86
4361	13855825.66	3215271.57	−1.62
4362	13855821.75	3215278.01	−1.59
4363	13855815.29	3215288.67	0.75
4364	13855804.92	3215305.77	1.24
4365	13855794.55	3215322.88	1.76
4366	13855784.19	3215339.98	2.15
4367	13855773.82	3215357.08	2.61
4368	13855766.05	3215376.19	−1.24
4369	13855763.45	3215374.18	0.43
4370	13855753.08	3215391.29	2.55
4371	13855742.71	3215408.39	2.72
4372	13855732.35	3215425.49	3.10
4373	13855721.98	3215442.60	3.40
4374	13855711.61	3215459.70	3.61
4375	13855713.82	3215473.93	1.63
4376	13855713.03	3215474.38	1.65
4380	13855701.24	3215476.80	3.73
4381	13855707.56	3215480.63	1.67
4382	13855694.20	3215495.92	1.70
4383	13855690.88	3215493.90	3.66
4384	13855680.51	3215511.01	1.81
4385	13855670.14	3215528.11	1.22
4386	13855667.47	3215526.49	1.31
4387	13855659.77	3215545.21	0.99
4388	13855653.47	3215555.61	4.16
4391	13855850.02	3215192.79	−6.00
4392	13855839.66	3215209.89	−5.22
4393	13855829.29	3215226.99	−2.54
4394	13855818.92	3215244.10	−2.48
4395	13855812.94	3215253.95	−2.33
4396	13855815.07	3215265.15	−1.83
4397	13855816.53	3215272.84	−1.61
4398	13855805.86	3215282.95	0.52
4399	13855790.81	3215297.22	0.42
4400	13855800.38	3215288.14	0.15
4401	13855789.92	3215291.94	0.10

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4402	13855787.82	3215295.40	0.23
4403	13855781.20	3215306.32	0.67
4404	13855777.45	3215312.51	1.62
4405	13855767.08	3215329.61	2.21
4406	13855756.71	3215346.71	2.42
4408	13855746.35	3215363.82	2.69
4409	13855735.98	3215380.92	2.65
4410	13855725.61	3215398.02	2.78
4411	13855715.24	3215415.12	3.00
4412	13855704.88	3215432.23	3.35
4416	13855694.51	3215449.33	3.40
4418	13855684.14	3215466.43	3.66
4420	13855673.77	3215483.54	3.81
4421	13855663.41	3215500.64	3.62
4422	13855653.04	3215517.74	3.35
4424	13855642.67	3215534.85	3.21
4425	13855654.11	3215541.78	1.23
4426	13855644.25	3215553.06	5.78
4428	13855633.44	3215550.07	8.50
4429	13855628.56	3215548.72	9.84
4435	13855812.18	3215216.62	−4.80
4438	13855810.06	3215238.72	−2.88
4439	13855785.03	3215293.71	0.01
4440	13855760.89	3215302.47	0.31
4441	13855775.76	3215311.48	0.89
4442	13855760.70	3215325.74	1.73
4443	13855749.98	3215319.24	1.51
4444	13855745.65	3215340.01	2.02
4445	13855739.61	3215336.35	1.92
4446	13855739.87	3215345.49	2.02
4448	13855742.88	3215356.58	2.12
4449	13855739.72	3215359.80	2.15
4450	13855729.24	3215353.45	2.07
4451	13855725.36	3215374.48	2.18
4452	13855710.99	3215389.16	2.33
4453	13855718.88	3215370.55	2.08
4454	13855708.51	3215387.66	2.34
4455	13855706.91	3215393.32	2.36
4457	13855698.14	3215404.76	2.82
4458	13855687.77	3215421.86	3.03
4460	13855677.41	3215438.96	3.20

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4461	13855667.18	3215455.83	3.46
4462	13855656.67	3215473.17	3.68
4464	13855646.30	3215490.27	3.60
4467	13855635.94	3215507.38	3.42
4468	13855625.57	3215524.48	3.66
4470	13855617.69	3215536.18	9.57
4471	13855746.00	3215307.87	0.95
4473	13855734.85	3215305.61	1.09
4474	13855732.88	3215308.88	1.07
4478	13855722.51	3215325.98	1.94
4481	13855712.14	3215343.08	2.21
4484	13855701.77	3215360.18	2.07
4486	13855691.41	3215377.29	2.55
4487	13855704.30	3215394.60	2.35
4488	13855691.62	3215400.80	2.55
4489	13855681.04	3215394.39	2.42
4490	13855671.05	3215410.87	2.77
4491	13855670.66	3215411.51	2.94
4492	13855660.30	3215428.60	3.60
4495	13855649.94	3215445.70	3.76
4496	13855639.57	3215462.80	3.58
4498	13855629.20	3215479.90	3.55
4500	13855618.83	3215497.01	3.08
4501	13855607.68	3215515.61	9.23
4502	13855723.81	3215303.38	1.25
4505	13855714.02	3215301.40	1.18
4506	13855705.41	3215315.61	2.02
4510	13855695.04	3215332.71	1.46
4511	13855684.67	3215349.82	2.15
4512	13855676.96	3215362.54	2.55
4513	13855677.52	3215368.19	2.60
4514	13855671.70	3215388.73	2.43
4515	13855666.04	3215408.69	2.32
4516	13855664.52	3215414.06	2.72
4519	13855648.16	3215410.05	2.79
4520	13855643.20	3215418.23	2.95
4523	13855632.83	3215435.33	3.18
4525	13855622.46	3215452.43	3.07
4528	13855612.10	3215469.54	3.13
4530	13855601.73	3215486.64	2.92
4532	13855591.00	3215504.34	9.19

*SEE SHEETS 13 & 14 FOR POINT LOCATIONS

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
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SW AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 16 OF 17

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4533	13855705.18	3215299.62	0.81
4534	13855694.63	3215309.08	2.04
4535	13855679.06	3215323.03	2.36
4536	13855673.52	3215328.00	2.55
4537	13855675.11	3215344.02	2.70
4538	13855627.80	3215405.05	2.94
4539	13855626.10	3215407.86	2.96
4541	13855615.73	3215424.96	2.92
4543	13855605.36	3215442.07	2.92
4544	13855617.13	3215402.42	3.17
4545	13855609.60	3215400.58	3.38
4546	13855601.49	3215416.33	3.21
4547	13855600.70	3215438.49	2.95
4548	13855592.31	3215434.18	3.20
4549	13855583.36	3215451.60	3.03
4550	13855594.99	3215459.17	6.93
4552	13855613.68	3215455.67	2.97
4553	13855606.90	3215461.22	3.00
4554	13855604.51	3215464.94	3.03
4555	13855593.67	3215481.75	2.81
4556	13855584.63	3215476.27	6.98
4557	13855572.28	3215468.79	7.02
4560	13855582.71	3215498.75	9.16
4561	13855581.37	3215497.84	8.98
4562	13855575.10	3215491.99	9.09
4563	13855564.00	3215481.62	9.13
4566	13855734.92	3215614.16	7.99
4567	13855717.82	3215603.79	8.09
4572	13855610.84	3215517.75	9.42
4573	13855608.46	3215514.11	8.34
4574	13855591.36	3215503.74	8.36
4576	13855741.75	3215622.39	10.08
4578	13855696.62	3215403.84	2.97
4589	13855932.59	3215249.48	−3.46
4590	13855912.61	3215243.86	−3.52
4591	13855892.63	3215238.24	−3.81
4592	13855881.03	3215234.97	−3.93
4593	13855872.66	3215232.62	−4.08
4594	13855852.68	3215226.99	−4.33
4595	13855832.70	3215221.37	−4.96
4596	13855812.72	3215215.75	−5.24

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4599	13855765.66	3215614.27	0.25
4600	13855760.67	3215622.51	5.18
4601	13855760.26	3215610.94	0.22
4602	13855755.25	3215619.21	5.18
4603	13855743.18	3215600.53	0.19
4604	13855738.13	3215608.86	4.94
4605	13855726.05	3215590.21	0.32
4606	13855720.99	3215598.56	4.77
4607	13855708.91	3215579.90	0.33
4608	13855703.84	3215588.26	4.91
4609	13855691.72	3215569.68	0.44
4610	13855686.70	3215577.96	5.24
4611	13855674.52	3215559.46	0.39
4613	13855657.09	3215549.65	0.71
4615	13855650.29	3215546.15	1.09
4617	13855644.04	3215546.32	3.34
4619	13855638.92	3215541.04	3.43
4620	13855635.49	3215546.69	6.60
4621	13855628.42	3215529.50	3.35
4622	13855625.04	3215535.08	6.50
4623	13855626.15	3215523.51	3.32
4624	13855622.09	3215530.21	6.34
4625	13855614.13	3215504.76	2.96
4626	13855610.86	3215510.16	6.13
4627	13855597.65	3215493.37	2.74
4628	13855594.34	3215498.83	5.85
4629	13855596.11	3215492.33	2.64
4630	13855592.72	3215497.90	5.91
4631	13855589.68	3215487.94	2.50
4632	13855586.19	3215493.34	5.77
4633	13855577.23	3215488.47	7.05
4634	13855576.17	3215490.22	8.08
4635	13855566.23	3215478.17	7.10
4636	13855565.38	3215480.14	8.11
4643	13855690.83	3215591.80	10.07
4677	13855749.36	3215604.25	0.33
4678	13855723.58	3215588.73	0.24
4679	13855711.38	3215581.38	0.29
4687	13855947.23	3215345.26	−0.10
4722	13855843.74	3215305.92	−0.81
4723	13855841.74	3215358.48	0.32

BOTTOM OF EXCAVATION SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
4724	13855838.21	3215365.78	0.46
4725	13855769.95	3215402.04	−1.13
4726	13855707.86	3215388.72	2.40
4744	13855706.60	3215390.81	2.37
4745	13856025.73	3215439.63	0.47
4746	13855959.63	3215397.79	0.69
4758	13855807.88	3215227.23	−3.31
4759	13855960.81	3215400.27	0.75
4760	13855945.15	3215367.39	0.34
4761	13855947.03	3215253.54	−3.36
4764	13855961.95	3215278.21	−0.91
4765	13855947.45	3215340.71	−0.23
4766	13855938.19	3215212.29	−3.49
4767	13855932.58	3215210.92	−3.43
4768	13855911.63	3215206.90	−4.49
4771	13855890.39	3215203.35	−5.53
4772	13855874.82	3215200.76	−5.70
4773	13855870.48	3215197.63	−5.79
4774	13855854.16	3215185.97	−6.08
4775	13855850.20	3215183.30	−6.23
4776	13855838.16	3215182.95	−6.40
4777	13855836.43	3215184.54	−6.36
4778	13855825.59	3215194.52	−6.17
4779	13855821.10	3215198.64	−5.90
4780	13855822.55	3215199.52	−5.80
4781	13855813.28	3215205.84	−5.68
4782	13855810.20	3215215.42	−5.03
4784	13855807.33	3215224.34	−3.42
4785	13855909.53	3215206.55	−5.27

EXCAVATED SLOPE SURVEY POINTS			
POINT #	NORTHING	EASTING	ELEVATION
700	13855803.95	3215649.85	6.84
701	13855802.19	3215654.38	9.46
702	13855795.57	3215647.03	7.27
703	13855794.69	3215650.44	9.65
704	13855791.50	3215644.38	7.55
705	13855790.06	3215648.15	9.86
706	13855767.83	3215637.34	9.92
707	13855757.29	3215631.24	9.97
708	13855750.51	3215626.95	10.02

STATE OF TEXAS
REGISTERED
MICHAEL K. WILLIAMS
6616
PROFESSIONAL
LAND SURVEYOR

08/09/2024

*SEE SHEETS 13 & 14 FOR POINT LOCATIONS

DESIGNED:
DRAWN: HME
CHECKED: DOM
APPROVED: MKW
F.B. No.:

PREPARED BY
MORRISON SURVEYING, INC.
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SW AREA
SAN JACINTO RIVER
WASTE PITS
BOTTOM OF EXCAVATION SURVEY POINTS

BY	REVISIONS

PROJECT NO.: 221222
DATE: AUGUST 7, 2024
SCALE: 1" = 30'
SHEET: 17 OF 17

SAN JACINTO SOUTH IMPOUNDMENT CELL FOUR

Appendix J

Contact Water Release Correspondences

11451 Katy Freeway, Suite 400
Houston, Texas 77079
United States
www.GHD.com

Our Ref.: 12599404-Poulos-13

March 24, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

Release Notification
San Jacinto Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), and pursuant to Appendix B, Section 3.3 of the United Sates Environmental Protection Agency (USEPA) Region 6, Docket No. 06-05-21 (UAO), GHD Services Inc. (GHD) submits to the United States Environmental Protection Agency (EPA) this release reporting notification. Appendix B, Section 3.3 of the USEPA Region 6, Docket No. 06-05-21 (UAO), requires that the Respondent shall, within 5 days of the onset of a release event, submit a report to the EPA describing the actions or events that occurred and the measures taken in response to the release.

1. Event Summary

At approximately 1:00 PM on March 20, 2023, on the northern portion of the Southern Impoundment work site (Work Site), a pump used for dewatering the excavation was turned on. Immediately a GHD employee observed that water was accumulating on the ground at a location directly south of the impacted material stockpile and approximately 150 feet from the excavation boundary. The pump was immediately turned off. After inspection, it was determined that a valve on the water conveyance piping south of the impacted material stockpile was slightly open, which had allowed water to accumulate on the ground. The location at which this occurred was an area of approximately 15 feet by 65 feet, located well within the Work Site boundaries. The EPA oversight contractor was on-site at the time and observed the affected area and the subsequent response activities. The locations of the piping, valve and area in which water from the piping accumulated are shown on Figure 1.

Based on the duration of the release, the flow coming from the conveyance pipe, and the ground surface area that was visually wetted, it is estimated that a total of approximately 100 gallons of water was released to the ground within the Work Site during this event.

2. Estimated Release Mass

A calculation was performed to determine whether this event involved a reportable quantity of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) under the UAO, the Emergency Response Plan or the Health &

Safety Plan. The calculations are included as Attachment 1. The estimated mass of 2,3,7,8-TCDD released was 0.000000018 pounds, which is below the Reportable Quantity of 1 pound under 40 Code of Federal Regulations (CFR) 302.4 and the Texas Administrative Code Chapter 327.4.

3. Response Measures

Immediately upon observation of the release, the pump was turned off and the valve was closed. An excavator that at that time was handling clean imported backfill was then used to create a shallow drainage swale to direct the standing water to drain into an existing open excavation. Once water had drained back into the excavation, the water was then pumped to the main water conveyance and to the water treatment system, which is located on the southern portion of the Work Site. The same excavator was then used to remove the top layer of soil in the location in which the water had previously accumulated. Soil that was visually wetted was removed to a depth of approximately 3-inches below the ground surface, across the 15 foot by 65 foot wetted area. The excavated soil was placed within the impacted material stockpile for subsequent off-site disposal.

The following additional measures have been implemented to reduce the potential for a future event associated with the water conveyance lines:

– Valve handles on piping have been fitted with valve locks.
– Camlock caps and camlock plugs have been installed on all fittings that are not in use.
– An enhanced daily inspection procedure has been developed to inspect the water conveyance system prior to use each day.

Should you have any questions regarding this submittal, please contact GHD at (832) 380-76552.

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

NWR/jlf/13

Encl.: Figure 1 - March 20, 2023 Release Area
Attachment 1 - Calculation of 2,3,7,8 - TCDD Release Quantity

Copy to: Brent Sasser, IPC

Paper Size ANSI A

0 20 40 60 80

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

Project No. **12599404**
Revision No. **-**
Date **Mar 24, 2023**

MARCH 20, 2023 RELEASE AREA

FIGURE 1

Q:\GIS\PROJECTS\12599000s\12599404\Poulos-13\12599404_202303_Poulos-13_GIS001.mxd
Print date: 24 Mar 2023 - 14:12

Data source: Google Earth Basemap, Imagery Date 1/25/2019

Attachment 1

Calculation of 2,3,7,8 - TCDD Release Quantity

Calculation of TCDD Release Quantity
March 20, 2023 Release
San Jacinto River Waste Pits - Southern Impoundment
International Paper Company
Channelview, Harris County, Texas

Calculated 2,3,7,8 - Tetrachlorodibenzo-p-dioxin (TCDD) Release Mass							
Water Released [(1)]	**Water Released (Converted to Liters)**	**Total Suspended Solids in Water [(2)]**	**Calculated Solids Released (Converted to kg)**	**2,3,7,8 - TCDD Concentration of Solids [(3)]**	**2,3,7,8 - TCDD Concentration of Solids (Converted to mg/kg)**	**Calculated 2,3,7,8 - TCDD Released**	**Calculated 2,3,7,8 - TCDD Released (Converted to pounds)**
gallons	liters	mg/L	kilograms	ng/kg	mg/kg	milligrams	pounds
100	378.5	4600	1.7411	4761	0.00476	0.0083	0.000000018

Notes:

L = liters
mg = milligrams
kg = kilograms
ng = nanograms
2,3,7,8 - TCDD = 2,3,7,8 - Tetrachlorodibenzo-p-dioxin

1. Approximately 100 gallons of impacted water were released to the ground within the Southern Impoundment.
2. Based on the 2019 pilot test to evaluate Total Suspended Solids (TSS) in contact water from excavations, the highest recorded TSS value was 4,600 mg/L. This value was recorded while contact water was being actively mixed and had not settled, and overestimates TSS in the water that was discharged.
3. The mean depth weighted average of TCDD concentrations in the polygon being excavated during the release. The concentrations are from soil samples collected during previous investigations.

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www.GHD.com

Our Ref.: 12599404-Poulos-21

May 5, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

30-Day Release Conclusion Notification
San Jacinto Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), and pursuant to Appendix B, Section 3.3 of the United States Environmental Protection Agency (USEPA) Region 6, Docket No. 06-05-21 (UAO), GHD Services Inc. (GHD) submits to the USEPA this report in response to the deadline for a submission 30 days following the conclusion of a release event (in this case the event reported to the EPA on March 20, 2023).

In an email correspondence dated April 18, 2023, EPA directed that this report be submitted by today's date. The EPA, however, may not consider the release event to be concluded as of today's date because the Respondent has not yet received sampling data collected at the EPA's direction related to the release event.

Per Appendix B, Section 3.3 of the UAO, the Respondent previously submitted a report to EPA dated March 24, 2023, regarding the release event (March 24 Submission). This report sets forth and updates information contained in the March 24 Submission.

1. Event Summary

At approximately 1:00 PM on March 20, 2023, on the northern portion of the Southern Impoundment work site (Work Site), a pump used for dewatering the excavation was turned on. Immediately a GHD employee observed that water was accumulating on the ground at a location directly south of the impacted material stockpile and approximately 150 feet from the excavation boundary. The pump was immediately turned off. After inspection, it was determined that a valve on the water conveyance piping south of the impacted material stockpile was slightly open, which had allowed water to accumulate on the ground. The location at which this occurred was an area of approximately 15 feet by 65 feet, located well within the Work Site boundaries. The EPA oversight contractor was on-site at the time and observed the affected area and the subsequent response activities. The locations of the piping, valve, and area in which water from the piping accumulated are shown on Figure 1.

Based on the duration of the release, the flow coming from the conveyance pipe, and the ground surface area that was visually wetted, it is estimated that a total of approximately 100 gallons of water was released to the ground within the Work Site during this event.

2. Estimated Release Mass

A calculation was performed to determine whether this event involved a reportable quantity of 2,3,7,8 Tetrachlorodibenzo p dioxin (TCDD) under the UAO, the Emergency Response Plan or the Health & Safety Plan. The calculations are included as Attachment 1. The estimated mass of 2,3,7,8 TCDD released was 0.000000018 pounds, which is below the Reportable Quantity of 1 pound under 40 Code of Federal Regulations (CFR) 302.4 and the Texas Administrative Code (TAC) Chapter 327.4.

3. Response Measures and Current Status

Immediately upon observation of the release, the pump was turned off and the valve was closed. An excavator that at that time was handling clean imported backfill was then used to create a shallow drainage swale to direct the standing water to drain into an existing open excavation. Once water had drained back into the excavation, the water was then pumped to the main water conveyance and to the water treatment system, which is located on the southern portion of the Work Site. The same excavator was then used to remove the top layer of soil in the location in which the water had previously accumulated. Soil that was visually wetted was removed to a depth of approximately 3-inches below the ground surface, across the 15 foot by 65 foot wetted area. The excavated soil was placed within the impacted material stockpile for subsequent off-site disposal.

As reported in the March 24 Submission, the following additional measures were then implemented to reduce the potential for a future event associated with the water conveyance lines:

– Valve handles on piping were fitted with valve locks.
– Camlock caps and camlock plugs were installed on all fittings that are not in use.
– An enhanced daily inspection procedure was developed to inspect the water conveyance system prior to use each day.

Since the submittal of the March 24 Submission, the soils that were excavated at the release area have been transported and disposed of at the Republic Golden Triangle Landfill. The Respondent has also continued with the measures described above that were implemented to reduce the potential for a future event associated with the water conveyance lines.

On April 6, 2023, EPA provided a surface soil sampling and analysis plan (SAP) to the Respondent, included as Attachment 2, to assess the area impacted by the March 20, 2023 release. The requested sampling was implemented by the Respondent during the week of April 24, 2023. At the time of this submittal, the analytical results from the sampling have not yet been received. Following receipt of the analytical results, they will be provided to the EPA along with a summary of any additional actions taken in response to the results.

Should you have any questions regarding this submittal, please contact GHD at (832) 380-7655.

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

NWR/kdn/21

Encl.: Figure 1 - March 20, 2023 Release Area
Attachment 1 - Calculation of 2,3,7,8 - TCDD Release Quantity
Attachment 2 - EPA Surface Soil Sampling and Analysis Plan

Copy to: Brent Sasser, IPC

Paper Size ANSI A

0 20 40 60 80

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

Project No. **12599404**
Revision No. **-**
Date **Mar 24, 2023**

MARCH 20, 2023 RELEASE AREA

FIGURE 1

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Print date: 24 Mar 2023 - 14:12

Data source: Google Earth Basemap, Imagery Date 1/25/2019

Attachment 1

Calculation of 2,3,7,8 - TCDD Release Quantity

Calculation of TCDD Release Quantity
March 20, 2023 Release
San Jacinto River Waste Pits - Southern Impoundment
International Paper Company
Channelview, Harris County, Texas

Calculated 2,3,7,8 - Tetrachlorodibenzo-p-dioxin (TCDD) Release Mass							
Water Released [(1)]	**Water Released (Converted to Liters)**	**Total Suspended Solids in Water [(2)]**	**Calculated Solids Released (Converted to kg)**	**2,3,7,8 - TCDD Concentration of Solids [(3)]**	**2,3,7,8 - TCDD Concentration of Solids (Converted to mg/kg)**	**Calculated 2,3,7,8 - TCDD Released**	**Calculated 2,3,7,8 - TCDD Released (Converted to pounds)**
gallons	liters	mg/L	kilograms	ng/kg	mg/kg	milligrams	pounds
100	378.5	4600	1.7411	4761	0.00476	0.0083	0.000000018

Notes:
L = liters
mg = milligrams
kg = kilograms
ng = nanograms
2,3,7,8 - TCDD = 2,3,7,8 - Tetrachlorodibenzo-p-dioxin
1. Approximately 100 gallons of impacted water were released to the ground within the Southern Impoundment.
2. Based on the 2019 pilot test to evaluate Total Suspended Solids (TSS) in contact water from excavations, the highest recorded TSS value was 4,600 mg/L. This value was recorded while contact water was being actively mixed and had not settled, and overestimates TSS in the water that was discharged.
3. The mean depth weighted average of TCDD concentrations in the polygon being excavated during the release. The concentrations are from soil samples collected during previous investigations.

Attachment 2

EPA Surface Soil Sampling and Analysis Plan

Sampling and Analysis Plan:

San Jacinto Southern Impoundment Superfund Site

Surface Soil Sampling

1. Introduction

The United States Environmental Protection Agency (EPA) was notified on Monday, March 20, of a release of approximately 100 to 200 gallons of water from the pipeline system used for dewatering excavations on the northern portion of the San Jacinto Southern Impoundment. The release is expected to have impacted less than 975 square feet of surface area on-site (Figure 1). All indications are that the release was contained on-site and did not impact any areas off-site. GHD Services, Inc. (GHD), the remedial contractor for the site's potentially responsible party, quickly initiated a response with EPA contractor oversight to pump the water back into the treatment system and address potentially impacted soils. EPA is working with GHD to modify procedures and relevant workplans to prevent any future contact water releases and make sure that there is a clear process for responding to any future issues, if necessary.

1.1 Event Summary and response Measures

At approximately 1 PM Monday, a release of pumped water from the open excavation in the north excavation area was observed near the impacted soil stockpile. GHD shut down operations and initiated response actions including diverting and pumping the released water back into the pipeline and water treatment system and then excavating the impacted soils to approximately 3 inches below ground surface (bgs) in the potentially impacted area beyond the Remedial Action excavation footprint. EPA's contractor was on-site at the time providing oversight and conducted a site walk and inspection of the excavation operations to document no off-site impacts were observed. Response activities were completed at approximately 3:15 p.m. the same day.

The source of the release was an open valve on the water treatment system pipeline. GHD has now implemented daily inspections of all valves along the pipeline system, caps for each open valve end, and is evaluating locking mechanisms to prevent any future releases from occurring. EPA is reviewing the Emergency Response Plan for additional measures that should be included related to spill and release protocols and response measures.

1.2 Sampling Rationale

EPA has developed the following sampling and analysis plan to assess the potential impact of the contact water release on the local soils that were inundated. This plan was developed in consultation with the EPA project management team and EPA contractors and includes soil sampling within the potentially impacted area associated with the released contact water.

2. Soil Sampling

Incremental Sampling Method (ISM) will be used to collect surface soil samples (0-1 ft bgs) within the potentially impacted area (see Figure 1), hereafter referred to as the decision unit (DU). The ISM approach is a statistically supported technique for assessing the unbiased mean contaminant concentration in soil. ISM incorporates two principal components: 1) field sampling methodology and 2) laboratory preparation and processing (Interstate Technology Regulatory Council [ITRC], 2020). The ISM approach reduces data variability and increases sample representativeness by obtaining a single sample that represents a large unit divided into smaller increments. DUs are the smallest volume of soil for which a decision will be made based on sampling results. The collected sample increments are composited, processed, and subsampled according to specific protocols of ISM to reduce variability and increase representativeness (ITRC, 2020).

Three ISM samples, each comprised of 30 surface soil sample increments each (Figure 2) will be collected within the DU. All sample increments were collected from 0 to 1-foot bgs using a dedicated volumetric sampling device (LaMotte 1055 Soil Sampler or AMS Soil Probe).

General Procedure for Collecting Surface Soil via ISM

1. Locate the boundaries of the rectangular-shaped DU using the excavation footprint from the response action. Stakes will be installed at the corners of the DU.
2. Pace the length and width of the DU, counting the paces for each. This information will be used to develop a grid for the DU. The goal of the grid is to space out the sample increments/borings as evenly as possible, consistent with Figure 2.
3. Pin flags will be used to define the sampling area and locate grid/transect pattern.
4. A random sample location will be identified in the first sampling grid cell. The same location will be replicated in each subsequent grid cell.
5. The distance and directional moves that will be required to collect the replicate samples will be determined and this information will be documented in the field logbook(s). The distance moved will be determined by measuring the length of the grid cell, if starting in the X direction, or measuring the height of the grid cell, if starting in the Y direction.
6. A serpentine pattern will be walked to collect initial and replicate samples. The serpentine pattern will alternate between starting in the X or Y direction for each replicate. Illustration 1 shows a simplified example of how samples could be collected. In this example, it is assumed that the 'X' symbol represents the original sample (1st replicate), the 'O' symbol represents the duplicate sample (2nd replicate), and the 'Δ' symbol represents the triplicate sample (3rd replicate).

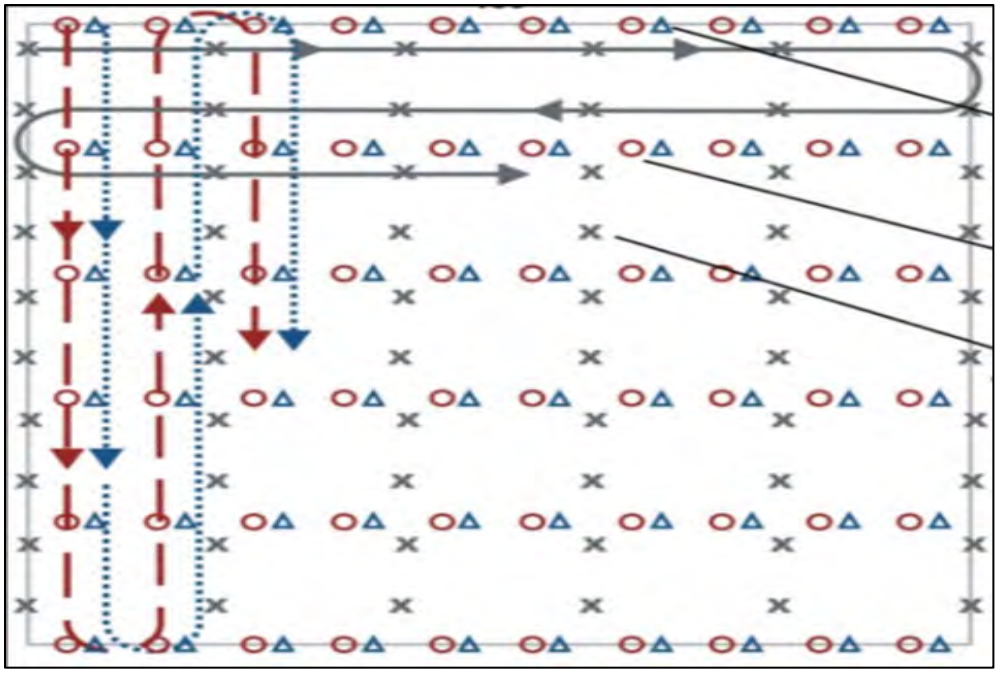

Illustration 1 – ISM serpentine pattern

7. Conduct a trial walk along the paths that will be followed for increment collection to ensure spacing is adequate to collect 30 increments.
8. Pin flags will be placed along these paths. Unique colored flags will be used to differentiate the original sample and the two replicate samples.
9. Following the grid/transect line, locate the first increment collection point for the original sample (replicate #1).
10. Use a dedicated volumetric sampling device to collect an increment.
11. Place increment into sample container.
12. Continue to the next increment collection point for replicate #1 and repeat steps 10 and 11. Repeat this process following a serpentine path until all 30 increments for replicate #1 are collected.
13. Place bulk sample into clean Ziplock® bag.
14. Label each sample bag with the proper identification label.
15. Collect the other replicate samples:
    a. Move the pre-determined number of feet in the pre-designated direction (determined in Steps #5 and 6) from the initial incremental collection point and begin collecting the duplicate sample.
    b. Repeat steps 9 through 15 for the duplicate and triplicate samples (replicate samples #2 and #3).

Additional surface soil sampling notes:

16. All non-soil material will be removed from the sampling area prior to sampling.
17. The sampling team will don the appropriate PPE including nitrile gloves.

18. Care will be taken to obtain the same sample mass from each incremental sample location. The target sample mass for the planned analytical methods is 1,500 grams. Assuming 30 increments per 1,500-gram sample, approximately 50 grams are needed from each increment.
19. Sampling devices will be decontaminated between replicates.
20. One equipment blank will be collected to assess potential contamination resulting from field sampling procedures.

The 30 soil increments for each replicate were placed in double Ziploc® bags, labeled, preserved with ice to below 6°C following sample collection, and transported to the laboratory for homogenization and processing prior to chemical analysis (Note; a detailed discussions of standard laboratory procedures used with ISM samples is provided in the ITRC Guidance document (ITRC, 2020). All ISM soil samples will be analyzed using EPA Method 1613B for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). After processing each ISM sample and removing an aliquot for analysis, the PRP-selected laboratory will remove an additional aliquot and provide it to EPA for split-sample confirmation analysis.

3. Data Evaluation

PCDD and PCDF have a wide range of relative potencies and are found in mixtures in the environment. The EPA endorses the toxicity equivalency factor (TEF) methodology to calculate total dioxin and furan concentrations, using 2,3,7,8-tetrachlorodibenzodioxin (TCDD) as the index chemical using the consensus TEF values published in 2005 by the World Health Organization (2013, EPA). By definition, the TEF for TCDD is 1.0. Each individual dioxin is assigned a scaling factor by which the individual compound concentration is multiplied, yielding total concentration that can be compared to the site cleanup goal for TCDD of 240 nanograms per kilogram (ng/kg). **Equation 1** provides the formula for calculating equivalence concentrations for the number of dioxins in a mixture (n) in TCDD toxic equivalence (TEQ) to the ith individual PCDD or PCDF compound. The selected laboratories will perform this calculation and report the results.

Equation 1 Toxic Equivalence Calculation

$$TEQ = \sum_{i=1}^{n} (C_i \times TEF_i)$$

The updated ITRC ISM 95% Upper Confidence Limit on the mean (UCL) calculator will be used to derive representative concentrations for surface soil in the DU (ITRC v. 3.0, 2020). The updated tool provides instructions for uploading replicate concentrations and determines the appropriate statistical parameter (i.e., Student's t UCL or Chebyshev UCL) to use for comparison to the site cleanup goal. The calculator recommends the 95% Student's t UCL for data sets where the coefficient of variation (CV) of increments is low (defined as CV < 1.5), and the 95% Chebyshev UCL for data sets where the CV is medium (defined as 1.5 < CV < 3) or high (defined as CV > 3).

4. References

EPA, 2013. *Use of Dioxin TEFs in Calculating Dioxin TEQs at CERCLA and RCRA Sites*. May.

EPA, 2017, *Record of Decision, San Jacinto River Waste Pits, Harris County, Texas.* October.

ITRC. 2020. Incremental Sampling Methodology (ISM) Update. October.

LEGEND

- PUMP LOCATION
- RELEASE POINT
- TEMPORARY SUMP LOCATION
- WATER CONVEYANCE PIPING
- APPROXIMATE RELEASE AREA
- SITE BOUNDARY

N

0 50 100

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY, 2023

MAP DATA SOURCE: GHD Release Notification Report

TDD: 0001/22-431
SSID: 06ZQ

US EPA REGION 6

FIGURE 1

SITE PLAN

SAN JACINTO SOUTHERN IMPOUNDMENT
W BANK OF SAN JACINTO RIVER,
N OF HWY 10
CHANNEL VIEW, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MARCH 2023	20600.012.001.1431	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\ER\San Jacinto Southern Impoundment\pro\San Jacinto Southern Impoundment\San Jacinto Southern Impoundment.aprx 8:22 AM 3/30/2023 covasj

LEGEND

- PUMP LOCATION
- RELEASE POINT
- TEMPORARY SUMP LOCATION
- WATER CONVEYANCE PIPING
- APPROXIMATE RELEASE AREA
- SITE BOUNDARY
- SURFACE SOIL SAMPLE GRID (n = 30)

N

0 10 20

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY, 2023

MAP DATA SOURCE: GHD Release Notification Report

TDD: 0001/22-431
SSID: 06ZQ

US EPA REGION 6

FIGURE 2

SURFACE SOIL INCREMENT SAMPLE GRID MAP
SAN JACINTO SOUTHERN IMPOUNDMENT
W BANK OF SAN JACINTO RIVER,
N OF HWY 10
CHANNEL VIEW, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MARCH 2023	20600.012.001.1431	AS SHOWN

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Our Ref.: 12599404-Poulos-27

June 16, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

March 20, 2023, Release Summary of Soil Analytical Laboratory Results
San Jacinto Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), and pursuant to Appendix B, Section 3.3 of the United States Environmental Protection Agency (USEPA) Region 6, Docket No. 06-05-21 (UAO), GHD Services Inc. (GHD) submits to the USEPA this letter to provide analytical results from sampling that the EPA requested following the release event reported to the EPA on March 20, 2023.

Per Appendix B, Section 3.3 of the UAO, the Respondent previously submitted a report to EPA dated March 24, 2023, regarding the release event (March 24 Submission), and a 30-Day Release Conclusion notification on May 5, 2023 (May 5, 2023, Submission), as requested by the EPA in an e-mail correspondence dated April 18, 2023. This report sets forth and updates information contained in the May 5, 2023, Submission.

The requested sampling was implemented by the Respondent during the week of April 24, 2023. The validated analytical results from the sampling are summarized in Table 1. All Toxicity Equivalent Quotient (TEQ) results are well below the 240 nanograms per kilogram (ng/kg) clean-up level for the Southern Impoundment. The analytical laboratory report is included as Attachment 1. Figures depicting the location of the release area and sampling layout are included as Figures 1 and 2, respectively.

No additional measures are planned at the release area, since all sample results are below the clean-up level.

Should you have any questions or require additional information regarding this submittal, please contact GHD at (832) 380-7655.

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

NWR/jlf/27

Encl.: Table 1 - Summary of Soil Analytical Results - Release Area
Figure 1 - March 20, 2023, Release Area
Figure 2 - March 20, 2023, Release Area Sampling Layout
Attachment 1 - Analytical Laboratory Report

Copy to: Brent Sasser, IPC

Table 1

Summary of Soil Analytical Results
Release Area
San Jacinto River Waste Pits - Southern Impoundment
International Paper Company
Channelview, Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	NE Release Area Sample 1 12599404-042423-S-NE-Release-1 04/24/2023	NE Release Area Sample 2 12599404-042423-S-NE-Release-2 04/24/2023	NE Release Area Sample 3 12599404-042423-S-NE-Release-3 04/24/2023
Dioxins/Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	ng/kg	19	19	16
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	ng/kg	6700	7500	4600
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	ng/kg	12	6.1	5.2
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	ng/kg	76	80	64
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	ng/kg	10	11	8.5
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	ng/kg	2.3	2.8	1.8
Total heptachlorodibenzofuran (HpCDF)	ng/kg	25 J	16 J	14 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	ng/kg	270 J	290 J	250 J
Total hexachlorodibenzofuran (HxCDF)	ng/kg	12 J	85 J	8.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	32 J	29 J	27 J
Total PCDD	ng/kg	6900 J	8100 J	4600 J
Total PCDD/PCDFs	ng/kg	7000 J	8300 J	4700 J
Total PCDF	ng/kg	87 J	150 J	60 J
Total pentachlorodibenzofuran (PeCDF)	ng/kg	9.6 J	5.7 J	3.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	ng/kg	6.9 J	5.0 J	4.8 J
Total tetrachlorodibenzofuran (TCDF)	ng/kg	21 J	28 J	17 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	ng/kg	3.3 J	4.1 J	2.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	ng/kg	6.2	7.0	4.7
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	ng/kg	8.2	9.1	6.8

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
ND - Not detected.
TEQ - Toxicity Equivalent Quotient.
ng/kg - nanogram per kilogram.

Paper Size ANSI A

0 30 60

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

Project No. **12599404**
Revision No. **-**
Date **Jun 16, 2023**

MARCH 20, 2023 RELEASE AREA

FIGURE 1

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Data source:©NEARMAP IMAGERY from US EPA

Paper Size ANSI A

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Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

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GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

MARCH 20, 2023 RELEASE AREA SAMPLING LAYOUT

Project No. **12599404**
Revision No. **-**
Date **Jun 16, 2023**

FIGURE 2

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Print date: 16 Jun 2023 - 15:51

Data source: ©NEARMAP IMAGERY, 2023 from US EPA

Attachment 1

Analytical Laboratory Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Wells Richard
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, Louisiana 70808

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JOB DESCRIPTION

San Jacinto Waste Pits S. Impoundment

JOB NUMBER

410-126458-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

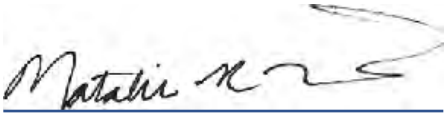
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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5/26/2023 4:30:09 PM

Authorized for release by
Natalie Luciano, Principal Project Manager
Natalie.Luciano@et.eurofinsus.com
(717)556-7258

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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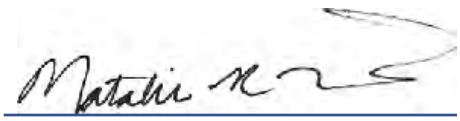

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Definitions/Glossary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-126458-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-126458-1

Receipt
The samples were received on 5/12/2023 10:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions
USDA Compliance agreement documentation to be submitted was either missing or incomplete for the following samples: 12599404-042423-S-NE-Release-1 (410-126458-1), 12599404-042423-S-NE-Release-2 (410-126458-2) and 12599404-042423-S-NE-Release-3 (410-126458-3).

Dioxin
Method 1613B: The Isotope Dilution Analyte (IDA) recovery associated with the following Quality Control sample is below the method recommended limit: (LCS 410-379265/2-A). The associated native analyte recoveries are within the method recommended limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1 — Lab Sample ID: 410-126458-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	76		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	12		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	2.3		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	10		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	19		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	270		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	25	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	32		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	12		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	6.9	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDF	9.6	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	3.3	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	21	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	6900	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	87	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	7000	E I B	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	6700		51	10	ng/Kg	5	☼	1613B	Total/NA

Client Sample ID: 12599404-042423-S-NE-Release-2 — Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	80		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	6.1		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	2.8		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	11		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	19		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	290		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	16		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	29		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	85	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	5.0	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDF	5.7	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	4.1	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	28	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	8100	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	150	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	8300	E I B	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	7500		51	10	ng/Kg	5	☼	1613B	Total/NA

Client Sample ID: 12599404-042423-S-NE-Release-3 — Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	64		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	5.2		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	1.8		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	8.5		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	16		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	250		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	14	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	27	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	8.9	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	4.8	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3 (Continued)

Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDF	3.7	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	2.4	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	17	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	4600	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	60	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	4700	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	4600		51	10	ng/Kg	5	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 12599404-042423-S-NE-Release-1 **Lab Sample ID: 410-126458-1**
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.2**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	76		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,6,7,8-HpCDF	12		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,7,8-TCDD	2.3		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,7,8-TCDF	10		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
OCDF	19		10	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HpCDD	270		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HpCDF	25	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HxCDD	32		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HxCDF	12		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PeCDD	6.9	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PeCDF	9.6	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total TCDD	3.3	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total TCDF	21	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDD	6900	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDF	87	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDD/PCDF	7000	E I B	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8-HxCDD	*62*		*32 - 141*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*66*		*28 - 130*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,6,7,8-HxCDF	*71*		*26 - 123*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8,9-HxCDD	*66*		*28 - 130*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8,9-HxCDF	*72*		*29 - 147*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,4,7,8-PeCDF	*70*		*21 - 178*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,7,8-TCDD	*78*		*25 - 164*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,7,8-TCDF	*77*		*24 - 169*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-OCDD	*46*		*17 - 157*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-OCDF	*51*		*17 - 157*	*05/23/23 22:49*	*05/25/23 23:19*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	6700		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 11:10	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1
Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 98.2

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,6,7,8-HpCDF	44		28 - 143	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8,9-HpCDF	56		26 - 138	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,6,7,8-HxCDD	69		28 - 130	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,6,7,8-HxCDF	73		26 - 123	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8-PeCDD	57		25 - 181	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8-PeCDF	65		24 - 185	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8,9-HxCDD	69		28 - 130	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8,9-HxCDF	68		29 - 147	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,4,6,7,8-HxCDF	62		28 - 136	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,4,7,8-PeCDF	63		21 - 178	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,7,8-TCDD	76		25 - 164	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,7,8-TCDF	69		24 - 169	05/23/23 22:49	05/26/23 11:10	5
13C-OCDD	43		17 - 157	05/23/23 22:49	05/26/23 11:10	5
13C-OCDF	48		17 - 157	05/23/23 22:49	05/26/23 11:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.8		1.0	1.0	%			05/22/23 10:50	1

Client Sample ID: 12599404-042423-S-NE-Release-2 **Lab Sample ID: 410-126458-2**
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 97.9**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	80		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,6,7,8-HpCDF	6.1		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,7,8-TCDD	2.8		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,7,8-TCDF	11		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
OCDF	19		10	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HpCDD	290		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HpCDF	16		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HxCDD	29		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HxCDF	85	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PeCDD	5.0	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PeCDF	5.7	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total TCDD	4.1	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total TCDF	28	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDD	8100	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDF	150	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDD/PCDF	8300	E I B	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*85*		*23 - 140*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*80*		*28 - 143*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8-HxCDD	*85*		*32 - 141*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*26 - 152*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*89*		*26 - 138*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,6,7,8-HxCDF	*98*		*26 - 123*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*25 - 181*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8-PeCDF	*81*		*24 - 185*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8,9-HxCDD	*91*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8,9-HxCDF	*91*		*29 - 147*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,4,6,7,8-HxCDF	*86*		*28 - 136*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,4,7,8-PeCDF	*82*		*21 - 178*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,7,8-TCDD	*90*		*25 - 164*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,7,8-TCDF	*90*		*24 - 169*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-OCDD	*92*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-OCDF	*90*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:07*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	7500		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 11:59	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-2
Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 97.9

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	84		23 - 140	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,6,7,8-HpCDF	81		28 - 143	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8-HxCDD	76		32 - 141	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8-HxCDF	80		26 - 152	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8,9-HpCDF	89		26 - 138	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,6,7,8-HxCDD	98		28 - 130	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,6,7,8-HxCDF	107		26 - 123	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8-PeCDD	77		25 - 181	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8-PeCDF	84		24 - 185	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8,9-HxCDD	103		28 - 130	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8,9-HxCDF	87		29 - 147	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,4,6,7,8-HxCDF	84		28 - 136	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,4,7,8-PeCDF	80		21 - 178	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,7,8-TCDD	86		25 - 164	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,7,8-TCDF	86		24 - 169	05/23/23 22:49	05/26/23 11:59	5
13C-OCDD	89		17 - 157	05/23/23 22:49	05/26/23 11:59	5
13C-OCDF	91		17 - 157	05/23/23 22:49	05/26/23 11:59	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.1		1.0	1.0	%			05/22/23 10:50	1

Client Sample ID: 12599404-042423-S-NE-Release-3 **Lab Sample ID: 410-126458-3**
Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.1**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	64		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,6,7,8-HpCDF	5.2		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,7,8-TCDD	1.8		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,7,8-TCDF	8.5		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
OCDF	16		10	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HpCDD	250		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HpCDF	14	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HxCDD	27	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HxCDF	8.9	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PeCDD	4.8	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PeCDF	3.7	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total TCDD	2.4	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total TCDF	17	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDD	4600	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDF	60	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDD/PCDF	4700	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*23 - 140*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*72*		*32 - 141*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*75*		*26 - 138*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*78*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*83*		*26 - 123*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*25 - 181*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*24 - 185*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8,9-HxCDD	*79*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*82*		*29 - 147*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*77*		*28 - 136*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,4,7,8-PeCDF	*76*		*21 - 178*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,7,8-TCDD	*84*		*25 - 164*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,7,8-TCDF	*82*		*24 - 169*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-OCDD	*60*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-OCDF	*65*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:56*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	4600		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 12:48	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3
Lab Sample ID: 410-126458-3
Date Collected: 04/24/23 16:50
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 98.1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	65		23 - 140	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8-HxCDD	64		32 - 141	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8-HxCDF	66		26 - 152	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8,9-HpCDF	70		26 - 138	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,6,7,8-HxCDD	80		28 - 130	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,6,7,8-HxCDF	91		26 - 123	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8-PeCDD	66		25 - 181	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8-PeCDF	73		24 - 185	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8,9-HxCDD	83		28 - 130	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8,9-HxCDF	74		29 - 147	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,4,6,7,8-HxCDF	73		28 - 136	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,4,7,8-PeCDF	76		21 - 178	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,7,8-TCDD	78		25 - 164	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,7,8-TCDF	68		24 - 169	05/23/23 22:49	05/26/23 12:48	5
13C-OCDD	59		17 - 157	05/23/23 22:49	05/26/23 12:48	5
13C-OCDF	67		17 - 157	05/23/23 22:49	05/26/23 12:48	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.9		1.0	1.0	%			05/22/23 10:50	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: San Jacinto Waste Pits S. Impoundment

Job ID: 410-126458-1

Client Sample ID: 12599404-042423-S-NE-Release-1 — Lab Sample ID: 410-126458-1

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**76**		5.1	2.0	ng/Kg	0.01	**0.76**	0.01	**0.76**
1,2,3,4,6,7,8-HpCDF	**12**		5.1	2.0	ng/Kg	0.01	**0.12**	0.01	**0.12**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**2.3**		1.0	0.20	ng/Kg	1	**2.3**	1	**2.3**
2,3,7,8-TCDF	**10**		1.0	0.20	ng/Kg	0.1	**1.0**	0.1	**1.0**
OCDF	**19**		10	2.0	ng/Kg	0.0003	**0.0057**	0.0003	**0.0057**
OCDD - DL	**6700**		51	10	ng/Kg	0.0003	**2.0**	0.0003	**2.0**

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		6.2		8.2

Client Sample ID: 12599404-042423-S-NE-Release-2 — Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**80**		5.1	2.0	ng/Kg	0.01	**0.80**	0.01	**0.80**
1,2,3,4,6,7,8-HpCDF	**6.1**		5.1	2.0	ng/Kg	0.01	**0.061**	0.01	**0.061**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**2.8**		1.0	0.20	ng/Kg	1	**2.8**	1	**2.8**
2,3,7,8-TCDF	**11**		1.0	0.20	ng/Kg	0.1	**1.1**	0.1	**1.1**
OCDF	**19**		10	2.0	ng/Kg	0.0003	**0.0057**	0.0003	**0.0057**
OCDD - DL	**7500**		51	10	ng/Kg	0.0003	**2.3**	0.0003	**2.3**

TEF Reference:

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

Toxicity Summary

Client: GHD Services Inc.
Project/Site: San Jacinto Waste Pits S. Impoundment

Job ID: 410-126458-1

Client Sample ID: 12599404-042423-S-NE-Release-2 (Continued)

Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		7.1		9.1

Client Sample ID: 12599404-042423-S-NE-Release-3

Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**64**		5.1	2.0	ng/Kg	0.01	**0.64**	0.01	**0.64**
1,2,3,4,6,7,8-HpCDF	**5.2**		5.1	2.0	ng/Kg	0.01	**0.052**	0.01	**0.052**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**1.8**		1.0	0.20	ng/Kg	1	**1.8**	1	**1.8**
2,3,7,8-TCDF	**8.5**		1.0	0.20	ng/Kg	0.1	**0.85**	0.1	**0.85**
OCDF	**16**		10	2.0	ng/Kg	0.0003	**0.0048**	0.0003	**0.0048**
OCDD - DL	**4600**		51	10	ng/Kg	0.0003	**1.4**	0.0003	**1.4**

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		4.7		6.8

TEF Reference:

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HpCDD (23-140)	HpCDF (28-143)	HxCDD (32-141)	HxCDF (26-152)	HpCDF2 (26-138)	HxDD (28-130)	HxDF (26-123)	PeCDD (25-181)
410-126458-1	12599404-042423-S-NE-Releas	54	46	62	64	64	66	71	60
410-126458-1 - DL	12599404-042423-S-NE-Release-1	49	44	53	57	56	69	73	57
410-126458-2	12599404-042423-S-NE-Release-2	85	80	85	85	89	90	98	76
410-126458-2 - DL	12599404-042423-S-NE-Release-2	84	81	76	80	89	98	107	77
410-126458-3	12599404-042423-S-NE-Release-3	67	60	72	74	75	78	83	68
410-126458-3 - DL	12599404-042423-S-NE-Release-3	65	59	64	66	70	80	91	66
MB 410-379265/1-A	Method Blank	80	79	79	79	83	85	97	73

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PeCDF (24-185)	13CHxCD (28-130)	HxCF (29-147)	13CHxCF (28-136)	PeCF (21-178)	TCDD (25-164)	TCDF (24-169)	OCDD (17-157)
410-126458-1	12599404-042423-S-NE-Releas	68	66	72	63	70	78	77	46
410-126458-1 - DL	12599404-042423-S-NE-Release-1	65	69	68	62	63	76	69	43
410-126458-2	12599404-042423-S-NE-Release-2	81	91	91	86	82	90	90	92
410-126458-2 - DL	12599404-042423-S-NE-Release-2	84	103	87	84	80	86	86	89
410-126458-3	12599404-042423-S-NE-Release-3	73	79	82	77	76	84	82	60
410-126458-3 - DL	12599404-042423-S-NE-Release-3	73	83	74	73	76	78	68	59
MB 410-379265/1-A	Method Blank	78	89	86	85	83	80	76	83

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDF (17-157)
410-126458-1	12599404-042423-S-NE-Releas	51
410-126458-1 - DL	12599404-042423-S-NE-Release-1	48
410-126458-2	12599404-042423-S-NE-Release-2	90
410-126458-2 - DL	12599404-042423-S-NE-Release-2	91
410-126458-3	12599404-042423-S-NE-Release-3	65
410-126458-3 - DL	12599404-042423-S-NE-Release-3	67
MB 410-379265/1-A	Method Blank	87

Surrogate Legend

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

13CHxCD = 13C-1,2,3,7,8,9-HxCDD
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
PeCF = 13C-2,3,4,7,8-PeCDF
TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HpCDD (26-166)	HpCDF (21-158)	HxCDD (21-193)	HxCDF (19-202)	HpCDF2 (20-186)	HxDD (25-163)	HxDF (21-159)	PeCDD (21-227)
LCS 410-379265/2-A	Lab Control Sample	10 *5- cn	9 *5- cn	6 *5- cn	6 *5- cn	9 *5- cn	7 *5- cn	7 *5- cn	4 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PeCDF (21-192)	13CHxCD (25-163)	HxCF (17-205)	13CHxCF (22-176)	PeCF (13-328)	TCDD (20-175)	TCDF (22-152)	OCDD (13-199)
LCS 410-379265/2-A	Lab Control Sample	4 *5- cn	8 *5- cn	7 *5- cn	8 *5- cn	5 *5- cn	3 *5- cn	3 *5- cn	12 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OCDF (13-199)							
LCS 410-379265/2-A	Lab Control Sample	12 *5- cn							

Surrogate Legend

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
13CHxCD = 13C-1,2,3,7,8,9-HxCDD
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
PeCF = 13C-2,3,4,7,8-PeCDF
TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-379265/1-A
Matrix: Solid
Analysis Batch: 379936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 379265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,6,7,8-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8-PeCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8-PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8,9-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8,9-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,4,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,4,7,8-PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,7,8-TCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,7,8-TCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
OCDD	ND		10	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
OCDF	ND		10	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HpCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PeCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total TCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total TCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDD/PCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*80*		*23 - 140*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*79*		*28 - 143*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*79*		*32 - 141*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*26 - 152*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*83*		*26 - 138*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*28 - 130*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*97*		*26 - 123*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*25 - 181*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*24 - 185*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8,9-HxCDD	*89*		*28 - 130*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*86*		*29 - 147*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*85*		*28 - 136*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,4,7,8-PeCDF	*83*		*21 - 178*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,7,8-TCDD	*80*		*25 - 164*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,7,8-TCDF	*76*		*24 - 169*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-OCDD	*83*		*17 - 157*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-OCDF	*87*		*17 - 157*	*05/23/23 22:49*	*05/25/23 13:56*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-379265/2-A
Matrix: Solid
Analysis Batch: 379936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 379265

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3,4,6,7,8-HpCDD			137	121	cn	ng/Kg		88	70 - 140		
1,2,3,4,6,7,8-HpCDF			137	121	cn	ng/Kg		88	82 - 122		
1,2,3,4,7,8-HxCDD			137	138	cn	ng/Kg		101	70 - 164		
1,2,3,4,7,8-HxCDF			137	121	cn	ng/Kg		88	72 - 134		
1,2,3,4,7,8,9-HpCDF			137	121	cn	ng/Kg		89	78 - 138		
1,2,3,6,7,8-HxCDD			137	131	cn	ng/Kg		96	76 - 134		
1,2,3,6,7,8-HxCDF			137	128	cn	ng/Kg		93	84 - 130		
1,2,3,7,8-PeCDD			137	138	cn	ng/Kg		101	70 - 142		
1,2,3,7,8-PeCDF			137	137	cn	ng/Kg		100	80 - 134		
1,2,3,7,8,9-HxCDD			137	125	cn	ng/Kg		91	64 - 162		
1,2,3,7,8,9-HxCDF			137	126	cn	ng/Kg		92	78 - 130		
2,3,4,6,7,8-HxCDF			137	119	cn	ng/Kg		87	70 - 156		
2,3,4,7,8-PeCDF			137	124	cn	ng/Kg		90	68 - 160		
2,3,7,8-TCDD			27.4	29.7	cn	ng/Kg		108	67 - 158		
2,3,7,8-TCDF			27.4	27.2	cn	ng/Kg		99	75 - 158		
OCDD			274	269	cn	ng/Kg		98	78 - 144		
OCDF			274	240	cn	ng/Kg		88	63 - 170		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-1,2,3,4,6,7,8-HpCDD	*10*	*5- cn*	*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*9*	*5- cn*	*21 - 158*
13C-1,2,3,4,7,8-HxCDD	*6*	*5- cn*	*21 - 193*
13C-1,2,3,4,7,8-HxCDF	*6*	*5- cn*	*19 - 202*
13C-1,2,3,4,7,8,9-HpCDF	*9*	*5- cn*	*20 - 186*
13C-1,2,3,6,7,8-HxCDD	*7*	*5- cn*	*25 - 163*
13C-1,2,3,6,7,8-HxCDF	*7*	*5- cn*	*21 - 159*
13C-1,2,3,7,8-PeCDD	*4*	*5- cn*	*21 - 227*
13C-1,2,3,7,8-PeCDF	*4*	*5- cn*	*21 - 192*
13C-1,2,3,7,8,9-HxCDD	*8*	*5- cn*	*25 - 163*
13C-1,2,3,7,8,9-HxCDF	*7*	*5- cn*	*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*8*	*5- cn*	*22 - 176*
13C-2,3,4,7,8-PeCDF	*5*	*5- cn*	*13 - 328*
13C-2,3,7,8-TCDD	*3*	*5- cn*	*20 - 175*
13C-2,3,7,8-TCDF	*3*	*5- cn*	*22 - 152*
13C-OCDD	*12*	*5- cn*	*13 - 199*
13C-OCDF	*12*	*5- cn*	*13 - 199*

QC Association Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Specialty Organics

ISM Prep Batch: 378513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	Increment, prep	
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	Increment, prep	
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	Increment, prep	
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	Increment, prep	
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	Increment, prep	
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	Increment, prep	

Prep Batch: 379265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	378513
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	378513
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	378513
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	378513
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	378513
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	378513
MB 410-379265/1-A	Method Blank	Total/NA	Solid	1613B	
LCS 410-379265/2-A	Lab Control Sample	Total/NA	Solid	1613B	

Analysis Batch: 379936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-379265/1-A	Method Blank	Total/NA	Solid	1613B	379265
LCS 410-379265/2-A	Lab Control Sample	Total/NA	Solid	1613B	379265

Analysis Batch: 380112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	379265
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	379265
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	379265

Analysis Batch: 380380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	379265
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	379265
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	379265

General Chemistry

Analysis Batch: 378522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	Moisture	
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	Moisture	
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	Moisture	

Lab Chronicle

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1 Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Client Sample ID: 12599404-042423-S-NE-Release-1 Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 10:45 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/25/23 23:19
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 10:45 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 11:10

Client Sample ID: 12599404-042423-S-NE-Release-2 Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Client Sample ID: 12599404-042423-S-NE-Release-2 Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 97.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 11:10 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/26/23 00:07
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 11:10 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 11:59

Client Sample ID: 12599404-042423-S-NE-Release-3 Lab Sample ID: 410-126458-3
Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Lab Chronicle

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3 Lab Sample ID: 410-126458-3

Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 11:25 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/26/23 00:56
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 11:25 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 12:48

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	1613B	Solid	1,2,3,4,6,7,8-HpCDD
1613B	1613B	Solid	1,2,3,4,6,7,8-HpCDF
1613B	1613B	Solid	1,2,3,4,7,8,9-HpCDF
1613B	1613B	Solid	1,2,3,4,7,8-HxCDD
1613B	1613B	Solid	1,2,3,4,7,8-HxCDF
1613B	1613B	Solid	1,2,3,6,7,8-HxCDD
1613B	1613B	Solid	1,2,3,6,7,8-HxCDF
1613B	1613B	Solid	1,2,3,7,8,9-HxCDD
1613B	1613B	Solid	1,2,3,7,8,9-HxCDF
1613B	1613B	Solid	1,2,3,7,8-PeCDD
1613B	1613B	Solid	1,2,3,7,8-PeCDF
1613B	1613B	Solid	2,3,4,6,7,8-HxCDF
1613B	1613B	Solid	2,3,4,7,8-PeCDF
1613B	1613B	Solid	2,3,7,8-TCDD
1613B	1613B	Solid	2,3,7,8-TCDF
1613B	1613B	Solid	OCDD
1613B	1613B	Solid	OCDF
1613B	1613B	Solid	Total HpCDD
1613B	1613B	Solid	Total HpCDF
1613B	1613B	Solid	Total HxCDD
1613B	1613B	Solid	Total HxCDF
1613B	1613B	Solid	Total PCDD
1613B	1613B	Solid	Total PCDD/PCDF
1613B	1613B	Solid	Total PCDF
1613B	1613B	Solid	Total PeCDD
1613B	1613B	Solid	Total PeCDF
1613B	1613B	Solid	Total TCDD
1613B	1613B	Solid	Total TCDF
Moisture		Solid	Percent Moisture
TEQ		Solid	Total Toxic Dioxins and Furans

Method Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	ELLE
TEQ	Total TEQ Calculation	Lab SOP	ELLE
Moisture	Percent Moisture	EPA	ELLE
1613B	Soxhlet Extraction	EPA	ELLE
Increment, prep	ISM - Dry, Disaggregate, Sieve, 2 D Slabcake Subsample	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-126458-1	12599404-042423-S-NE-Release-1	Solid	04/24/23 11:20	05/12/23 10:05
410-126458-2	12599404-042423-S-NE-Release-2	Solid	04/24/23 14:20	05/12/23 10:05
410-126458-3	12599404-042423-S-NE-Release-3	Solid	04/24/23 16:50	05/12/23 10:05

410-126458 Chain of Custody

SGS

CHAIN OF CUSTODY

SSOW: 12599404-2022-001

B7854

PROJECT INFO

PROJECT: San Jacinto Waste Pits S. Impoundment

P.O. #: —

QUOTE #: —

SITE REF: —

TURN AROUND TIME: Standard

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

See Remarks

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

PRESERVATIVE

1

ANALYSIS & METHOD

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Dioxin/Furan 1613B	MS MSD	MS/ DUP	REMARKS
12599401-042423-S-NE-Release-1	4/24/23	1120	1	SO	X			Homogenize each bulk sample separately.
↓ -↓ -↓-↓-Release-2	↓	1420	1	SO	X			Collect one aliquot from each homogenized
↓ -↓ -↓-↓-Release-3	↓	1650	1	SO	X			sample and process.
Temp Blank	—	—	1	W				
								Collect a second aliquot from each homogenized
								sample and send to Eurofins Houston. GHD will
								provide instructions. *Reach out to
								Wells Richard with any questions*
								Follow ISM sample prep guidelines.

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
[signature] GHD	4/24/23	1700	
RELINQUISHED BY (2): Ashley Owens	DATE: 5/10/23	TIME: 16:30	RECEIVED BY:
RELINQUISHED BY (3):	DATE: 5/12/23	TIME: 10:05	RECEIVED BY: [signature]

RECEIVED BY LABORATORY:	DATE:	TIME:
Ashley Owens	4/26/23	10:17

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 1.5°

TRACKING #:

Temp: RAW: 0.8 COR: 0.8

Page ____ of ____

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Member of the SGS Group (SGS SA)

Page 27 of 29

5/26/2023

Q1240

Laboratory Services / GHD Simplified Scope of Work (SSOW)

SSOW Ref. Code
12599404-2022-001

Please contact Project Chemist to implement document

Project summary

Project name	San Jacinto Southern Impoundment		
Project no.	12599404		
Task	DEL.001	Task Org Code	5032
Project location	Channelview, Harris County, Texas		
Client name	IP & MIMC		
QAPP title			

Database summary

Database maintained ☑ Yes ☐ No

Database facility code	11187072-GD-Channel	FOR INTERNAL USE ONLY - CODING
Is there more than one laboratory for this event?	No	SSOW 1 of 1

Events summary

Phase/study title	Southern Impoundment RA	Rush TAT	3 Day		
Event description	Soil Sampling	Final report and EDD TAT	3 Day	Sample batching	Sample Event
Start date	April 21, 2023	Bottle shipping address	1601 South Main Street Highlands, TX 77562	Date bottle required	April 20, 2023
Sampling duration		Phone number	432-413-5156	Attention	Jason Davis
Sampling frequency	one-time	Sample pick-up required	☐ Yes ☑ No		

Contacts

	Name	Address	Phone	Cell	Email
Client Project Manager					
Consulting Firm	GHD Services Inc.				
Project Manager	Wells Richard	5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	225-296-6508	225-454-4363	wells.richard@ghd.com
Project Coordinator	Alice Harpole				Alice.Harpole@ghd.com
Project Coordinator	Sarah Belanger				Sarah.Belanger@ghd.com
Field Leader	Jason Davis	11451 Katy Fwy #400, Houston, TX 77079		432-413-5156	jason.davis@ghd.com
Laboratory (Vendor)					
Lab Project Manager	Tamara Burkamper	5500 Business Drive, Wilmington, NC 28405	910-350-1903,x343	910-794-2527	tamara.burkamper@sgs.com
Lab Project Manager	Beth Stopen	2235 US-130, Dayton, NJ 08810	732-329-0200 ext 14555		Beth.Stopen@sgs.com
Chemistry/data mgt. firm	GHD Services Inc.				
Chemist	Shaw, Kathy	45 Farmington Valley Drive, Plainville, CT 06062	860-747-8298		Kathleen.Shaw@ghd.com
Database Analyst	Cameron, Mary	26850 Haggerty Road, Farmington Hills, Michigan, 48331	248-893-3400		mary.cameron@ghd.com

Lab deliverables

EDD format	☐ GHD EQuIS EZEDD	☐ GHD EQuIS 4-file	☐ Other (Please Specify)	
Report level requested	☑ Level II	☐ Level IV	☐ Other (Please Specify)	

Additional reporting requirements

Form 1s include	☑ MDLs	☑ PQLs	☑ J Values
TICs	☐ Yes	☑ No	
Soil reporting	☑ Dry	☐ Wet	

Lab deliverables distribution

Rush TAT data (email deliverable only)	Wells Richard, Kathy Shaw, Mary Cameron
Final EDD and result summary (PDF)	edds@ghd.com
Final lab report	Wells Richard, Kathy Shaw, Mary Cameron, Marisa Oriaku

GHD data review level

☐ Stage 1	☑ Stage 2a	☐ Stage 2b	
☐ Stage 4	☑ Stage 4/2b	☐ Other (Please Specify)	

Data management deliverables

☐ EQuIS Database ☐ Cross Tab Table ☐ Flat File ☑ Databox ☐ Other (please specify) EDAT

Data management deliverables distribution

Distribution list: Wells Richard, Kathy Shaw, Mary Cameron

Database exports - reporting down to MDL ☐ Yes ☐ No

Comments

Please see below for shipping information to the Eurofins Denver Lab
Eurofins Denver
4955 Yarrow St, Arvada, CO 80002

Attn:Anthony Grimaldi

* additional Final Lab Report copy (in PDF format) is available in the GHD Project File folder. Please contact Project Chemist.

SSOW email distribution list	wells.richard@ghd.com; jason.davis@ghd.com; Alice.Harpole@ghd.com; tamara.burkamper@sgs.com; Sarah.Belanger@ghd.com; Kathleen.Shaw@ghd.com; mary.cameron@ghd.com; Jennifer.Devonshire@ghd.com						
Prepared by	Kathy Shaw	Date		Revision number	2	Revision Date	May 10, 2023

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 410-126458-1

Login Number: 126458
List Number: 1
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

11451 Katy Freeway, Suite 400
Houston, Texas 77079
United States
www.GHD.com

Our Ref.: 12599404-Poulos-42

November 21, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

30-Day Release Conclusion Report
San Jacinto River Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), and pursuant to Appendix B, Section 3.3 of the United States Environmental Protection Agency (USEPA) Region 6, Docket No. 06-05-21 (UAO) for the San Jacinto River Waste Pits Superfund Site - Southern Impoundment, located in Harris County, Texas (Site), GHD Services Inc. (GHD) submits to the USEPA this updated report following the conclusion of the release event reported to the USEPA on March 20, 2023.

Per Appendix B, Section 3.3 of the UAO, the Respondent previously submitted a report regarding the release event to USEPA dated March 24, 2023, and a 30-Day Release Conclusion notification on May 5, 2023, as requested by the USEPA in an e-mail correspondence dated April 18, 2023. The requested sampling was implemented by the Respondent during the week of April 24, 2023. The validated analytical results from the sampling were summarized and submitted in a report to USEPA dated June 16, 2023 (Attachment 1). The analytical laboratory report and figures depicting the location of the release area and sampling layout are included in Attachment 1. All Toxicity Equivalent Quotient (TEQ) results are below the 240 nanograms per kilogram (ng/kg) clean-up level for the Southern Impoundment, as shown in Attachment 2.

On September 28, 2023, USEPA provided to the Respondent written correspondence containing the analytical results from split samples collected for independent analysis coordinated by the USEPA (Attachment 3) and requested that its correspondence be incorporated into the submittal herein.

Both sets of data confirm that no further action is needed in the release area, as all sample results are below the clean-up level.

Should you have any questions regarding this submittal, please don't hesitate to contact GHD at (713) 734-3090

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

NWR/jlf/42

Encl.: Attachment 1 - March 20, 2023, Release Summary of Soil Analytical Laboratory Results
Attachment 2 - Calculation of 2,3,7,8-TCDD Release Quantity
Attachment 3 - March 20, 2023, Release Summary of Split Sample Soil Analytical Laboratory Results

Copy to: Brent Sasser, IPC

Attachment 1

March 20, 2023, Release Summary of Soil Analytical Laboratory Results

11451 Katy Freeway, Suite 400
Houston, Texas 77079
United States
www.GHD.com

Our Ref.: 12599404-Poulos-27

June 16, 2023

Ms. Lauren Poulos
Remedial Project Manager
United States Environmental Protection Agency - 6SF RA
1201 Elm Street, Suite 500
Dallas, Texas 75270

March 20, 2023, Release Summary of Soil Analytical Laboratory Results
San Jacinto Waste Pits Superfund Site - Southern Impoundment, Harris County, Texas
Unilateral Administrative Order for Remedial Action of the Southern Impoundment
USEPA Region 6, Docket No. 06-05-21 (UAO)

Dear Ms. Poulos:

On behalf of International Paper Company (Respondent), and pursuant to Appendix B, Section 3.3 of the United States Environmental Protection Agency (USEPA) Region 6, Docket No. 06-05-21 (UAO), GHD Services Inc. (GHD) submits to the USEPA this letter to provide analytical results from sampling that the EPA requested following the release event reported to the EPA on March 20, 2023.

Per Appendix B, Section 3.3 of the UAO, the Respondent previously submitted a report to EPA dated March 24, 2023, regarding the release event (March 24 Submission), and a 30-Day Release Conclusion notification on May 5, 2023 (May 5, 2023, Submission), as requested by the EPA in an e-mail correspondence dated April 18, 2023. This report sets forth and updates information contained in the May 5, 2023, Submission.

The requested sampling was implemented by the Respondent during the week of April 24, 2023. The validated analytical results from the sampling are summarized in Table 1. All Toxicity Equivalent Quotient (TEQ) results are well below the 240 nanograms per kilogram (ng/kg) clean-up level for the Southern Impoundment. The analytical laboratory report is included as Attachment 1. Figures depicting the location of the release area and sampling layout are included as Figures 1 and 2, respectively.

No additional measures are planned at the release area, since all sample results are below the clean-up level.

Should you have any questions or require additional information regarding this submittal, please contact GHD at (832) 380-7655.

Regards,

GHD

Charles W. Munce, P.E.
Project Coordinator

Charles.Munce@GHD.com

NWR/jlf/27

Encl.: Table 1 - Summary of Soil Analytical Results - Release Area
Figure 1 - March 20, 2023, Release Area
Figure 2 - March 20, 2023, Release Area Sampling Layout
Attachment 1 - Analytical Laboratory Report

Copy to: Brent Sasser, IPC

Table 1

Summary of Soil Analytical Results
Release Area
San Jacinto River Waste Pits - Southern Impoundment
International Paper Company
Channelview, Harris County, Texas

Sample Location: Sample Identification: Sample Date:	Units	NE Release Area Sample 1 12599404-042423-S-NE-Release-1 04/24/2023	NE Release Area Sample 2 12599404-042423-S-NE-Release-2 04/24/2023	NE Release Area Sample 3 12599404-042423-S-NE-Release-3 04/24/2023
Dioxins/Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	ng/kg	19	19	16
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	ng/kg	6700	7500	4600
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	ng/kg	12	6.1	5.2
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	ng/kg	76	80	64
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	ng/kg	2.0 U	2.0 U	2.0 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	ng/kg	2.0 U	2.0 U	2.0 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	ng/kg	10	11	8.5
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	ng/kg	2.3	2.8	1.8
Total heptachlorodibenzofuran (HpCDF)	ng/kg	25 J	16 J	14 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	ng/kg	270 J	290 J	250 J
Total hexachlorodibenzofuran (HxCDF)	ng/kg	12 J	85 J	8.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	ng/kg	32 J	29 J	27 J
Total PCDD	ng/kg	6900 J	8100 J	4600 J
Total PCDD/PCDFs	ng/kg	7000 J	8300 J	4700 J
Total PCDF	ng/kg	87 J	150 J	60 J
Total pentachlorodibenzofuran (PeCDF)	ng/kg	9.6 J	5.7 J	3.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	ng/kg	6.9 J	5.0 J	4.8 J
Total tetrachlorodibenzofuran (TCDF)	ng/kg	21 J	28 J	17 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	ng/kg	3.3 J	4.1 J	2.4 J
Total WHO Dioxin TEQ(Human/Mammal)(ND=0)	ng/kg	6.2	7.0	4.7
Total WHO Dioxin TEQ(Human/Mammal)(ND=0.5)	ng/kg	8.2	9.1	6.8

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
ND - Not detected.
TEQ - Toxicity Equivalent Quotient.
ng/kg - nanogram per kilogram.

Paper Size ANSI A

0 30 60

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

Project No. **12599404**
Revision No. **-**
Date **Jun 16, 2023**

MARCH 20, 2023 RELEASE AREA

FIGURE 1

Q:\GIS\PROJECTS\12599000s\12599404\Poulos-27\12599404_202306_Poulos-27_GIS001.mxd
Print date: 16 Jun 2023 - 14:43

Data source:©NEARMAP IMAGERY from US EPA

Paper Size ANSI A

0 5 10 15

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

N

GHD

SAN JACINTO RIVER WASTE PITS
HARRIS COUNTY, TEXAS
SOUTHERN IMPOUNDMENT

MARCH 20, 2023 RELEASE AREA SAMPLING LAYOUT

Project No. **12599404**
Revision No. **-**
Date **Jun 16, 2023**

FIGURE 2

Q:\GIS\PROJECTS\12599000s\12599404\Poulos-27\12599404_202306_Poulos-27_GIS002.mxd
Print date: 16 Jun 2023 - 15:51

Data source: ©NEARMAP IMAGERY, 2023 from US EPA

Attachment 1

Analytical Laboratory Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Wells Richard
GHD Services Inc.
5551 Corporate Boulevard
Suite 200
Baton Rouge, Louisiana 70808

Generated 5/26/2023 4:30:09 PM

JOB DESCRIPTION

San Jacinto Waste Pits S. Impoundment

JOB NUMBER

410-126458-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

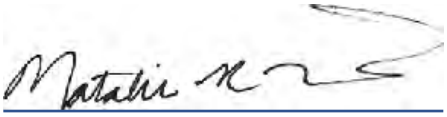
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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5/26/2023 4:30:09 PM

Authorized for release by
Natalie Luciano, Principal Project Manager
Natalie.Luciano@et.eurofinsus.com
(717)556-7258

Compliance Statement

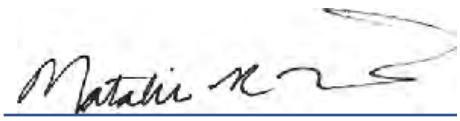
Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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Definitions/Glossary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Qualifiers

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-126458-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-126458-1

Receipt
The samples were received on 5/12/2023 10:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions
USDA Compliance agreement documentation to be submitted was either missing or incomplete for the following samples: 12599404-042423-S-NE-Release-1 (410-126458-1), 12599404-042423-S-NE-Release-2 (410-126458-2) and 12599404-042423-S-NE-Release-3 (410-126458-3).

Dioxin
Method 1613B: The Isotope Dilution Analyte (IDA) recovery associated with the following Quality Control sample is below the method recommended limit: (LCS 410-379265/2-A). The associated native analyte recoveries are within the method recommended limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1 — Lab Sample ID: 410-126458-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	76		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	12		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	2.3		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	10		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	19		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	270		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	25	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	32		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	12		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	6.9	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDF	9.6	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	3.3	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	21	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	6900	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	87	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	7000	E I B	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	6700		51	10	ng/Kg	5	☼	1613B	Total/NA

Client Sample ID: 12599404-042423-S-NE-Release-2 — Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	80		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	6.1		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	2.8		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	11		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	19		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	290		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	16		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	29		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	85	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	5.0	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDF	5.7	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	4.1	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	28	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	8100	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	150	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	8300	E I B	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	7500		51	10	ng/Kg	5	☼	1613B	Total/NA

Client Sample ID: 12599404-042423-S-NE-Release-3 — Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	64		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
1,2,3,4,6,7,8-HpCDF	5.2		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDD	1.8		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
2,3,7,8-TCDF	8.5		1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDF	16		10	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDD	250		5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HpCDF	14	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDD	27	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total HxCDF	8.9	I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total PeCDD	4.8	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3 (Continued)

Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total PeCDF	3.7	J I	5.1	2.0	ng/Kg	1	☼	1613B	Total/NA
Total TCDD	2.4	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total TCDF	17	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD	4600	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDF	60	I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
Total PCDD/PCDF	4700	E I	1.0	0.20	ng/Kg	1	☼	1613B	Total/NA
OCDD - DL	4600		51	10	ng/Kg	5	☼	1613B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 12599404-042423-S-NE-Release-1 **Lab Sample ID: 410-126458-1**
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.2**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	76		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,6,7,8-HpCDF	12		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,7,8-TCDD	2.3		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
2,3,7,8-TCDF	10		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
OCDF	19		10	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HpCDD	270		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HpCDF	25	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HxCDD	32		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total HxCDF	12		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PeCDD	6.9	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PeCDF	9.6	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total TCDD	3.3	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total TCDF	21	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDD	6900	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDF	87	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1
Total PCDD/PCDF	7000	E I B	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/25/23 23:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*54*		*23 - 140*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*46*		*28 - 143*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8-HxCDD	*62*		*32 - 141*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*64*		*26 - 152*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*64*		*26 - 138*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*66*		*28 - 130*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,6,7,8-HxCDF	*71*		*26 - 123*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8-PeCDD	*60*		*25 - 181*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8-PeCDF	*68*		*24 - 185*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8,9-HxCDD	*66*		*28 - 130*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-1,2,3,7,8,9-HxCDF	*72*		*29 - 147*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,4,6,7,8-HxCDF	*63*		*28 - 136*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,4,7,8-PeCDF	*70*		*21 - 178*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,7,8-TCDD	*78*		*25 - 164*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-2,3,7,8-TCDF	*77*		*24 - 169*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-OCDD	*46*		*17 - 157*	*05/23/23 22:49*	*05/25/23 23:19*	*1*
13C-OCDF	*51*		*17 - 157*	*05/23/23 22:49*	*05/25/23 23:19*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	6700		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 11:10	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1
Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 98.2

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	49		23 - 140	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,6,7,8-HpCDF	44		28 - 143	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8-HxCDD	53		32 - 141	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8-HxCDF	57		26 - 152	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,4,7,8,9-HpCDF	56		26 - 138	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,6,7,8-HxCDD	69		28 - 130	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,6,7,8-HxCDF	73		26 - 123	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8-PeCDD	57		25 - 181	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8-PeCDF	65		24 - 185	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8,9-HxCDD	69		28 - 130	05/23/23 22:49	05/26/23 11:10	5
13C-1,2,3,7,8,9-HxCDF	68		29 - 147	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,4,6,7,8-HxCDF	62		28 - 136	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,4,7,8-PeCDF	63		21 - 178	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,7,8-TCDD	76		25 - 164	05/23/23 22:49	05/26/23 11:10	5
13C-2,3,7,8-TCDF	69		24 - 169	05/23/23 22:49	05/26/23 11:10	5
13C-OCDD	43		17 - 157	05/23/23 22:49	05/26/23 11:10	5
13C-OCDF	48		17 - 157	05/23/23 22:49	05/26/23 11:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.8		1.0	1.0	%			05/22/23 10:50	1

Client Sample ID: 12599404-042423-S-NE-Release-2 **Lab Sample ID: 410-126458-2**
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 97.9**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	80		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,6,7,8-HpCDF	6.1		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,7,8-TCDD	2.8		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
2,3,7,8-TCDF	11		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
OCDF	19		10	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HpCDD	290		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HpCDF	16		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HxCDD	29		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total HxCDF	85	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PeCDD	5.0	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PeCDF	5.7	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total TCDD	4.1	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total TCDF	28	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDD	8100	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDF	150	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1
Total PCDD/PCDF	8300	E I B	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*85*		*23 - 140*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*80*		*28 - 143*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8-HxCDD	*85*		*32 - 141*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*26 - 152*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*89*		*26 - 138*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,6,7,8-HxCDD	*90*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,6,7,8-HxCDF	*98*		*26 - 123*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8-PeCDD	*76*		*25 - 181*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8-PeCDF	*81*		*24 - 185*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8,9-HxCDD	*91*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-1,2,3,7,8,9-HxCDF	*91*		*29 - 147*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,4,6,7,8-HxCDF	*86*		*28 - 136*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,4,7,8-PeCDF	*82*		*21 - 178*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,7,8-TCDD	*90*		*25 - 164*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-2,3,7,8-TCDF	*90*		*24 - 169*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-OCDD	*92*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:07*	*1*
13C-OCDF	*90*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:07*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	7500		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 11:59	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-2
Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 97.9

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	84		23 - 140	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,6,7,8-HpCDF	81		28 - 143	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8-HxCDD	76		32 - 141	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8-HxCDF	80		26 - 152	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,4,7,8,9-HpCDF	89		26 - 138	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,6,7,8-HxCDD	98		28 - 130	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,6,7,8-HxCDF	107		26 - 123	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8-PeCDD	77		25 - 181	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8-PeCDF	84		24 - 185	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8,9-HxCDD	103		28 - 130	05/23/23 22:49	05/26/23 11:59	5
13C-1,2,3,7,8,9-HxCDF	87		29 - 147	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,4,6,7,8-HxCDF	84		28 - 136	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,4,7,8-PeCDF	80		21 - 178	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,7,8-TCDD	86		25 - 164	05/23/23 22:49	05/26/23 11:59	5
13C-2,3,7,8-TCDF	86		24 - 169	05/23/23 22:49	05/26/23 11:59	5
13C-OCDD	89		17 - 157	05/23/23 22:49	05/26/23 11:59	5
13C-OCDF	91		17 - 157	05/23/23 22:49	05/26/23 11:59	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.1		1.0	1.0	%			05/22/23 10:50	1

Client Sample ID: 12599404-042423-S-NE-Release-3 **Lab Sample ID: 410-126458-3**
Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.1**

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	64		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,6,7,8-HpCDF	5.2		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,7,8-TCDD	1.8		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
2,3,7,8-TCDF	8.5		1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
OCDF	16		10	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HpCDD	250		5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HpCDF	14	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HxCDD	27	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total HxCDF	8.9	I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PeCDD	4.8	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PeCDF	3.7	J I	5.1	2.0	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total TCDD	2.4	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total TCDF	17	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDD	4600	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDF	60	I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1
Total PCDD/PCDF	4700	E I	1.0	0.20	ng/Kg	☼	05/23/23 22:49	05/26/23 00:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*67*		*23 - 140*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*60*		*28 - 143*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*72*		*32 - 141*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*74*		*26 - 152*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*75*		*26 - 138*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*78*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*83*		*26 - 123*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*25 - 181*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8-PeCDF	*73*		*24 - 185*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8,9-HxCDD	*79*		*28 - 130*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*82*		*29 - 147*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*77*		*28 - 136*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,4,7,8-PeCDF	*76*		*21 - 178*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,7,8-TCDD	*84*		*25 - 164*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-2,3,7,8-TCDF	*82*		*24 - 169*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-OCDD	*60*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:56*	*1*
13C-OCDF	*65*		*17 - 157*	*05/23/23 22:49*	*05/26/23 00:56*	*1*

Method: EPA 1613B - Dioxins and Furans (HRGC/HRMS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	4600		51	10	ng/Kg	☼	05/23/23 22:49	05/26/23 12:48	5

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3
Lab Sample ID: 410-126458-3
Date Collected: 04/24/23 16:50
Matrix: Solid
Date Received: 05/12/23 10:05
Percent Solids: 98.1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,4,6,7,8-HpCDD	65		23 - 140	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,6,7,8-HpCDF	59		28 - 143	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8-HxCDD	64		32 - 141	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8-HxCDF	66		26 - 152	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,4,7,8,9-HpCDF	70		26 - 138	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,6,7,8-HxCDD	80		28 - 130	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,6,7,8-HxCDF	91		26 - 123	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8-PeCDD	66		25 - 181	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8-PeCDF	73		24 - 185	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8,9-HxCDD	83		28 - 130	05/23/23 22:49	05/26/23 12:48	5
13C-1,2,3,7,8,9-HxCDF	74		29 - 147	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,4,6,7,8-HxCDF	73		28 - 136	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,4,7,8-PeCDF	76		21 - 178	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,7,8-TCDD	78		25 - 164	05/23/23 22:49	05/26/23 12:48	5
13C-2,3,7,8-TCDF	68		24 - 169	05/23/23 22:49	05/26/23 12:48	5
13C-OCDD	59		17 - 157	05/23/23 22:49	05/26/23 12:48	5
13C-OCDF	67		17 - 157	05/23/23 22:49	05/26/23 12:48	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	1.9		1.0	1.0	%			05/22/23 10:50	1

Toxicity Summary

Client: GHD Services Inc.
Project/Site: San Jacinto Waste Pits S. Impoundment

Job ID: 410-126458-1

Client Sample ID: 12599404-042423-S-NE-Release-1 — Lab Sample ID: 410-126458-1

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**76**		5.1	2.0	ng/Kg	0.01	**0.76**	0.01	**0.76**
1,2,3,4,6,7,8-HpCDF	**12**		5.1	2.0	ng/Kg	0.01	**0.12**	0.01	**0.12**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**2.3**		1.0	0.20	ng/Kg	1	**2.3**	1	**2.3**
2,3,7,8-TCDF	**10**		1.0	0.20	ng/Kg	0.1	**1.0**	0.1	**1.0**
OCDF	**19**		10	2.0	ng/Kg	0.0003	**0.0057**	0.0003	**0.0057**
OCDD - DL	**6700**		51	10	ng/Kg	0.0003	**2.0**	0.0003	**2.0**

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		6.2		8.2

Client Sample ID: 12599404-042423-S-NE-Release-2 — Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**80**		5.1	2.0	ng/Kg	0.01	**0.80**	0.01	**0.80**
1,2,3,4,6,7,8-HpCDF	**6.1**		5.1	2.0	ng/Kg	0.01	**0.061**	0.01	**0.061**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**2.8**		1.0	0.20	ng/Kg	1	**2.8**	1	**2.8**
2,3,7,8-TCDF	**11**		1.0	0.20	ng/Kg	0.1	**1.1**	0.1	**1.1**
OCDF	**19**		10	2.0	ng/Kg	0.0003	**0.0057**	0.0003	**0.0057**
OCDD - DL	**7500**		51	10	ng/Kg	0.0003	**2.3**	0.0003	**2.3**

TEF Reference:

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

Toxicity Summary

Client: GHD Services Inc.
Project/Site: San Jacinto Waste Pits S. Impoundment

Job ID: 410-126458-1

Client Sample ID: 12599404-042423-S-NE-Release-2 (Continued)

Lab Sample ID: 410-126458-2

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		7.1		9.1

Client Sample ID: 12599404-042423-S-NE-Release-3

Lab Sample ID: 410-126458-3

Analyte	Result	Qualifier	RL	MDL	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
1,2,3,4,6,7,8-HpCDD	**64**		5.1	2.0	ng/Kg	0.01	**0.64**	0.01	**0.64**
1,2,3,4,6,7,8-HpCDF	**5.2**		5.1	2.0	ng/Kg	0.01	**0.052**	0.01	**0.052**
1,2,3,4,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,4,7,8,9-HpCDF	ND		5.1	2.0	ng/Kg	0.01	0.00	0.01	0.010
1,2,3,6,7,8-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8-PeCDD	ND		5.1	2.0	ng/Kg	1	0.00	1	1.0
1,2,3,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.03	0.00	0.03	0.030
1,2,3,7,8,9-HxCDD	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
1,2,3,7,8,9-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,6,7,8-HxCDF	ND		5.1	2.0	ng/Kg	0.1	0.00	0.1	0.10
2,3,4,7,8-PeCDF	ND		5.1	2.0	ng/Kg	0.3	0.00	0.3	0.30
2,3,7,8-TCDD	**1.8**		1.0	0.20	ng/Kg	1	**1.8**	1	**1.8**
2,3,7,8-TCDF	**8.5**		1.0	0.20	ng/Kg	0.1	**0.85**	0.1	**0.85**
OCDF	**16**		10	2.0	ng/Kg	0.0003	**0.0048**	0.0003	**0.0048**
OCDD - DL	**4600**		51	10	ng/Kg	0.0003	**1.4**	0.0003	**1.4**

Analyte	Result	Qualifier	NONE	NONE	Unit	HRSM Mml ND = 0 TEF	HRSM Mml ND = 0 TEQ	HRSM Mml ND = ½ MDL TEF	HRSM Mml ND = ½ MDL TEQ
Total Toxic Dioxins and Furans					ng/Kg		4.7		6.8

TEF Reference:

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

HRSM Mml = HRSM Form 1B/C 2005 WHO Mammal TEF, World Health Organization (WHO) 2005

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HpCDD (23-140)	HpCDF (28-143)	HxCDD (32-141)	HxCDF (26-152)	HpCDF2 (26-138)	HxDD (28-130)	HxDF (26-123)	PeCDD (25-181)
410-126458-1	12599404-042423-S-NE-Releas	54	46	62	64	64	66	71	60
410-126458-1 - DL	12599404-042423-S-NE-Release-1	49	44	53	57	56	69	73	57
410-126458-2	12599404-042423-S-NE-Release-2	85	80	85	85	89	90	98	76
410-126458-2 - DL	12599404-042423-S-NE-Release-2	84	81	76	80	89	98	107	77
410-126458-3	12599404-042423-S-NE-Release-3	67	60	72	74	75	78	83	68
410-126458-3 - DL	12599404-042423-S-NE-Release-3	65	59	64	66	70	80	91	66
MB 410-379265/1-A	Method Blank	80	79	79	79	83	85	97	73

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PeCDF (24-185)	13CHxCD (28-130)	HxCF (29-147)	13CHxCF (28-136)	PeCF (21-178)	TCDD (25-164)	TCDF (24-169)	OCDD (17-157)
410-126458-1	12599404-042423-S-NE-Releas	68	66	72	63	70	78	77	46
410-126458-1 - DL	12599404-042423-S-NE-Release-1	65	69	68	62	63	76	69	43
410-126458-2	12599404-042423-S-NE-Release-2	81	91	91	86	82	90	90	92
410-126458-2 - DL	12599404-042423-S-NE-Release-2	84	103	87	84	80	86	86	89
410-126458-3	12599404-042423-S-NE-Release-3	73	79	82	77	76	84	82	60
410-126458-3 - DL	12599404-042423-S-NE-Release-3	73	83	74	73	76	78	68	59
MB 410-379265/1-A	Method Blank	78	89	86	85	83	80	76	83

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OCDF (17-157)
410-126458-1	12599404-042423-S-NE-Releas	51
410-126458-1 - DL	12599404-042423-S-NE-Release-1	48
410-126458-2	12599404-042423-S-NE-Release-2	90
410-126458-2 - DL	12599404-042423-S-NE-Release-2	91
410-126458-3	12599404-042423-S-NE-Release-3	65
410-126458-3 - DL	12599404-042423-S-NE-Release-3	67
MB 410-379265/1-A	Method Blank	87

Surrogate Legend

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF

Isotope Dilution Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

13CHxCD = 13C-1,2,3,7,8,9-HxCDD
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
PeCF = 13C-2,3,4,7,8-PeCDF
TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HpCDD (26-166)	HpCDF (21-158)	HxCDD (21-193)	HxCDF (19-202)	HpCDF2 (20-186)	HxDD (25-163)	HxDF (21-159)	PeCDD (21-227)
LCS 410-379265/2-A	Lab Control Sample	10 *5- cn	9 *5- cn	6 *5- cn	6 *5- cn	9 *5- cn	7 *5- cn	7 *5- cn	4 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PeCDF (21-192)	13CHxCD (25-163)	HxCF (17-205)	13CHxCF (22-176)	PeCF (13-328)	TCDD (20-175)	TCDF (22-152)	OCDD (13-199)
LCS 410-379265/2-A	Lab Control Sample	4 *5- cn	8 *5- cn	7 *5- cn	8 *5- cn	5 *5- cn	3 *5- cn	3 *5- cn	12 *5- cn

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OCDF (13-199)							
LCS 410-379265/2-A	Lab Control Sample	12 *5- cn							

Surrogate Legend

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
13CHxCD = 13C-1,2,3,7,8,9-HxCDD
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
PeCF = 13C-2,3,4,7,8-PeCDF
TCDD = 13C-2,3,7,8-TCDD
TCDF = 13C-2,3,7,8-TCDF
OCDD = 13C-OCDD
OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-379265/1-A
Matrix: Solid
Analysis Batch: 379936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 379265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,6,7,8-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8-PeCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8-PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8,9-HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
1,2,3,7,8,9-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,4,6,7,8-HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,4,7,8-PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,7,8-TCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
2,3,7,8-TCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
OCDD	ND		10	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
OCDF	ND		10	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HpCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HpCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HxCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total HxCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PeCDD	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PeCDF	ND		5.0	2.0	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total TCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total TCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDD	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1
Total PCDD/PCDF	ND		1.0	0.20	ng/Kg		05/23/23 22:49	05/25/23 13:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-1,2,3,4,6,7,8-HpCDD	*80*		*23 - 140*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*79*		*28 - 143*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8-HxCDD	*79*		*32 - 141*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8-HxCDF	*79*		*26 - 152*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*83*		*26 - 138*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,6,7,8-HxCDD	*85*		*28 - 130*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,6,7,8-HxCDF	*97*		*26 - 123*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8-PeCDD	*73*		*25 - 181*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8-PeCDF	*78*		*24 - 185*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8,9-HxCDD	*89*		*28 - 130*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-1,2,3,7,8,9-HxCDF	*86*		*29 - 147*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,4,6,7,8-HxCDF	*85*		*28 - 136*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,4,7,8-PeCDF	*83*		*21 - 178*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,7,8-TCDD	*80*		*25 - 164*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-2,3,7,8-TCDF	*76*		*24 - 169*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-OCDD	*83*		*17 - 157*	*05/23/23 22:49*	*05/25/23 13:56*	*1*
13C-OCDF	*87*		*17 - 157*	*05/23/23 22:49*	*05/25/23 13:56*	*1*

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-379265/2-A
Matrix: Solid
Analysis Batch: 379936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 379265

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3,4,6,7,8-HpCDD			137	121	cn	ng/Kg		88	70 - 140		
1,2,3,4,6,7,8-HpCDF			137	121	cn	ng/Kg		88	82 - 122		
1,2,3,4,7,8-HxCDD			137	138	cn	ng/Kg		101	70 - 164		
1,2,3,4,7,8-HxCDF			137	121	cn	ng/Kg		88	72 - 134		
1,2,3,4,7,8,9-HpCDF			137	121	cn	ng/Kg		89	78 - 138		
1,2,3,6,7,8-HxCDD			137	131	cn	ng/Kg		96	76 - 134		
1,2,3,6,7,8-HxCDF			137	128	cn	ng/Kg		93	84 - 130		
1,2,3,7,8-PeCDD			137	138	cn	ng/Kg		101	70 - 142		
1,2,3,7,8-PeCDF			137	137	cn	ng/Kg		100	80 - 134		
1,2,3,7,8,9-HxCDD			137	125	cn	ng/Kg		91	64 - 162		
1,2,3,7,8,9-HxCDF			137	126	cn	ng/Kg		92	78 - 130		
2,3,4,6,7,8-HxCDF			137	119	cn	ng/Kg		87	70 - 156		
2,3,4,7,8-PeCDF			137	124	cn	ng/Kg		90	68 - 160		
2,3,7,8-TCDD			27.4	29.7	cn	ng/Kg		108	67 - 158		
2,3,7,8-TCDF			27.4	27.2	cn	ng/Kg		99	75 - 158		
OCDD			274	269	cn	ng/Kg		98	78 - 144		
OCDF			274	240	cn	ng/Kg		88	63 - 170		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-1,2,3,4,6,7,8-HpCDD	*10*	*5- cn*	*26 - 166*
13C-1,2,3,4,6,7,8-HpCDF	*9*	*5- cn*	*21 - 158*
13C-1,2,3,4,7,8-HxCDD	*6*	*5- cn*	*21 - 193*
13C-1,2,3,4,7,8-HxCDF	*6*	*5- cn*	*19 - 202*
13C-1,2,3,4,7,8,9-HpCDF	*9*	*5- cn*	*20 - 186*
13C-1,2,3,6,7,8-HxCDD	*7*	*5- cn*	*25 - 163*
13C-1,2,3,6,7,8-HxCDF	*7*	*5- cn*	*21 - 159*
13C-1,2,3,7,8-PeCDD	*4*	*5- cn*	*21 - 227*
13C-1,2,3,7,8-PeCDF	*4*	*5- cn*	*21 - 192*
13C-1,2,3,7,8,9-HxCDD	*8*	*5- cn*	*25 - 163*
13C-1,2,3,7,8,9-HxCDF	*7*	*5- cn*	*17 - 205*
13C-2,3,4,6,7,8-HxCDF	*8*	*5- cn*	*22 - 176*
13C-2,3,4,7,8-PeCDF	*5*	*5- cn*	*13 - 328*
13C-2,3,7,8-TCDD	*3*	*5- cn*	*20 - 175*
13C-2,3,7,8-TCDF	*3*	*5- cn*	*22 - 152*
13C-OCDD	*12*	*5- cn*	*13 - 199*
13C-OCDF	*12*	*5- cn*	*13 - 199*

QC Association Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Specialty Organics

ISM Prep Batch: 378513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	Increment, prep	
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	Increment, prep	
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	Increment, prep	
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	Increment, prep	
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	Increment, prep	
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	Increment, prep	

Prep Batch: 379265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	378513
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	378513
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	378513
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	378513
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	378513
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	378513
MB 410-379265/1-A	Method Blank	Total/NA	Solid	1613B	
LCS 410-379265/2-A	Lab Control Sample	Total/NA	Solid	1613B	

Analysis Batch: 379936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-379265/1-A	Method Blank	Total/NA	Solid	1613B	379265
LCS 410-379265/2-A	Lab Control Sample	Total/NA	Solid	1613B	379265

Analysis Batch: 380112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	379265
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	379265
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	379265

Analysis Batch: 380380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1 - DL	12599404-042423-S-NE-Release-1	Total/NA	Solid	1613B	379265
410-126458-2 - DL	12599404-042423-S-NE-Release-2	Total/NA	Solid	1613B	379265
410-126458-3 - DL	12599404-042423-S-NE-Release-3	Total/NA	Solid	1613B	379265

General Chemistry

Analysis Batch: 378522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-126458-1	12599404-042423-S-NE-Release-1	Total/NA	Solid	Moisture	
410-126458-2	12599404-042423-S-NE-Release-2	Total/NA	Solid	Moisture	
410-126458-3	12599404-042423-S-NE-Release-3	Total/NA	Solid	Moisture	

Lab Chronicle

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-1 Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Client Sample ID: 12599404-042423-S-NE-Release-1 Lab Sample ID: 410-126458-1
Date Collected: 04/24/23 11:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 10:45 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/25/23 23:19
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 10:45 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 11:10

Client Sample ID: 12599404-042423-S-NE-Release-2 Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Client Sample ID: 12599404-042423-S-NE-Release-2 Lab Sample ID: 410-126458-2
Date Collected: 04/24/23 14:20 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 97.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 11:10 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/26/23 00:07
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 11:10 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 11:59

Client Sample ID: 12599404-042423-S-NE-Release-3 Lab Sample ID: 410-126458-3
Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	378522	UVJN	ELLE	05/22/23 10:50

Lab Chronicle

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Client Sample ID: 12599404-042423-S-NE-Release-3 Lab Sample ID: 410-126458-3

Date Collected: 04/24/23 16:50 **Matrix: Solid**
Date Received: 05/12/23 10:05 **Percent Solids: 98.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	ISM Prep	Increment, prep			378513	UGCW	ELLE	05/22/23 11:25 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B			379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B		1	380112	DZ6A	ELLE	05/26/23 00:56
Total/NA	ISM Prep	Increment, prep	DL		378513	UGCW	ELLE	05/22/23 11:25 - 05/22/23 11:29 [1]
Total/NA	Prep	1613B	DL		379265	SJ7Z	ELLE	05/23/23 22:49
Total/NA	Analysis	1613B	DL	5	380380	DZ6A	ELLE	05/26/23 12:48

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1613B	1613B	Solid	1,2,3,4,6,7,8-HpCDD
1613B	1613B	Solid	1,2,3,4,6,7,8-HpCDF
1613B	1613B	Solid	1,2,3,4,7,8,9-HpCDF
1613B	1613B	Solid	1,2,3,4,7,8-HxCDD
1613B	1613B	Solid	1,2,3,4,7,8-HxCDF
1613B	1613B	Solid	1,2,3,6,7,8-HxCDD
1613B	1613B	Solid	1,2,3,6,7,8-HxCDF
1613B	1613B	Solid	1,2,3,7,8,9-HxCDD
1613B	1613B	Solid	1,2,3,7,8,9-HxCDF
1613B	1613B	Solid	1,2,3,7,8-PeCDD
1613B	1613B	Solid	1,2,3,7,8-PeCDF
1613B	1613B	Solid	2,3,4,6,7,8-HxCDF
1613B	1613B	Solid	2,3,4,7,8-PeCDF
1613B	1613B	Solid	2,3,7,8-TCDD
1613B	1613B	Solid	2,3,7,8-TCDF
1613B	1613B	Solid	OCDD
1613B	1613B	Solid	OCDF
1613B	1613B	Solid	Total HpCDD
1613B	1613B	Solid	Total HpCDF
1613B	1613B	Solid	Total HxCDD
1613B	1613B	Solid	Total HxCDF
1613B	1613B	Solid	Total PCDD
1613B	1613B	Solid	Total PCDD/PCDF
1613B	1613B	Solid	Total PCDF
1613B	1613B	Solid	Total PeCDD
1613B	1613B	Solid	Total PeCDF
1613B	1613B	Solid	Total TCDD
1613B	1613B	Solid	Total TCDF
Moisture		Solid	Percent Moisture
TEQ		Solid	Total Toxic Dioxins and Furans

Method Summary

Client: GHD Services Inc. Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Method	Method Description	Protocol	Laboratory
1613B	Dioxins and Furans (HRGC/HRMS)	EPA	ELLE
TEQ	Total TEQ Calculation	Lab SOP	ELLE
Moisture	Percent Moisture	EPA	ELLE
1613B	Soxhlet Extraction	EPA	ELLE
Increment, prep	ISM - Dry, Disaggregate, Sieve, 2 D Slabcake Subsample	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: GHD Services Inc.
Job ID: 410-126458-1
Project/Site: San Jacinto Waste Pits S. Impoundment

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-126458-1	12599404-042423-S-NE-Release-1	Solid	04/24/23 11:20	05/12/23 10:05
410-126458-2	12599404-042423-S-NE-Release-2	Solid	04/24/23 14:20	05/12/23 10:05
410-126458-3	12599404-042423-S-NE-Release-3	Solid	04/24/23 16:50	05/12/23 10:05

410-126458 Chain of Custody

SGS

CHAIN OF CUSTODY

SSOW: 12599404-2022-001

B7854

PROJECT INFO

PROJECT: San Jacinto Waste Pits S. Impoundment

P.O. #: —

QUOTE #: —

SITE REF: —

TURN AROUND TIME: Standard

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

See Remarks

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

PRESERVATIVE

1

ANALYSIS & METHOD

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	Dioxin/Furan 1613B	MS MSD	MS/ DUP	REMARKS
12599401-042423-S-NE-Release-1	4/24/23	1120	1	SO	X			Homogenize each bulk sample separately.
↓ -↓ -↓-↓-Release-2	↓	1420	1	SO	X			Collect one aliquot from each homogenized
↓ -↓ -↓-↓-Release-3	↓	1650	1	SO	X			sample and process.
Temp Blank	—	—	1	W				
								Collect a second aliquot from each homogenized
								sample and send to Eurofins Houston. GHD will
								provide instructions. *Reach out to
								Wells Richard with any questions*
								Follow ISM sample prep guidelines.

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
[signature] GHD	4/24/23	1700	
RELINQUISHED BY (2): Ashley Owens	DATE: 5/10/23	TIME: 16:30	RECEIVED BY:
RELINQUISHED BY (3):	DATE: 5/12/23	TIME: 10:05	RECEIVED BY: [signature]

RECEIVED BY LABORATORY:	DATE:	TIME:
Ashley Owens	4/26/23	10:17

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 1.5°

TRACKING #:

Temp: RAW: 0.8 COR: 0.8

Page ____ of ____

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Member of the SGS Group (SGS SA)

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5/26/2023

Q1240

Laboratory Services / GHD Simplified Scope of Work (SSOW)

SSOW Ref. Code
12599404-2022-001

Please contact Project Chemist to implement document

Project summary

Project name	San Jacinto Southern Impoundment		
Project no.	12599404		
Task	DEL.001	Task Org Code	5032
Project location	Channelview, Harris County, Texas		
Client name	IP & MIMC		
QAPP title			

Database summary

Database maintained ☑ Yes ☐ No

Database facility code	11187072-GD-Channel	FOR INTERNAL USE ONLY - CODING
Is there more than one laboratory for this event?	No	SSOW 1 of 1

Events summary

Phase/study title	Southern Impoundment RA	Rush TAT	3 Day		
Event description	Soil Sampling	Final report and EDD TAT	3 Day	Sample batching	Sample Event
Start date	April 21, 2023	Bottle shipping address	1601 South Main Street Highlands, TX 77562	Date bottle required	April 20, 2023
Sampling duration		Phone number	432-413-5156	Attention	Jason Davis
Sampling frequency	one-time	Sample pick-up required	☐ Yes ☑ No		

Contacts

	Name	Address	Phone	Cell	Email
Client Project Manager					
Consulting Firm	GHD Services Inc.				
Project Manager	Wells Richard	5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	225-296-6508	225-454-4363	wells.richard@ghd.com
Project Coordinator	Alice Harpole				Alice.Harpole@ghd.com
Project Coordinator	Sarah Belanger				Sarah.Belanger@ghd.com
Field Leader	Jason Davis	11451 Katy Fwy #400, Houston, TX 77079		432-413-5156	jason.davis@ghd.com
Laboratory (Vendor)					
Lab Project Manager	Tamara Burkamper	5500 Business Drive, Wilmington, NC 28405	910-350-1903,x343	910-794-2527	tamara.burkamper@sgs.com
Lab Project Manager	Beth Stopen	2235 US-130, Dayton, NJ 08810	732-329-0200 ext 14555		Beth.Stopen@sgs.com
Chemistry/data mgt. firm	GHD Services Inc.				
Chemist	Shaw, Kathy	45 Farmington Valley Drive, Plainville, CT 06062	860-747-8298		Kathleen.Shaw@ghd.com
Database Analyst	Cameron, Mary	26850 Haggerty Road, Farmington Hills, Michigan, 48331	248-893-3400		mary.cameron@ghd.com

Lab deliverables

EDD format	☐ GHD EQuIS EZEDD	☐ GHD EQuIS 4-file	☐ Other (Please Specify)	
Report level requested	☑ Level II	☐ Level IV	☐ Other (Please Specify)	

Additional reporting requirements

Form 1s include	☑ MDLs	☑ PQLs	☑ J Values
TICs	☐ Yes	☑ No	
Soil reporting	☑ Dry	☐ Wet	

Lab deliverables distribution

Rush TAT data (email deliverable only)	Wells Richard, Kathy Shaw, Mary Cameron
Final EDD and result summary (PDF)	edds@ghd.com
Final lab report	Wells Richard, Kathy Shaw, Mary Cameron, Marisa Oriaku

GHD data review level

☐ Stage 1	☑ Stage 2a	☐ Stage 2b	
☐ Stage 4	☑ Stage 4/2b	☐ Other (Please Specify)	

Data management deliverables

☐ EQuIS Database ☐ Cross Tab Table ☐ Flat File ☑ Databox ☐ Other (please specify) EDAT

Data management deliverables distribution

Distribution list: Wells Richard, Kathy Shaw, Mary Cameron

Database exports - reporting down to MDL ☐ Yes ☐ No

Comments

Please see below for shipping information to the Eurofins Denver Lab
Eurofins Denver
4955 Yarrow St, Arvada, CO 80002

Attn:Anthony Grimaldi

* additional Final Lab Report copy (in PDF format) is available in the GHD Project File folder. Please contact Project Chemist.

SSOW email distribution list	wells.richard@ghd.com; jason.davis@ghd.com; Alice.Harpole@ghd.com; tamara.burkamper@sgs.com; Sarah.Belanger@ghd.com; Kathleen.Shaw@ghd.com; mary.cameron@ghd.com; Jennifer.Devonshire@ghd.com						
Prepared by	Kathy Shaw	Date		Revision number	2	Revision Date	May 10, 2023

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 410-126458-1

Login Number: 126458
List Number: 1
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Attachment 2

Calculation of 2,3,7,8-TCDD Release Quantity

Calculation of TCDD Release Quantity
March 20, 2023 Release
San Jacinto River Waste Pits - Southern Impoundment
International Paper Company
Channelview, Harris County, Texas

Calculated 2,3,7,8 - Tetrachlorodibenzo-p-dioxin (TCDD) Release Mass							
Water Released [(1)]	**Water Released (Converted to Liters)**	**Total Suspended Solids in Water [(2)]**	**Calculated Solids Released (Converted to kg)**	**2,3,7,8 - TCDD Concentration of Solids [(3)]**	**2,3,7,8 - TCDD Concentration of Solids (Converted to mg/kg)**	**Calculated 2,3,7,8 - TCDD Released**	**Calculated 2,3,7,8 - TCDD Released (Converted to pounds)**
gallons	liters	mg/L	kilograms	ng/kg	mg/kg	milligrams	pounds
100	378.5	4600	1.7411	4761	0.00476	0.0083	0.000000018

Notes:
L = liters
mg = milligrams
kg = kilograms
ng = nanograms
2,3,7,8 - TCDD = 2,3,7,8 - Tetrachlorodibenzo-p-dioxin
1. Approximately 100 gallons of impacted water were released to the ground within the Southern Impoundment.
2. Based on the 2019 pilot test to evaluate Total Suspended Solids (TSS) in contact water from excavations, the highest recorded TSS value was 4,600 mg/L. This value was recorded while contact water was being actively mixed and had not settled, and overestimates TSS in the water that was discharged.
3. The mean depth weighted average of TCDD concentrations in the polygon being excavated during the release. The concentrations are from soil samples collected during previous investigations.

Attachment 3

March 20, 2023, Release Summary of Split Sample Soil Analytical Laboratory

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1201 ELM STREET. SUITE 500

September 28, 2023

Charles W. Munce, P.E.
Project Coordinator
GHD Services Inc.
111451 Katy Freeway, Suite 400
Houston, Texas 77079

RE: March 20, 2023, Release Summary of Split Sample Soil Analytical Laboratory Results
San Jacinto River Waste Pits Superfund Site Southern Impoundment
Unilateral Administrative Order CERCLA Docket No. 06-05-21 (UAO)

Dear Mr. Munce,

On March 20, 2023, EPA was notified that a release had occurred at the San Jacinto River Waste Pits Superfund Site Southern Impoundment of approximately 100 to 200 gallons of water from the pipeline system impacting less than 975 square feet of surface area on-site. Following this release, GHD initiated response actions, pumping released water into the water treatment system and excavating impacted soils to approximately 3 inches below ground surface in the potentially impacted area beyond the Remedial Action excavation footprint.

The Environmental Protection Agency (EPA) required that sampling be conducted to determine whether additional action would be needed in the area of the release and provided GHD with the Sampling and Analysis Plan: San Jacinto Southern Impoundment Superfund Site Surface Soil Sampling (attached) via email on April 6, 2023. EPA also required that split samples be taken for independent analysis at a separate lab coordinated by EPA. Sampling was concluded April 24, 2023, and EPA has received and reviewed the validated analytical results from the independent analysis of the split samples (attached). EPA has also received and reviewed the analytical results provided by GHD on June 16, 2023. Both sets of data confirm that no further action is needed in the release area at this time as all sample results are below the cleanup level.

This package of information, including this cover letter and all attachments, should be incorporated into the 30-Day Release Report as well as the Remedial Action Report.

Thank you for coordinating, and please contact me with any questions at poulos.lauren@epa.gov or 214-665-8371.

Sincerely,

Lauren Poulos
Remedial Project Manager

Cc: Wells Richard, GHD
Brent Sasser, IPC
Katie Delbecq, TCEQ

ATTACHMENTS

Attachment I
Contact Water Release Analysis
San Jacinto Southern Impoundment

					Sample ID	12599404-042423-S-NE-RELEASE-1	12599404-042423-S-NE-RELEASE-2	12599404-042423-S-NE-RELEASE-3
					Date	4/24/2023	4/24/2023	4/24/2023
Analyte	CAS.NO	Units	RSL	Type		FS	FS	FS
EPA 1613B								
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/Kg		--		**66**	**85**	**70**
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/Kg		--		**8.6**	**6.9**	**6.6**
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/Kg		--		5 U	5 U	5 U
1,2,3,4,7,8-HxCDD	39227-28-6	ng/Kg		--		5 U	5 U	5 U
1,2,3,4,7,8-HxCDF	70648-26-9	ng/Kg		--		5 U	5 U	5 U
1,2,3,6,7,8-HxCDD	57653-85-7	ng/Kg		--		5 U	5 U	5 U
1,2,3,6,7,8-HxCDF	57117-44-9	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8,9-HxCDD	19408-74-3	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8,9-HxCDF	72918-21-9	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8-PeCDD	40321-76-4	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8-PeCDF	57117-41-6	ng/Kg		--		5 U	5 U	5 U
2,3,4,6,7,8-HxCDF	60851-34-5	ng/Kg		--		5 U	5 U	5 U
2,3,4,7,8-PeCDF	57117-31-4	ng/Kg		--		5 U	5 U	5 U
2,3,7,8-TCDD	1746-01-6	ng/Kg		--		**2 J**	**2 J**	**2**
2,3,7,8-TCDF	51207-31-9	ng/Kg		--		**7.6**	**7.2**	**7.5**
OCDD	3268-87-9	ng/Kg		--		**6200 J**	**8200 J**	**6100**
OCDF	39001-02-0	ng/Kg		--		**19**	**21**	**21**
Total HpCDD	37871-00-4	ng/Kg		--		**220**	**270**	**270**
Total HpCDF	38998-75-3	ng/Kg		--		**19**	**18**	**16**
Total HxCDD	34465-46-8	ng/Kg		--		**19**	**23**	**21**
Total HxCDF	55684-94-1	ng/Kg		--		5 U	5 U	5 U
Total PeCDD	36088-22-9	ng/Kg		--		5 U	5 U	5 U
Total PeCDF	30402-15-4	ng/Kg		--		**7.1**	**7**	**6.6**
Total TCDD	41903-57-5	ng/Kg		--		**3.6 J**	1 U	**3.2**
Total TCDF	30402-14-3	ng/Kg		--		**13**	**12**	**11**
TEQ (DL/2)	1746-01-6	ng/Kg		--		**11.03575**	**8.61615**	**11.00415**
TEQ (DL=0)	1746-01-6	ng/Kg		--		**5.3717**	**4.1053**	**5.3523**

Note:
ng/Kg - nanograms per kilogram.
RSL - Regional Screening Level (THQ=0.1, Cancer Risk = 1E -06) Resident Soil Summary Issued 05/2023
FS - Field Sample
U - The analyte was analyzed for but was not detected.
J - The analyte was positively identified, and the quantity is estimated.
Detected values are BOLD

Sampling and Analysis Plan:

San Jacinto Southern Impoundment Superfund Site

Surface Soil Sampling

1. Introduction

The United States Environmental Protection Agency (EPA) was notified on Monday, March 20, of a release of approximately 100 to 200 gallons of water from the pipeline system used for dewatering excavations on the northern portion of the San Jacinto Southern Impoundment. The release is expected to have impacted less than 975 square feet of surface area on-site (Figure 1). All indications are that the release was contained on-site and did not impact any areas off-site. GHD Services, Inc. (GHD), the remedial contractor for the site's potentially responsible party, quickly initiated a response with EPA contractor oversight to pump the water back into the treatment system and address potentially impacted soils. EPA is working with GHD to modify procedures and relevant workplans to prevent any future contact water releases and make sure that there is a clear process for responding to any future issues, if necessary.

1.1 Event Summary and response Measures

At approximately 1 PM Monday, a release of pumped water from the open excavation in the north excavation area was observed near the impacted soil stockpile. GHD shut down operations and initiated response actions including diverting and pumping the released water back into the pipeline and water treatment system and then excavating the impacted soils to approximately 3 inches below ground surface (bgs) in the potentially impacted area beyond the Remedial Action excavation footprint. EPA's contractor was on-site at the time providing oversight and conducted a site walk and inspection of the excavation operations to document no off-site impacts were observed. Response activities were completed at approximately 3:15 p.m. the same day.

The source of the release was an open valve on the water treatment system pipeline. GHD has now implemented daily inspections of all valves along the pipeline system, caps for each open valve end, and is evaluating locking mechanisms to prevent any future releases from occurring. EPA is reviewing the Emergency Response Plan for additional measures that should be included related to spill and release protocols and response measures.

1.2 Sampling Rationale

EPA has developed the following sampling and analysis plan to assess the potential impact of the contact water release on the local soils that were inundated. This plan was developed in consultation with the EPA project management team and EPA contractors and includes soil sampling within the potentially impacted area associated with the released contact water.

2. Soil Sampling

Incremental Sampling Method (ISM) will be used to collect surface soil samples (0-1 ft bgs) within the potentially impacted area (see Figure 1), hereafter referred to as the decision unit (DU). The ISM approach is a statistically supported technique for assessing the unbiased mean contaminant concentration in soil. ISM incorporates two principal components: 1) field sampling methodology and 2) laboratory preparation and processing (Interstate Technology Regulatory Council [ITRC], 2020). The ISM approach reduces data variability and increases sample representativeness by obtaining a single sample that represents a large unit divided into smaller increments. DUs are the smallest volume of soil for which a decision will be made based on sampling results. The collected sample increments are composited, processed, and subsampled according to specific protocols of ISM to reduce variability and increase representativeness (ITRC, 2020).

Three ISM samples, each comprised of 30 surface soil sample increments each (Figure 2) will be collected within the DU. All sample increments were collected from 0 to 1-foot bgs using a dedicated volumetric sampling device (LaMotte 1055 Soil Sampler or AMS Soil Probe).

General Procedure for Collecting Surface Soil via ISM

1. Locate the boundaries of the rectangular-shaped DU using the excavation footprint from the response action. Stakes will be installed at the corners of the DU.
2. Pace the length and width of the DU, counting the paces for each. This information will be used to develop a grid for the DU. The goal of the grid is to space out the sample increments/borings as evenly as possible, consistent with Figure 2.
3. Pin flags will be used to define the sampling area and locate grid/transect pattern.
4. A random sample location will be identified in the first sampling grid cell. The same location will be replicated in each subsequent grid cell.
5. The distance and directional moves that will be required to collect the replicate samples will be determined and this information will be documented in the field logbook(s). The distance moved will be determined by measuring the length of the grid cell, if starting in the X direction, or measuring the height of the grid cell, if starting in the Y direction.
6. A serpentine pattern will be walked to collect initial and replicate samples. The serpentine pattern will alternate between starting in the X or Y direction for each replicate. Illustration 1 shows a simplified example of how samples could be collected. In this example, it is assumed that the 'X' symbol represents the original sample (1st replicate), the 'O' symbol represents the duplicate sample (2nd replicate), and the 'Δ' symbol represents the triplicate sample (3rd replicate).

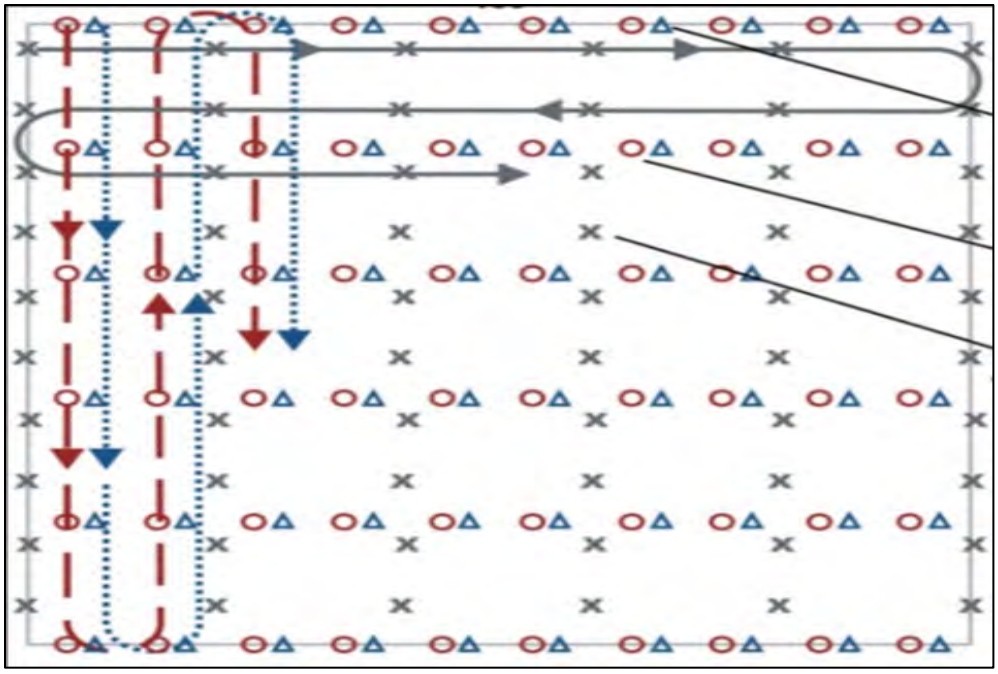

Illustration 1 – ISM serpentine pattern

7. Conduct a trial walk along the paths that will be followed for increment collection to ensure spacing is adequate to collect 30 increments.
8. Pin flags will be placed along these paths. Unique colored flags will be used to differentiate the original sample and the two replicate samples.
9. Following the grid/transect line, locate the first increment collection point for the original sample (replicate #1).
10. Use a dedicated volumetric sampling device to collect an increment.
11. Place increment into sample container.
12. Continue to the next increment collection point for replicate #1 and repeat steps 10 and 11. Repeat this process following a serpentine path until all 30 increments for replicate #1 are collected.
13. Place bulk sample into clean Ziplock® bag.
14. Label each sample bag with the proper identification label.
15. Collect the other replicate samples:
    a. Move the pre-determined number of feet in the pre-designated direction (determined in Steps #5 and 6) from the initial incremental collection point and begin collecting the duplicate sample.
    b. Repeat steps 9 through 15 for the duplicate and triplicate samples (replicate samples #2 and #3).

Additional surface soil sampling notes:

16. All non-soil material will be removed from the sampling area prior to sampling.
17. The sampling team will don the appropriate PPE including nitrile gloves.

18. Care will be taken to obtain the same sample mass from each incremental sample location. The target sample mass for the planned analytical methods is 1,500 grams. Assuming 30 increments per 1,500-gram sample, approximately 50 grams are needed from each increment.
19. Sampling devices will be decontaminated between replicates.
20. One equipment blank will be collected to assess potential contamination resulting from field sampling procedures.

The 30 soil increments for each replicate were placed in double Ziploc® bags, labeled, preserved with ice to below 6°C following sample collection, and transported to the laboratory for homogenization and processing prior to chemical analysis (Note; a detailed discussions of standard laboratory procedures used with ISM samples is provided in the ITRC Guidance document (ITRC, 2020). All ISM soil samples will be analyzed using EPA Method 1613B for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). After processing each ISM sample and removing an aliquot for analysis, the PRP-selected laboratory will remove an additional aliquot and provide it to EPA for split-sample confirmation analysis.

3. Data Evaluation

PCDD and PCDF have a wide range of relative potencies and are found in mixtures in the environment. The EPA endorses the toxicity equivalency factor (TEF) methodology to calculate total dioxin and furan concentrations, using 2,3,7,8-tetrachlorodibenzodioxin (TCDD) as the index chemical using the consensus TEF values published in 2005 by the World Health Organization (2013, EPA). By definition, the TEF for TCDD is 1.0. Each individual dioxin is assigned a scaling factor by which the individual compound concentration is multiplied, yielding total concentration that can be compared to the site cleanup goal for TCDD of 240 nanograms per kilogram (ng/kg). **Equation 1** provides the formula for calculating equivalence concentrations for the number of dioxins in a mixture (n) in TCDD toxic equivalence (TEQ) to the ith individual PCDD or PCDF compound. The selected laboratories will perform this calculation and report the results.

Equation 1 Toxic Equivalence Calculation

$$TEQ = \sum_{i=1}^{n} (C_i \times TEF_i)$$

The updated ITRC ISM 95% Upper Confidence Limit on the mean (UCL) calculator will be used to derive representative concentrations for surface soil in the DU (ITRC v. 3.0, 2020). The updated tool provides instructions for uploading replicate concentrations and determines the appropriate statistical parameter (i.e., Student's t UCL or Chebyshev UCL) to use for comparison to the site cleanup goal. The calculator recommends the 95% Student's t UCL for data sets where the coefficient of variation (CV) of increments is low (defined as CV < 1.5), and the 95% Chebyshev UCL for data sets where the CV is medium (defined as 1.5 < CV < 3) or high (defined as CV > 3).

4. References

EPA, 2013. *Use of Dioxin TEFs in Calculating Dioxin TEQs at CERCLA and RCRA Sites*. May.

EPA, 2017, *Record of Decision, San Jacinto River Waste Pits, Harris County, Texas.* October.

ITRC. 2020. Incremental Sampling Methodology (ISM) Update. October.

LEGEND

- PUMP LOCATION
- RELEASE POINT
- TEMPORARY SUMP LOCATION
- WATER CONVEYANCE PIPING
- APPROXIMATE RELEASE AREA
- SITE BOUNDARY

N

0 50 100

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY, 2023

MAP DATA SOURCE: GHD Release Notification Report

TDD: 0001/22-431
SSID: 06ZQ

US EPA REGION 6

FIGURE 1

SITE PLAN

SAN JACINTO SOUTHERN IMPOUNDMENT
W BANK OF SAN JACINTO RIVER,
N OF HWY 10
CHANNEL VIEW, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MARCH 2023	20600.012.001.1431	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\ER\San Jacinto Southern Impoundment\pro\San Jacinto Southern Impoundment\San Jacinto Southern Impoundment.aprx 8:22 AM 3/30/2023 covasj

LEGEND

- PUMP LOCATION
- RELEASE POINT
- TEMPORARY SUMP LOCATION
- WATER CONVEYANCE PIPING
- APPROXIMATE RELEASE AREA
- SITE BOUNDARY
- SURFACE SOIL SAMPLE GRID (n = 30)

N

0 10 20

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY, 2023

MAP DATA SOURCE: GHD Release Notification Report

TDD: 0001/22-431
SSID: 06ZQ

US EPA REGION 6

FIGURE 2

SURFACE SOIL INCREMENT SAMPLE GRID MAP
SAN JACINTO SOUTHERN IMPOUNDMENT
W BANK OF SAN JACINTO RIVER,
N OF HWY 10
CHANNEL VIEW, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MARCH 2023	20600.012.001.1431	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\ER\San Jacinto Southern Impoundment\pro\San Jacinto Southern Impoundment\San Jacinto Southern Impoundment.aprx 8:38 AM 3/30/2023 covasj

ANALYTICAL REPORT

July 11, 2023

Revised Report

Weston Solutions Inc -Baton Rouge, LA

Sample Delivery Group:	L1619390
Samples Received:	05/24/2023
Project Number:	12599404
Description:	San Jacinto Waste Pits S. Impoundment

Report To:

Jeff Wright
13702 Coursey Blvd
Bldg #7, STE A
Baton Rouge, LA 70817

Entire Report Reviewed By:

Chad A Upchurch
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

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12599404-042423-S-NE-RELEASE-1 L1619390-01 Solid

Collected by	Collected date/time	Received date/time
	04/24/23 11:20	05/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2065801	1	06/16/23 00:00	06/16/23 00:00	-	Minneapolis, MN 55414

12599404-042423-S-NE-RELEASE-2 L1619390-02 Solid

Collected by	Collected date/time	Received date/time
	04/24/23 14:20	05/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2065801	1	06/16/23 00:00	06/16/23 00:00	-	Minneapolis, MN 55414

12599404-042423-S-NE-RELEASE-3 L1619390-03 Solid

Collected by	Collected date/time	Received date/time
	04/24/23 16:50	05/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2065801	1	06/16/23 00:00	06/16/23 00:00	-	Minneapolis, MN 55414

CASE NARRATIVE

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chad A Upchurch
Project Manager

Report Revision History

Level II Report - Version 1: 06/19/23 17:33

Project Comments

Level 4 data package added.

L1619390 -01, -02, -03 contains subout data that is included after the chain of custody.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: J147

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: GHD	Billing Information: GHD Services Inc. 2055 Niagara Falls Blvd., Niagara Falls, New York 14304 USA
Address: 5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	
Report To: Wells Richard	Email To: accountspayableUS@ghd.com
Copy To: Jeff Wright at Weston	Site Collection Info/Address:
Customer Project Name/Number: San Jacinto Waste Pits S. Impoundment	State: Texas / County/City: Harris/Channelview Time Zone Collected: [ ]PT [ ]MT [X]CT [ ]ET
Phone: 225-296-6508 Email: wells.richard@ghd.com	Site/Facility ID #:
Collected By (print):	Purchase Order # : Quote #:
Collected By (signature):	Turnaround Date Required: Standard
Sample Disposal: [ ] Dispose as appropriate [X] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Container Preservative Type **: U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Compliance Monitoring? [ ] Yes [ ] No	
DW PWS ID #:	
DW Location Code:	
Immediately Packed on Ice: [ ] Yes [ ] No	
Field Filtered (if applicable): [ ] Yes [ ] No	
Analysis: _____	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: Dioxin/Furan 1613B (dry weight reporting)
12599404-042423-S-NE-Release-1	SL		4/24/23	11:20				1	G	X
12599404-042423-S-NE-Release-2	SL		4/24/23	14:20				1	G	X
12599404-042423-S-NE-Release-3	SL		4/24/23	16:50				1	G	X

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
L1699390
-01
-02
-03

Customer Remarks / Special Conditions / Possible Hazards:

Level II & GHD EQuIS 4-file
Copy of Original Client COC included for reference
ISM Prep Completed by Eurofins per GHD

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 6499 7732 7164

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:
NSAT 3.9+0=3.9

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Kristin Deare ELLE	5/23/23 1537		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 5/24/23 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

410-126458 Chain of Custody

L1619380

SGS CHAIN OF CUSTODY

SSOW: 12599404-2022-001

B7854

PROJECT INFO

PROJECT: San Jacinto Waste Pits S. Impoundment

P.O. #: —

QUOTE #: —

SITE REF: —

TURN AROUND TIME: Standard

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

See Remarks

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☐ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE: 1	ANALYSIS & METHOD: Dioxins/Furans 1613B	MS MSD	MS/ DUP	REMARKS
12599404-041423-3-NE-Release-1	4/14/23	1120	1	SO		X			Homogenize each bulk sample separately.
↓ -↓-↓-↓-Release-2	↓	1420	1	SO		X			Collect one aliquot from each homogenized
↓ -↓-↓-↓-Release-3	↓	1650	1	SO		X			sample and process.
Temp Blank	—	—	1	W					
									Collect a second aliquot from each homogenized
									sample and send to Eurofins Houston. GHD will
									provide instructions. *Reach out to
									Wells Richard with any questions*
									Follow ISM sample prep guidelines.

COLLECTED/RELINQUISHED BY (1): GHD	DATE: 4/24/23	TIME: 1700	RECEIVED BY:
RELINQUISHED BY (2): Ashley Owens	DATE: 5/10/23	TIME: 10:30	RECEIVED BY:
RELINQUISHED BY (3):	DATE: 5/11/23	TIME: 10:05	RECEIVED BY:

RECEIVED BY LABORATORY: Ashley Owens DATE: 4/26/23 TIME: 10:17

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 1.5°

TRACKING #:

Temp: RAW: 0.8 COR: 0.8

SGS NORTH AMERICA INC. ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Member of the SGS Group (SGS SA)

Kristi Sears 5/23/23 1537 ELLE

U6193390

Q1240

Laboratory Services / GHD Simplified Scope of Work (SSOW)

SSOW Ref. Code
12599404-2022-001

Please contact Project Chemist to implement document

Project summary

Project name	San Jacinto Southern Impoundment		
Project no.	12599404		
Task	OEL.001	Task Org Code	5032
Project location	Channelview, Harris County, Texas		
Client name	IP & MMC		
QAPP title			

Database summary

Database maintained: ☑ Yes ☐ No

Database facility code: 11187072-GD-Channel

FOR INTERNAL USE ONLY - CODING:

Is there more than one laboratory for this event? No

SSOW 1 of 1

Events summary

Phase/study title	Southern Impoundment RA	Rush TAT	3 Day
Event description	Soil Sampling	Final report and EDD TAT	3 Day
Start date	April 21, 2023	Bottle shipping address	1601 South Main Street Highlands, TX 77562
Sampling duration		Phone number	432-413-5158
Sampling frequency	one-time	Sample pick-up required	☐ Yes ☑ No

Sample batching	Sample Event
Date bottle required	April 20, 2023
Attention	Jason Davis

Contacts

	Name	Address	Phone	Cell	Email
Client Project Manager					
Consulting Firm	GHD Services Inc				
Project Manager	Wells Richard	5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	225-296-6508	225-454-4363	wells.richard@ghd.com
Project Coordinator	Alice Harpole				Alice.Harpole@ghd.com
Project Coordinator	Sarah Belanger				Sarah.Belanger@ghd.com
Field Leader	Jason Davis	11451 Katy Fwy #400, Houston, TX 77079		432-413-5158	jason.davis@ghd.com
Laboratory (Vendor)					
Lab Project Manager	Tamara Burkamper	5500 Business Drive, Wilmington, NC 28405	910-350-1903,x343	910-794-2527	tamara.burkamper@sgs.com
Lab Project Manager	Beth Stopen	2235 US-130, Dayton, NJ 08810	732-329-0200 ext 14555		Beth.Stopen@sgs.com
Chemistry/data mgt. firm	GHD Services Inc.				
Chemist	Shaw, Kathy	45 Farmington Valley Drive, Plainville, CT 06062	860-747-8298		Kathleen.Shaw@ghd.com
Database Analyst	Cameron, Mary	26850 Haggerty Road, Farmington Hills, Michigan, 48331	248-893-3400		mary.cameron@ghd.com

Lab deliverables

EDD format: ☐ GHD EQuIS EZEDD ☐ GHD EQuIS 4-File ☐ Other (Please Specify)

Report level requested: ☑ Level III ☐ Level IV ☐ Other (Please Specify)

Additional reporting requirements

Form 1s include: ☑ MDLs ☑ PQLs ☑ J Values

TICs: ☐ Yes ☑ No

Soil reporting: ☑ Dry ☐ Wet

Lab deliverables distribution

Rush TAT data (email deliverable only)	Wells Richard, Kathy Shaw, Mary Cameron
Final EDD and result summary (PDF)	edds@ghd.com
Final lab report	Wells Richard, Kathy Shaw, Mary Cameron, Mansa Oriaku

GHD data review level

☐ Stage 1 ☑ Stage 2a ☐ Stage 2b

☐ Stage 4 ☑ Stage 4/2b ☐ Other (Please Specify)

Data management deliverables

☐ EQuIS Database ☐ Cross Tab Table ☐ Flat File ☑ Database ☐ Other (please specify) EDAT

Data management deliverables distribution

Distribution list: Wells Richard, Kathy Shaw, Mary Cameron

Database exports - reporting down to MDL ☐ Yes ☐ No

Comments

Please see below for shipping information to the Eurofins Denver Lab
Eurofins Denver
4955 Yarrow St, Arvada, CO 80002

Attn Anthony Grimaldi

* additional Final Lab Report copy (in PDF format) is available in the GHD Project File folder. Please contact Project Chemist.

SSOW email distribution list	wells.richard@ghd.com; jason.davis@ghd.com; Alice.Harpole@ghd.com; tamara.burkamper@sgs.com; Sarah.Belanger@ghd.com; Kathleen.Shaw@ghd.com; mary.cameron@ghd.com; Jennifer.Devonshire@ghd.com					
Prepared by	Kathy Shaw	Date		Revision number	2	Revision Date	May 10, 2023

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Client Services
Pace Analytical National
12065 Lebanon Rd
Mt. Juliet TN 37122

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10654728
Sample Receipt Date: 05/25/2023
Client Project #: L1619390 WG2065801
Client Sub PO #: L1619390
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kongmeng Vang, your Pace Project Manager.

This report has been reviewed by:

June 16, 2023

Kongmeng Vang, Project Manager
(612) 607-6382
(612) 607-6444 (fax)
kongmeng.vang@pacelabs.com

Report Prepared Date:
June 15, 2023

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on three samples submitted by a representative of Pace Analytical National. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount, and the sensitivity was verified by signal-to-noise measurements. The quantitation limits, adjusted for sample extraction amount, may be somewhat higher or lower than the reporting limits provided in this report. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 38-99%. Except for two low values, which were flagged "R" on the results tables, the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations above the calibration range were flagged "E" and should also be regarded as estimates.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to be free of PCDDs and PCDFs at the reporting limits.

A laboratory spike sample was also prepared with each sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 86-109%. These results were within the target ranges for the method. Matrix spikes were prepared with the sample batches using sample materials from separate projects; results from these analyses will be provided upon request.

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Missouri	10100
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska-DW	MN00064	Nevada	MN00064
Alaska-UST	17-009	New Hampshire	2081
Arizona	AZ0014	New Jersey	MN002
Arkansas - WW	88-0680	New York	11647
Arkansas-DW	MN00064	North Carolina-	27700
California	2929	North Carolina-	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio-DW	41244
Florida	E87605	Ohio-VAP (170	CL101
Georgia	959	Ohio-VAP (180	CL110
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon-Primary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Report No.....10655587

Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
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www.pacelabs.com

Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

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WO# : 10654728

10654728

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — **Required Client Information:**

Company:	Pace Analytical
Address:	12065 Lebanon Rd.
	Mt. Juliet, TN 37122
Email:	MTJLSuboutTeam@pacelabs.com
Phone:	(615) 773-9756 Fax: (615) 758-5859
Requested Due Date:	1-Jun

Section B — **Required Project Information:**

Report To:	Pace Analytical Subout Team
Copy To:	
Purchase Order #:	L1619390
Project Name:	San Jacinto Waste Pits S. Impoundment
Project #:	

Section C — **Invoice Information:**

Attention:	Jackie Brewster
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	Kongmeng Vang
Pace Profile #:	38076

Regulatory Agency

State / Location: MN 55414, MN 55414

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Dioxins and Furans 1613	Residual Chlorine (Y/N)	
1	12599404-042423-S-NE-RELEASE-1	SL				24-Apr	11:20		1	1									X		001
2	12599404-042423-S-NE-RELEASE-2	SL				24-Apr	14:20		1	1									X		002
3	12599404-042423-S-NE-RELEASE-3	SL				24-Apr	16:50		1	1									X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Angela Ford	24-May	11:28	PACE	5.25.23	850	0.9	4	4	4
Pace Analytical Batch: WG2065801										
Pace Analytical SDGs: L1619390										
Location: Minneapolis, MN 55414										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:			
SIGNATURE of SAMPLER:		DATE Signed:	

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

DC#_Title: ENV-FRM-MIN4-0150 v13_Sample Condition Upon Receipt (SCUR)
Effective Date: 4/14/2023

Sample Condition Upon Receipt

Client Name: PACE NATIONALS

Project #: **WO#: 10654728**

PM: KV **Due Date: 06/19/23**
CLIENT: ESC_TN

Courier: ☒ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 6491 5472 8006 ☐ See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☒ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 01339252/1710 **Type of Ice:** ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☒ No ☐ N/A

Temp should be above freezing to 6 °C **Cooler temp Read w/Temp Blank:** 0.9 °C

Correction Factor: TBUG **Cooler Temp Corrected w/temp blank:** 0.9 °C

Average Corrected Temp (no temp blank only): ____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☒ N/A, water sample/other: Soil)

Date/Initials of Person Examining Contents: 5.25.23 CM2

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☒ Yes ☐ No pmn 5/25/23

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☐ Minneapolis ☐ Virginia				**COMMENTS**
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☒ No	☐ N/A	3. 5.25.23 CM7
Samples Arrived within Hold Time?	☒ Yes	☐ No		4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other ____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Sample Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No	☐ N/A	8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☒ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	☒ Yes	☐ No		11. **If no, write ID/Date/Time of container below:** ☐ See Exceptions ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	☐ Yes	☐ No	☒ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 **pH Paper Lot #**
				Residual Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes	☐ No	☒ N/A	13.
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
3 Trip Blanks Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): ____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager Review: [signature] **Date:** 5/26/23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: CM7 **Line:** 2

	DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist
Pace ANALYTICAL SERVICES	Effective Date: 08/19/2022

USDA Regulated Soil Checklist

To be Completed by Sample Receiving:

WO: 10654728 **Date:** 5/25/23 **Initials:** PMM

Sample Origin (check one): ☑ DOMESTIC ☒ QUARANTINED KV 5/26/23 ☐ FOREIGN

NOTE: Soil samples from Hawaii, Guam, Puerto Rico, and the US Virgin Islands are Foreign originated.

If **DOMESTIC**, circle state of origin: AL AR AZ CA FL GA LA MS NC NM NY OK OR SC TN (TX) VA

Includes: IFA, SOD, Golden Nematode, Karnal Bunt, and Witchweed List County: San Jacinto

(USDA Permit/Compliance Agreement authorizes movement of samples from these domestic regulated zones)

If **QUARANTINED**, circle state of origin: CA ID NY TX

Includes: Fruit Fly and Pale Cyst Nematode List County: _____

(Movement is not authorized for Pale Cyst Nematode (ID)—remaining quarantines require additional paperwork)

If **FOREIGN**, list country of origin: _____

(Movement from some Canadian Provinces is not allowed. Refer to ENV-FRM-MIN4-0137 *Regulated Soil Flow Chart*)

REQUIREMENT	ACTION	COMPLETED		
PPQ-530 Paperwork must be included for any samples from counties with a Fruit Fly Quarantine in CA, NY, and TX. Reference ENV-SOP-MIN4-0095.	Scan PPQ-530 to the corresponding Project folder on the X:drive. If PPQ-530 is not present, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)
Samples from ID may not be moved from the quarantined region. Reference ENV-SOP-MIN4-0095.	If samples originated in a quarantined zone, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)

REQUIREMENT	ACTION	COMPLETED		
"Special Handling" stickers are to be placed on all samples.	Did "special handling" stickers get placed on all sample containers?	(YES)	NO	N/A
Samples must be segregated and stored in designated bins, shelves, and coolers.	Were samples placed in a designated cooler, containers, and shelves?	(YES)	NO	N/A
Samples must be double contained to prevent accidental release.	Were there any signs of breakage or leakage (check for broken glass and/or loose soil in the cooler)? *NOTE: If NO, ice and melt water can be disposed of by normal process (ex: down the drain).*	YES	(NO)	N/A
	If **YES**, were ice and melt water separated from the cooler and disposed of properly?	YES	NO	(N/A)
	Any broken glass and/or loose soil are to be bagged and placed in a USDA Regulated satellite container or active drum (see Waste Coordinator). **Ice and melt water should be baked at a temperature range of 121-154°F for 2 hours and then cooled before going down the drain.**			
Equipment and supplies that have come into contact samples must be decontaminated.	Was the cooler(s) and/or countertop(s) decontaminated using either a fresh 10% bleach solution or 70% ethanol? (Gloves and other lab supplies will be bagged and placed in the USDA Regulated satellite container or active drum).	(YES)	NO	

COMMENTS:

Pace ANALYTICAL SERVICES	**DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist**
	Effective Date: 08/19/2022

To be Completed by Project Management (PM and/or PC):

Sample analysis will be conducted (circle all that apply): MN Subcontract Lab

If **subcontract**, list lab(s): _____

REQUIREMENT	ACTION	COMPLETED		
Permission to ship untreated soil must be on file prior to shipping to any subcontract lab, including IR Pace Labs.	Go to: *S:\CLIENTSVR\10_Client Services Department Documents\Regulated Soils Permits\Permission to Ship* If permission to ship letter is not there, contact the laboratory's designated USDA permit holder.	YES	NO	N/A
Shipment must include a valid copy of the receiving lab's permit as well as permission to ship letter.	Is a copy of all needed paperwork included with the COC? **Do NOT ship samples until all necessary paperwork is compiled.**	YES	NO	N/A

COMMENTS:

PM Signature: _____ **Date:** 5/26/23

Qualtrax ID: 52751

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Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

H2 = Extracted outside of holding time

I = Isotope ratio out of specification

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-1		
Lab Sample ID	10654728001		
Filename	L230610A_18		
Injected By	CVS		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	2.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	04/24/2023 11:20
ICAL ID	L230610	Received	05/25/2023 08:50
CCal Filename(s)	L230610A_06	Extracted	06/02/2023 15:12
Method Blank ID	BLANK-106604	Analyzed	06/10/2023 23:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	7.6	-----	1.0		2,3,7,8-TCDF-13C	2.00	84	
Total TCDF	13	-----	1.0		2,3,7,8-TCDD-13C	2.00	38	
					1,2,3,7,8-PeCDF-13C	2.00	99	
2,3,7,8-TCDD	2.0	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	98	
Total TCDD	3.6	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97	
					1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	91	
Total PeCDF	7.1	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	97	
					1,2,3,4,7,8-HxCDD-13C	2.00	82	
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	68	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76	
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	77	
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	76	
2,3,4,6,7,8-HxCDF	ND	-----	5.0					
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	34	R
1,2,3,6,7,8-HxCDD	ND	-----	5.0					
1,2,3,7,8,9-HxCDD	ND	-----	5.0					
Total HxCDD	19	-----	5.0					
1,2,3,4,6,7,8-HpCDF	8.6	-----	5.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 5.4 ng/Kg			
Total HpCDF	19	-----	5.0		(Lower-bound - Using 2005 WHO Factors)			
1,2,3,4,6,7,8-HpCDD	66	-----	5.0					
Total HpCDD	220	-----	5.0					
OCDF	19	-----	10					
OCDD	6200	-----	10	E				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-2		
Lab Sample ID	10654728002		
Filename	L230610A_19		
Injected By	CVS		
Total Amount Extracted	10.1 g	Matrix	Solid
% Moisture	2.2	Dilution	NA
Dry Weight Extracted	9.89 g	Collected	04/24/2023 14:20
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 00:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.2	-----	1.0		2,3,7,8-TCDF-13C	2.00	82
Total TCDF	12	-----	1.0		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	-----	2.0	1.0	I	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	7.0	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	-----	5.0				
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	5.0				
1,2,3,7,8,9-HxCDD	ND	-----	5.0				
Total HxCDD	23	-----	5.0				
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 6.1 ng/Kg		
Total HpCDF	18	-----	5.0		(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	85	-----	5.0				
Total HpCDD	270	-----	5.0				
OCDF	21	-----	10				
OCDD	8200	-----	10	E			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = Exceeds calibration range
I = Isotope ratio out of specification

REPORT OF LABORATORY ANALYSIS

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Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-3		
Lab Sample ID	10654728003		
Filename	L230610A_20		
Injected By	CVS		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	2.1	Dilution	NA
Dry Weight Extracted	9.97 g	Collected	04/24/2023 16:50
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.5	-----	1.0	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	11	-----	1.0	2,3,7,8-TCDD-13C	2.00	62
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	2.0	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	3.2	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	6.6	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	67
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	21	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.6	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 5.3 ng/Kg		
Total HpCDF	16	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	70	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	6100	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

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Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTO		
Lab Sample ID	BLANK-106604	Matrix	Solid
Filename	U230608A_04	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	06/02/2023 15:12
ICAL ID	U230524	Analyzed	06/08/2023 04:57
CCal Filename(s)	U230608A_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	47
				1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	95
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	88
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	89
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	39
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

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Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTS		
Lab Sample ID	BLANK-106615	Matrix	Solid
Filename	U230608B_10	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	06/05/2023 14:25
ICAL ID	U230524	Analyzed	06/09/2023 04:58
CCal Filename(s)	U230608B_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	66
				1,2,3,7,8-PeCDF-13C	2.00	89
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	94
				1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106605		
Filename	U230608A_02	Matrix	Solid
Total Amount Extracted	10.2 g	Dilution	NA
ICAL ID	U230524	Extracted	06/02/2023 15:12
CCal Filename	U230608A_01	Analyzed	06/08/2023 03:25
Method Blank ID	BLANK-106604	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.	
2,3,7,8-TCDF	10	9.7	7.5	15.8	97	
2,3,7,8-TCDD	10	9.6	6.7	15.8	96	
1,2,3,7,8-PeCDF	50	48	40.0	67.0	95	
2,3,4,7,8-PeCDF	50	48	34.0	80.0	96	
1,2,3,7,8-PeCDD	50	43	35.0	71.0	86	
1,2,3,4,7,8-HxCDF	50	47	36.0	67.0	95	
1,2,3,6,7,8-HxCDF	50	49	42.0	65.0	98	
2,3,4,6,7,8-HxCDF	50	48	35.0	78.0	96	
1,2,3,7,8,9-HxCDF	50	51	39.0	65.0	102	
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	102	
1,2,3,6,7,8-HxCDD	50	47	38.0	67.0	94	
1,2,3,7,8,9-HxCDD	50	50	32.0	81.0	101	
1,2,3,4,6,7,8-HpCDF	50	49	41.0	61.0	97	
1,2,3,4,7,8,9-HpCDF	50	51	39.0	69.0	102	
1,2,3,4,6,7,8-HpCDD	50	43	35.0	70.0	87	
OCDF	100	100	63.0	170.0	100	
OCDD	100	100	78.0	144.0	101	
2,3,7,8-TCDD-37Cl4	10	2.7	3.1	19.1	27	R
2,3,7,8-TCDF-13C	100	82	22.0	152.0	82	
2,3,7,8-TCDD-13C	100	33	20.0	175.0	33	
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89	
2,3,4,7,8-PeCDF-13C	100	93	13.0	328.0	93	
1,2,3,7,8-PeCDD-13C	100	100	21.0	227.0	101	
1,2,3,4,7,8-HxCDF-13C	100	94	19.0	202.0	94	
1,2,3,6,7,8-HxCDF-13C	100	94	21.0	159.0	94	
2,3,4,6,7,8-HxCDF-13C	100	88	22.0	176.0	88	
1,2,3,7,8,9-HxCDF-13C	100	80	17.0	205.0	80	
1,2,3,4,7,8-HxCDD-13C	100	80	21.0	193.0	80	
1,2,3,6,7,8-HxCDD-13C	100	94	25.0	163.0	94	
1,2,3,4,6,7,8-HpCDF-13C	100	65	21.0	158.0	65	
1,2,3,4,7,8,9-HpCDF-13C	100	57	20.0	186.0	57	
1,2,3,4,6,7,8-HpCDD-13C	100	70	26.0	166.0	70	
OCDD-13C	200	100	26.0	397.0	52	

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106616		
Filename	U230608B_06	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	U230524	Extracted	06/05/2023 14:25
CCal Filename	U230608B_01	Analyzed	06/09/2023 01:53
Method Blank ID	BLANK-106615	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	106
2,3,7,8-TCDD	10	11	6.7	15.8	107
1,2,3,7,8-PeCDF	50	52	40.0	67.0	103
2,3,4,7,8-PeCDF	50	53	34.0	80.0	107
1,2,3,7,8-PeCDD	50	48	35.0	71.0	95
1,2,3,4,7,8-HxCDF	50	51	36.0	67.0	102
1,2,3,6,7,8-HxCDF	50	54	42.0	65.0	109
2,3,4,6,7,8-HxCDF	50	50	35.0	78.0	100
1,2,3,7,8,9-HxCDF	50	54	39.0	65.0	108
1,2,3,4,7,8-HxCDD	50	53	35.0	82.0	106
1,2,3,6,7,8-HxCDD	50	52	38.0	67.0	103
1,2,3,7,8,9-HxCDD	50	53	32.0	81.0	106
1,2,3,4,6,7,8-HpCDF	50	53	41.0	61.0	105
1,2,3,4,7,8,9-HpCDF	50	50	39.0	69.0	100
1,2,3,4,6,7,8-HpCDD	50	48	35.0	70.0	96
OCDF	100	110	63.0	170.0	108
OCDD	100	110	78.0	144.0	109
2,3,7,8-TCDD-37Cl4	10	5.7	3.1	19.1	57
2,3,7,8-TCDF-13C	100	72	22.0	152.0	72
2,3,7,8-TCDD-13C	100	65	20.0	175.0	65
1,2,3,7,8-PeCDF-13C	100	79	21.0	192.0	79
2,3,4,7,8-PeCDF-13C	100	81	13.0	328.0	81
1,2,3,7,8-PeCDD-13C	100	84	21.0	227.0	84
1,2,3,4,7,8-HxCDF-13C	100	78	19.0	202.0	78
1,2,3,6,7,8-HxCDF-13C	100	76	21.0	159.0	76
2,3,4,6,7,8-HxCDF-13C	100	74	22.0	176.0	74
1,2,3,7,8,9-HxCDF-13C	100	69	17.0	205.0	69
1,2,3,4,7,8-HxCDD-13C	100	66	21.0	193.0	66
1,2,3,6,7,8-HxCDD-13C	100	75	25.0	163.0	75
1,2,3,4,6,7,8-HpCDF-13C	100	51	21.0	158.0	51
1,2,3,4,7,8,9-HpCDF-13C	100	48	20.0	186.0	48
1,2,3,4,6,7,8-HpCDD-13C	100	53	26.0	166.0	53
OCDD-13C	200	82	26.0	397.0	41

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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www.pacelabs.com

Report Prepared for:

Client Services
Pace Analytical National
12065 Lebanon Rd

Mt. Juliet TN 37122

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Prepared Date:
July 3, 2023

Report Information:

Pace Project #: 10654728
Sample Receipt Date: 05/25/2023
Client Project #: L1619390 WG2065801
Client Sub PO #: L1619390
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 4 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kongmeng Vang, your Pace Project Manager.

This report has been reviewed by:

July 03, 2023

Kongmeng Vang, Project Manager
(612) 607-6382
(612) 607-6444 (fax)
kongmeng.vang@pacelabs.com

Report of Laboratory Analysis

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The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on three samples submitted by a representative of Pace Analytical National. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount, and the sensitivity was verified by signal-to-noise measurements. The quantitation limits, adjusted for sample extraction amount, may be somewhat higher or lower than the reporting limits provided in this report. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 38-99%. Except for two low values, which were flagged "R" on the results tables, the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations above the calibration range were flagged "E" and should also be regarded as estimates.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to be free of PCDDs and PCDFs at the reporting limits.

A laboratory spike sample was also prepared with each sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 86-109%. These results were within the target ranges for the method. Matrix spikes were prepared with the sample batches using sample materials from separate projects; results from these analyses will be provided upon request.

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Missouri	10100
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska-DW	MN00064	Nevada	MN00064
Alaska-UST	17-009	New Hampshire	2081
Arizona	AZ0014	New Jersey	MN002
Arkansas - WW	88-0680	New York	11647
Arkansas-DW	MN00064	North Carolina-	27700
California	2929	North Carolina-	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio-DW	41244
Florida	E87605	Ohio-VAP (170	CL101
Georgia	959	Ohio-VAP (180	CL110
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon-Primary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Report No.....10654728

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Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

H2 = Extracted outside of holding time

I = Isotope ratio out of specification

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

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2,3,7,8-TCDD Equivalency Factors (TEFs) for the Polychlorinated Dibenzo-p-dioxins and Dibenzofurans

WHO2005 Factors

Compound	TEF
2,3,7,8-TCDD	1.000000
1,2,3,7,8-PeCDD	1.000000
1,2,3,4,7,8-HxCDD	0.100000
1,2,3,6,7,8-HxCDD	0.100000
1,2,3,7,8,9-HxCDD	0.100000
1,2,3,4,6,7,8-HpCDD	0.010000
OCDD	0.000300
Total TCDD	0.000000
Total PeCDD	0.000000
Total HxCDD	0.000000
Total HpCDD	0.000000
2,3,7,8-TCDF	0.100000
1,2,3,7,8-PeCDF	0.030000
2,3,4,7,8-PeCDF	0.300000
1,2,3,4,7,8-HxCDF	0.100000
1,2,3,6,7,8-HxCDF	0.100000
2,3,4,6,7,8-HxCDF	0.100000
1,2,3,7,8,9-HxCDF	0.100000
1,2,3,4,6,7,8-HpCDF	0.010000
1,2,3,4,7,8,9-HpCDF	0.010000
OCDF	0.000300
Total TCDF	0.000000
Total PeCDF	0.000000
Total HxCDF	0.000000
Total HpCDF	0.000000

REPORT OF LABORATORY ANALYSIS

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Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
12599404-042423-S-NE-RELEASE-1	10654728001	05/25/2023	Solid
12599404-042423-S-NE-RELEASE-2	10654728002	05/25/2023	Solid
12599404-042423-S-NE-RELEASE-3	10654728003	05/25/2023	Solid

REPORT OF LABORATORY ANALYSIS

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WO# : 10654728

10654728

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Pace Analytical
Address:	12065 Lebanon Rd.
	Mt. Juliet, TN 37122
Email:	MTJLSuboutTeam@pacelabs.com
Phone:	(615) 773-9756 Fax: (615) 758-5859
Requested Due Date:	1-Jun

Section B — Required Project Information:

Report To:	Pace Analytical Subout Team
Copy To:	
Purchase Order #:	L1619390
Project Name:	San Jacinto Waste Pits S. Impoundment
Project #:	

Section C — Invoice Information:

Attention:	Jackie Brewster
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	Kongmeng Vang
Pace Profile #:	38076

Regulatory Agency:

State / Location: MN 55414, MN 55414

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Dioxins and Furans 1613	Residual Chlorine (Y/N)	
1	12599404-042423-S-NE-RELEASE-1	SL				24-Apr	11:20		1	1									X		001
2	12599404-042423-S-NE-RELEASE-2	SL				24-Apr	14:20		1	1									X		002
3	12599404-042423-S-NE-RELEASE-3	SL				24-Apr	16:50		1	1									X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Angela Ford	24-May	11:28	PACE	5.25.23	850	0.9	Y	Y	Y
Pace Analytical Batch: WG2065801										
Pace Analytical SDGs: L1619390										
Location: Minneapolis, MN 55414										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

DC#_Title: ENV-FRM-MIN4-0150 v13_Sample Condition Upon Receipt (SCUR)
Effective Date: 4/14/2023

Sample Condition Upon Receipt

Client Name: PACE NATIONALS

Project #: **WO#: 10654728**

PM: KV **Due Date: 06/19/23**

CLIENT: ESC_TN

Courier: [X] FedEx [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial

Tracking Number: 6491 5472 8006 [ ] See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? [X] Yes [ ] No **Seals Intact?** [X] Yes [ ] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [ ] Other **Temp Blank?** [X] Yes [ ] No

Thermometer: [ ] T1 (0461) [ ] T2 (0436) [X] T3 (0459) [ ] T4 (0402) [ ] T5 (0178) [ ] T6 (0235) [ ] T7 (0042) [ ] T8 (0775) [ ] T9(0727) [ ] 01339252/1710 **Type of Ice:** [X] Wet [ ] Blue [ ] Dry [ ] None [ ] Melted

Did Samples Originate in West Virginia? [ ] Yes [X] No **Were All Container Temps Taken?** [ ] Yes [X] No [ ] N/A

Temp should be above freezing to 6 °C **Cooler temp Read w/Temp Blank:** 0.9 °C

Correction Factor: TRUE **Cooler Temp Corrected w/temp blank:** 0.9 °C

Average Corrected Temp (no temp blank only): ____ °C [ ] See Exceptions ENV-FRM-MIN4-0142 [ ] 1 Container

USDA Regulated Soil: ([X] N/A, water sample/other: Soil)

Date/Initials of Person Examining Contents: 5.25.23 CM2

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? [X] Yes [ ] No PMM 5/25/23

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [X] No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): [ ] Duluth [ ] Minneapolis [ ] Virginia

				COMMENTS
Chain of Custody Present and Filled Out?	[X] Yes	[ ] No		1.
Chain of Custody Relinquished?	[X] Yes	[ ] No		2.
Sampler Name and/or Signature on COC?	[ ] Yes	[X] No	[ ] N/A	3. 5.25.23 CM7
Samples Arrived within Hold Time?	[X] Yes	[ ] No		4. If fecal: [ ] <8 hrs [ ] >8 hr, <24 [ ] No
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No		5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E.coli [ ] BOD/cBOD [ ] Hex Chrom [ ] Turbidity [ ] Nitrate [ ] Nitrite [ ] Orthophos [ ] Other ____
Rush Turn Around Time Requested?	[ ] Yes	[X] No		6.
Sufficient Sample Volume?	[X] Yes	[ ] No		7.
Correct Containers Used?	[X] Yes	[ ] No	[ ] N/A	8.
-Pace Containers Used?	[X] Yes	[ ] No		
Containers Intact?	[X] Yes	[ ] No		9.
Field Filtered Volume Received for Dissolved Tests?	[ ] Yes	[X] No	[ ] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [ ] No
Is sufficient information available to reconcile the samples to the COC?	[X] Yes	[ ] No		11. **If no, write ID/Date/Time of container below:** [ ] See Exceptions ENV-FRM-MIN4-0142
Matrix: [ ] Water [X] Soil [ ] Oil [ ] Other				
All containers needing acid/base preservation have been checked?	[ ] Yes	[ ] No	[X] N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	[ ] Yes	[ ] No	[X] N/A	[ ] NaOH [ ] HNO3 [ ] H2SO4 [ ] Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	[ ] Yes	[ ] No	[X] N/A	Positive for Residual Chlorine? [ ] Yes [ ] No [ ] See Exceptions ENV-FRM-MIN4-0142
				pH Paper Lot #
				Residual Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	[ ] Yes	[ ] No	[X] N/A	13.
Extra labels present on soil VOA or WIDRO containers?	[ ] Yes	[ ] No	[X] N/A	14. [ ] See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	[ ] Yes	[ ] No	[X] N/A	
3 Trip Blanks Present?	[ ] Yes	[ ] No	[X] N/A	15.
Trip Blank Custody Seals Present?	[ ] Yes	[ ] No	[X] N/A	Pace Trip Blank Lot # (if purchased): ____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager Review: [signature] **Date:** 5/26/23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: CM7 **Line:** 2

	DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist
Pace ANALYTICAL SERVICES	**Effective Date: 08/19/2022**

USDA Regulated Soil Checklist

To be Completed by Sample Receiving:

WO: 10654728 **Date:** 5/25/23 **Initials:** PMM

Sample Origin (check one): ☑ DOMESTIC ☒ QUARANTINED KV 5/26/23 ☐ FOREIGN

NOTE: Soil samples from Hawaii, Guam, Puerto Rico, and the US Virgin Islands are Foreign originated.

If **DOMESTIC**, circle state of origin: AL AR AZ CA FL GA LA MS NC NM NY OK OR SC TN (TX) VA

Includes: IFA, SOD, Golden Nematode, Karnal Bunt, and Witchweed List County: San Jacinto

(USDA Permit/Compliance Agreement authorizes movement of samples from these domestic regulated zones)

If **QUARANTINED**, circle state of origin: CA ID NY TX

Includes: Fruit Fly and Pale Cyst Nematode List County: _____

(Movement is not authorized for Pale Cyst Nematode (ID)—remaining quarantines require additional paperwork)

If **FOREIGN**, list country of origin: _____

(Movement from some Canadian Provinces is not allowed. Refer to ENV-FRM-MIN4-0137 *Regulated Soil Flow Chart*)

REQUIREMENT	ACTION	COMPLETED		
PPQ-530 Paperwork must be included for any samples from counties with a Fruit Fly Quarantine in CA, NY, and TX. Reference ENV-SOP-MIN4-0095.	Scan PPQ-530 to the corresponding Project folder on the X:drive. If PPQ-530 is not present, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)
Samples from ID may not be moved from the quarantined region. Reference ENV-SOP-MIN4-0095.	If samples originated in a quarantined zone, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)

REQUIREMENT	ACTION	COMPLETED		
"Special Handling" stickers are to be placed on all samples.	Did "special handling" stickers get placed on all sample containers?	(YES)	NO	N/A
Samples must be segregated and stored in designated bins, shelves, and coolers.	Were samples placed in a designated cooler, containers, and shelves?	(YES)	NO	N/A
Samples must be double contained to prevent accidental release.	Were there any signs of breakage or leakage (check for broken glass and/or loose soil in the cooler)? *NOTE: If NO, ice and melt water can be disposed of by normal process (ex: down the drain).*	YES	(NO)	N/A
	If **YES**, were ice and melt water separated from the cooler and disposed of properly?	YES	NO	(N/A)
	Any broken glass and/or loose soil are to be bagged and placed in a USDA Regulated satellite container or active drum (see Waste Coordinator). **Ice and melt water should be baked at a temperature range of 121-154°F for 2 hours and then cooled before going down the drain.**			
Equipment and supplies that have come into contact samples must be decontaminated.	Was the cooler(s) and/or countertop(s) decontaminated using either a fresh 10% bleach solution or 70% ethanol? (Gloves and other lab supplies will be bagged and placed in the USDA Regulated satellite container or active drum).	(YES)	NO	

COMMENTS:

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist
	Effective Date: 08/19/2022

To be Completed by Project Management (PM and/or PC):

Sample analysis will be conducted (circle all that apply): MN Subcontract Lab

If **subcontract**, list lab(s): _____

REQUIREMENT	ACTION	COMPLETED		
Permission to ship untreated soil must be on file prior to shipping to any subcontract lab, including IR Pace Labs.	Go to: *S:\CLIENTSVR\10_Client Services Department Documents\Regulated Soils Permits\Permission to Ship* If permission to ship letter is not there, contact the laboratory's designated USDA permit holder.	YES	NO	N/A
Shipment must include a valid copy of the receiving lab's permit as well as permission to ship letter.	Is a copy of all needed paperwork included with the COC? **Do NOT ship samples until all necessary paperwork is compiled.**	YES	NO	N/A

COMMENTS:

_____

PM Signature: _____ **Date:** 5/26/23

Dioxin Solid Soxhlet EB-35531

EB-35531

Extract Solvents:

Extraction On (Date/Time): 06/02/23 15:12

QC Matrix Lot #: Sand 211540/WIPES **Toluene Lot #** EG735-US

Time of Spiking: 06/02/23 14:12 **Hexane Lot #**

Extraction Off (Date/Time): 06/03/23 08:30

Balance: 10BALO **MeCl Lot #**

Standards	Name/ID	Amount	Initial	Witness	Expiration Date	Dispenser
Internal Std.	FL-I-21266-220	100	JEF	EGM	05/26/24	Q763
Native	FL-N-21266-200	50	JEF	EGM	03/30/24	Q763
Cl37 Std.	DWCL4-21266-213	50	MF		05/02/24	Q763
Recovery	FL-R-21266-211	10	CBS		04/28/04	Q763
Tridecane	A0424714	10	CBS			Q763
Others						

#	Sample ID	Internal Standards	Native Standards	Extracted mL or g	Glassware Set	Location	Comments
1	BLANK-106604	x		10.7			
2	LCS-106605	x	x	10.2			
3	10654789002-MS2	x	x	6.1		10-C16-074	
4	10654789002-MSD2	x	x	6.0		10-C16-074	
5	10654789002	x		6.0		10-C16-074	
6	10654728001	x		10.3		10-C16-346	
7	10655466001	x		12.1		10-C29-512	
8	10655466002	x		12.2		10-C29-512	
9	10655466003	x		11.6		10-C29-512	
10	10655466004	x		11.7		10-C29-512	
11	10655466005	x		12.1		10-C29-512	
12	10655466006	x		12.3		10-C29-512	
13	10655466007	x		12.5		10-C29-512	
14	10655466008	x		11.7		10-C29-512	
15	10655466009	x		10.7		10-C29-512	
16	10655467001	x		12.8		10-C29-512	
17	10655467002	x		11.4		10-C29-512	
18	10654637001	x		1.0		10-C16-071	
19	10654638001	x		1.0		10-C16-071	
20	10654632001	x		1.1		10-C16-071	
21	10654633001	x		1.0		10-C16-071	
22	10654634001	x		1.1		10-C16-071	
23	10654635001	x		1.1		10-C16-071	
24	10654636001	x		1.1		10-C16-071	

Relinquished By: C Received By: Date:

Batch Notes:

Silica		Alumina		Carbon		Florisil	
Initials	CBS/CW1	Initials	CBS/CW1	Initials	CBS/CW1	Initials	
Date	6/5/2023	Date	6/5/2023	Date	6/5/2023	Date	
Neutral Batch	760	Alumina Lot #	33XX	Hexane Lot #	EG312-US	Florisil Lot #	
Basic Batch	836	Hexane Lot #	EG312-US	Dispenser	Q771	Hexane Lot #	
Acid Batch	962	Dispenser	Q771	50% Batch		Dispenser	
Hexane Lot #	EG312-US	60% Batch	2025	Dispenser		6% Batch	
Dispenser	Q771	Dispenser	Q899	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	225553
Base Batch	

MK in training 6/5/23

Dioxin Solid Soxhlet EB-35536

EB-35536

Extract Solvents:

Extraction On (Date/Time): 06/05/23 14:25

QC Matrix Lot #: Sand 211540/WIPES **Toluene Lot #** EG735-US

Time of Spiking: 06/05/23 13:25 **Hexane Lot #**

Extraction Off (Date/Time): 06/06/23 07:00

Balance: 10BALO **MeCl Lot #**

Standards	Name/ID	Amount	Initial	Witness	Expiration Date	Dispenser
Internal Std.	FL-I-21266-220	100	JEF	EGM	05/26/24	Q763
Native	FL-N-21266-200	50	JEF	EGM	03/30/24	Q763
Cl37 Std.	DWCL4-21266-213	50	CW1		05/02/24	Q763
Recovery	FL-R-21266-211	10	MF		06/07/24	Q763
Tridecane	A0424714	10	MF			Q763
Others						

#	Sample ID	Internal Standards	Native Standards	Extracted mL or g	Glassware Set	Location	Comments
1	BLANK-106615	x		10.3			
2	LCS-106616	x	x	10.3			
3	10655587012-MS	x	x	11.9			
4	10655587012-MSD	x	x	12.1			
5	10655587012	x		11.9		10-C16-101	
6	10655587020	x		11.8		10-C16-103	
7	10655587022	x		10.6		10-C16-103	
8	10655587023	x		10.6		10-C16-101	
9	60427877001-R	x		4.3		10-C16-101	
10	10654728002	x		10.1		10-C16-346	
11	10654728003	x		10.2		10-C16-346	
12	10655564001	x		10.6		10-C16-108	
13	10655564002	x		12.0		10-C16-108	
14	10655420001	x		15.2		10-C16-347	
15	10655422001	x		15.1		10-C16-095	
16	10655422002	x		14.1		10-C16-095	
17	10655422003	x		12.1		10-C16-095	
18	10655422004	x		14.3		10-C16-095	
19	10655423001	x		10.6		10-C16-347	
20	10655423002	x		10.5		10-C16-347	
21	10655423003	x		10.4		10-C16-347	
22	10655423004	x		10.4		10-C16-347	
23	10655423005	x		10.5		10-C16-347	
24	10655423006	x		10.3		10-C16-347	

Relinquished By: M Felea Received By: S Hannan Date: 6/8/2023

Batch Notes:

Silica		Alumina		Carbon		Florisil	
Initials	CW1/CBS	Initials	CW1/CBS	Initials	CW1/CBS	Initials	
Date	6/7/2023	Date	6/7/2023	Date	6/7/2023	Date	
Neutral Batch	760	Alumina Lot #	33XX	Hexane Lot #	EG312-US	Florisil Lot #	
Basic Batch	836	Hexane Lot #	EG312-US	Dispenser	Q899	Hexane Lot #	
Acid Batch	962	Dispenser	Q899	50% Batch		Dispenser	
Hexane Lot #	EG312-US	60% Batch	2026	Dispenser		6% Batch	
Dispenser	Q899	Dispenser	Q771	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	225553
Base Batch	

MK in training 6/6/23

Silica		Alumina		Carbon		Florisil	
Initials	CBS	Initials	CBS	Initials	CBS	Initials	
Date	6/12/2023	Date	6/12/2023	Date	6/12/2023	Date	
Neutral Batch	760	Alumina Lot #	33XX	Hexane Lot #	EG312-US	Florisil Lot #	
Basic Batch	836	Hexane Lot #	EG312-US	Dispenser	Q899	Hexane Lot #	
Acid Batch	962	Dispenser	Q899	50% Batch		Dispenser	
Hexane Lot #	EG312-US	60% Batch	2026	Dispenser		6% Batch	
Dispenser	Q899	Dispenser	Q771	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	
Base Batch	

Silica		Alumina		Carbon		Florisil	
Initials	CBS	Initials	CBS	Initials	CBS	Initials	
Date	6/21/2023	Date	6/21/2023	Date	6/21/2023	Date	
Neutral Batch	761	Alumina Lot #	33XX	Hexane Lot #	221554	Florisil Lot #	
Basic Batch	838	Hexane Lot #	221554	Dispenser	Q899	Hexane Lot #	
Acid Batch	964	Dispenser	Q899	50% Batch		Dispenser	
Hexane Lot #	221554	60% Batch	2026	Dispenser		6% Batch	
Dispenser	Q899	Dispenser	Q771	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	
Base Batch	

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Solid Sample Moisture Log

Sample ID	Container Weight	Wet Weight	Dry Weight	% Moisture	% Solids	Assayed
10654728001	1.2531	9.2376	9.0498	2.352	97.648	6/13/2023
10654728002	1.2391	9.8227	9.6314	2.2286	97.7714	6/14/2023
10654728003	1.2481	9.7581	9.5831	2.0564	97.9436	6/14/2023

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
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www.pacelabs.com

Client names have been blacked out on notebook pages in order to preserve client confidentiality

REPORT OF LABORATORY ANALYSIS

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Analysis Key Code List

- = Not used

✔ = Worked up

= See comment # below

Li = Liner, replace or clean

Ba = Baseplate, change

SyB = Syringe, replace – bent

SyP = Syringe, replace – plugged

SyO = Syringe, replace – other

IS = Injector Septum, replace

BS = Batch Septum, replace

Fi = Filament, replace

Co = Contacts, adjust

Ca = re-Calibrate

Tu = Tune

TC = Tune and Calibrate

CC () = Cut Column (length cut)

CO = Carry-Over possible

RRM = ReRun - Matrix

RRLM = ReRun – Lock Mass

RRBI = ReRun – Bad Injection

RRRT = ReRun – Retention Time shift

RR>S = Rerun – need better Sensitivity

Re = Re-extract

AS = Adjust Slits

LC = Leak Check

RB = Re-Boot system

CiS = Cleaned inner Source

CoS = Cleaned outer Source

AiS = Alternate inner Source

AoS = Alternate outer Source

<Y = Adjust Y focus down

>Y = Adjust Y focus up

Di () = Dilution needed (amount needed)

FE = Front End – liner, baseplate and septum

Sample List Report **MassLynx 4.2 SCN992** 10 MSHR15 6/10/23

Sample List: C:\MassLynx\PaceNew.PRO\SampleDB\L230610A.SPL
Last Modified: Saturday, June 10, 2023 15:54:18 Central Daylight Time
Printed: Sunday, June 11, 2023 09:14:31 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Stnd Exp.	Method	MS File	Inlet File	VIAL	VOL	Control
1	L230610A_01	Blank Nonane - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:2	1.000000	—
2	L230610A_02	CAL CS1-22-171-033 - CVS TC, col:US3225411H	240419	8290/1613B	dioxfurL	dioxfur	Tray1:4	1.000000	—
3	L230610A_03	CAL CS2-22-171-006 - CVS	231005	8290/1613B	dioxfurL	dioxfur	Tray1:3	1.000000	—
4	L230610A_04	CAL CS5-22-171-008 - CVS	231005	8290/1613B	dioxfurL	dioxfur	Tray1:5	1.000000	—
5	L230610A_05	CAL CS4-22-171-007 - CVS	231005	8290/1613B	dioxfurL	dioxfur	Tray1:6	1.000000	—
6	L230610A_06	CAL CS3/CPM-22-171-036 - CVS	240514	8290/1613B	dioxfurL	dioxfur	Tray1:1	1.000000	—
7	L230610A_07	Blank Nonane - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:2	1.000000	—
8	L230610A_08	CAL ICV-102062 - CVS	231025	8290/1613B	dioxfurL	dioxfur	Tray1:7	1.000000	—
9	L230610A_09	LCS LCS-106632 - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:57	1.000000	—
10	L230610A_10	LCS LCSD-106633 - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:58	1.000000	—
11	L230610A_11	Blank Nonane - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:2	1.000000	—
12	L230610A_12	Blank Blank-106631 - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:59	1.000000	— reshoot
13	L230610A_13	Samp 10652618001 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:60	1.000000	—
14	L230610A_14	Samp 10652618002 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:61	1.000000	—
15	L230610A_15	Samp 10653864001 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:62	1.000000	—
16	L230610A_16	Samp 10653866001 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:63	1.000000	—
17	L230610A_17	Samp 10654611002 - CVS [redacted] 6/14	—	1613B	dioxfurL	dioxfur	Tray1:64	1.000000	—
18	L230610A_18	Samp 10654728001 - CVS ESC	—	1613B	dioxfurL	dioxfur	Tray1:65	1.000000	—
19	L230610A_19	Samp 10654728002 - CVS ESC 6/14	—	1613B	dioxfurL	dioxfur	Tray1:66	1.000000	—
20	L230610A_20	Samp 10654728003 - CVS ESC	—	1613B	dioxfurL	dioxfur	Tray1:67	1.000000	—
21	L230610A_21	CAL CS3/CPM-22-171-036 - CVS	240514	8290/1613B	dioxfurL	dioxfur	Tray1:1	1.000000	— not needed

ver 6/11/23 JRH

JRH 6/11/23

Sample List Report **MassLynx 4.2 SCN992** 10MSHR06 5/24/23

Sample List: C:\MassLynx\Default.pro\Sampledb\U230524B.SPL
Last Modified: Wednesday, May 24, 2023 17:13:16 Central Daylight Time
Printed: Wednesday, May 24, 2023 17:13:27 Central Daylight Time

Page Position (1, 1)

	File Name	File Text		Stnd Exp	Method	MS File	Inlet File	Vial	Vol	Control
1	U230524B_01	BLANK NONANE - AH5 FECC2"		---	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000	---
2	U230524B_02	CAL CS3/CPM-22-171-034 - CVS TC	11:09	240427	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---
3	U230524B_03	CAL CS2-22-171-006 - AH5		231005	8290/1613B	dioxfur	dioxfur	Tray1:4	1.000000	---
4	U230524B_04	CAL CS1-22-171-033 - AH5		240419	8290/1613B	dioxfur	dioxfur	Tray1:5	1.000000	---
5	U230524B_05	CAL CS5-22-171-008 - AH5		231005	8290/1613B	dioxfur	dioxfur	Tray1:6	1.000000	---
6	U230524B_06	CAL CS4-22-171-007 - AH5		231005	8290/1613B	dioxfur	dioxfur	Tray1:7	1.000000	---
7	U230524B_07	BLANK NONANE - AH5		---	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000	---
8	U230524B_08	CAL ICV-102062		231025	8290/1613B	dioxfur	dioxfur	Tray1:8	1.000000	---
9	U230524B_09	LCS LCS-106163 - CVS		---	8290/1613B	dioxfur	dioxfur	Tray1:9	1.000000	---
10	U230524B_10	Samp 10651870005-MS - CVS[redacted]	5/25	---	8290	dioxfur	dioxfur	Tray1:10	1.000000	---
11	U230524B_11	Samp 10651870005-MSD - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:11	1.000000	---
12	U230524B_12	Blank Nonane - CVS		---	8290	dioxfur	dioxfur	Tray1:2	1.000000	---
13	U230524B_13	Samp 10651870005 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:12	1.000000	---
14	U230524B_14	Samp 10651870001 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:13	1.000000	---
15	U230524B_15	Samp 10651870002 - CVS[redacted]	5/25	---	8290	dioxfur	dioxfur	Tray1:14	1.000000	---
16	U230524B_16	Samp 10651870003 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:15	1.000000	---
17	U230524B_17	Samp 10651870004 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:16	1.000000	---
18	U230524B_18	Samp 20276478001 - CVS[redacted]		---	1613TD	dioxfur	dioxfur	Tray1:30	1.000000	---
19	U230524B_19	CAL CS3/CPM-22-171-034 - CVS		240427	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---

Ver 05/25/23

pass well

5/25/23

Sample List Report **MassLynx 4.2 SCN992** 10 MSHR 06 6/8/23

Sample List: C:\MassLynx\Default.pro\Sampledb\U230608A.SPL
Last Modified: Thursday, June 08, 2023 15:49:43 Central Daylight Time
Printed: Thursday, June 08, 2023 15:49:58 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Stnd Exp	Method	MS File	Inlet File	Vial	Vol	Control
1	U230608A_01	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---
2	U230608A_02	LCS LCS-106605 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:4	1.000000	---
3	U230608A_03	BLANK BLANK-105861-10X - SMT	---	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000	---
4	U230608A_04	BLANK BLANK-106604 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:5	1.000000	---
5	U230608A_05	SAMP 10653698007 - SMT [redacted]	---	1613B	dioxfur	dioxfur	Tray1:6	1.000000	---
6	U230608A_06	SAMP 10653661001 - SMT ESC	6/9	8290	dioxfur	dioxfur	Tray1:7	1.000000	---
7	U230608A_07	SAMP 10653661002 - SMT ESC	---	8290	dioxfur	dioxfur	Tray1:8	1.000000	---
8	U230608A_08	SAMP 10653661003 - SMT ESC	---	8290	dioxfur	dioxfur	Tray1:9	1.000000	---
9	U230608A_09	SAMP 10654051001 - SMT [redacted]	6/12	1613B	dioxfur	dioxfur	Tray1:10	1.000000	---
10	U230608A_10	SAMP 10654052001 - SMT [redacted]	6/12	1613B	dioxfur	dioxfur	Tray1:11	1.000000	---
11	U230608A_11	SAMP 10654054001 - SMT [redacted]	6/12	1613B	dioxfur	dioxfur	Tray1:12	1.000000	---
12	U230608A_12	SAMP 10654227001 - SMT ESC	6/13	8290	dioxfur	dioxfur	Tray1:13	1.000000	---
13	U230608A_13	SAMP 10654227002 - SMT ESC	---	8290	dioxfur	dioxfur	Tray1:14	1.000000	---
14	U230608A_14	SAMP 10654909001 - SMT [redacted]	6/12	8290	dioxfur	dioxfur	Tray1:15	1.000000	---
15	U230608A_15	SAMP 10654911001 - SMT [redacted]	---	8290	dioxfur	dioxfur	Tray1:16	1.000000	---
16	U230608A_16	SAMP 10654823001 - SMT [redacted]	---	1613B-TD	dioxfur	dioxfur	Tray1:17	1.000000	---
17	U230608A_17	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	--- empty
18	U230608A_18	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	--- pass all

6/9/23

Sample List Report **MassLynx 4.2 SCN992** 10MS HR 06 6/8/23

Sample List: C:\MassLynx\Default.pro\Sampledb\U230608B.SPL
Last Modified: Thursday, June 08, 2023 22:06:02 Central Daylight Time
Printed: Thursday, June 08, 2023 22:27:10 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Stnd Exp	Method	MS File	Inlet File	Vial	Vol	Control	
1	U230608B_01	CAL CS3/CPM-22-171-036 - SM TC	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---	pass ver
2	U230608B_02	LCS LCS-106589 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:15	1.000000	---	
3	U230608B_03	LCS LCSD-106590 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:16	1.000000	---	
4	U230608B_04	LCS LCS-106598 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:17	1.000000	---	
5	U230608B_05	LCS LCSD-106599 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:18	1.000000	---	
6	U230608B_06	LCS LCS-106616 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:19	1.000000	---	
7	U230608B_07	BLANK BLANK-105861-10X - SMT	---	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000	---	
8	U230608B_08	BLANK BLANK-106588 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:20	1.000000	---	
9	U230608B_09	BLANK BLANK-106597 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:21	1.000000	---	ver 6/9/23 sm
10	U230608B_10	BLANK BLANK-106615 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:22	1.000000	---	
11	U230608B_11	SAMP 10654093001 - SMT [redacted] 6/13	---	1613B	dioxfur	dioxfur	Tray1:23	1.000000	---	
12	U230608B_12	SAMP 10654093002 - SMT [redacted]	---	1613B	dioxfur	dioxfur	Tray1:24	1.000000	---	
13	U230608B_13	SAMP 10654093003 - SMT [redacted]	---	1613B	dioxfur	dioxfur	Tray1:25	1.000000	---	
14	U230608B_14	SAMP 10654087001 - SMT [redacted] 6/13	---	1613B	dioxfur	dioxfur	Tray1:26	1.000000	---	
15	U230608B_15	SAMP 10655307001 - SMT [redacted] 6/13	---	1613B	dioxfur	dioxfur	Tray1:27	1.000000	---	
16	U230608B_16	SAMP 10655343001 - SMT [redacted]	---	8290	dioxfur	dioxfur	Tray1:28	1.000000	---	
17	U230608B_17	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---	all

sm 6/9/23

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Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700
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Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-1		
Lab Sample ID	10654728001		
Filename	L230610A_18		
Injected By	CVS		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	2.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	04/24/2023 11:20
ICAL ID	L230610	Received	05/25/2023 08:50
CCal Filename(s)	L230610A_06	Extracted	06/02/2023 15:12
Method Blank ID	BLANK-106604	Analyzed	06/10/2023 23:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	7.6	-----	1.0		2,3,7,8-TCDF-13C	2.00	84	
Total TCDF	13	-----	1.0		2,3,7,8-TCDD-13C	2.00	38	
					1,2,3,7,8-PeCDF-13C	2.00	99	
2,3,7,8-TCDD	2.0	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	98	
Total TCDD	3.6	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97	
					1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	91	
Total PeCDF	7.1	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	97	
					1,2,3,4,7,8-HxCDD-13C	2.00	82	
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	68	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76	
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	77	
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	76	
2,3,4,6,7,8-HxCDF	ND	-----	5.0					
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	34	R
1,2,3,6,7,8-HxCDD	ND	-----	5.0					
1,2,3,7,8,9-HxCDD	ND	-----	5.0					
Total HxCDD	19	-----	5.0					
1,2,3,4,6,7,8-HpCDF	8.6	-----	5.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 5.4 ng/Kg			
Total HpCDF	19	-----	5.0		(Lower-bound - Using 2005 WHO Factors)			
1,2,3,4,6,7,8-HpCDD	66	-----	5.0					
Total HpCDD	220	-----	5.0					
OCDF	19	-----	10					
OCDD	6200	-----	10	E				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-2		
Lab Sample ID	10654728002		
Filename	L230610A_19		
Injected By	CVS		
Total Amount Extracted	10.1 g	Matrix	Solid
% Moisture	2.2	Dilution	NA
Dry Weight Extracted	9.89 g	Collected	04/24/2023 14:20
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 00:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.2	-----	1.0		2,3,7,8-TCDF-13C	2.00	82
Total TCDF	12	-----	1.0		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	-----	2.0	1.0	I	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	7.0	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	-----	5.0				
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	5.0				
1,2,3,7,8,9-HxCDD	ND	-----	5.0				
Total HxCDD	23	-----	5.0				
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 6.1 ng/Kg		
Total HpCDF	18	-----	5.0		(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	85	-----	5.0				
Total HpCDD	270	-----	5.0				
OCDF	21	-----	10				
OCDD	8200	-----	10	E			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = Exceeds calibration range
I = Isotope ratio out of specification

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-3		
Lab Sample ID	10654728003		
Filename	L230610A_20		
Injected By	CVS		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	2.1	Dilution	NA
Dry Weight Extracted	9.97 g	Collected	04/24/2023 16:50
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.5	-----	1.0	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	11	-----	1.0	2,3,7,8-TCDD-13C	2.00	62
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	2.0	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	3.2	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	6.6	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	67
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	21	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.6	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 5.3 ng/Kg		
Total HpCDF	16	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	70	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	6100	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

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Appendix C

QC and Calibration Results Summary

REPORT OF LABORATORY ANALYSIS

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Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTO		
Lab Sample ID	BLANK-106604	Matrix	Solid
Filename	U230608A_04	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	06/02/2023 15:12
ICAL ID	U230524	Analyzed	06/08/2023 04:57
CCal Filename(s)	U230608A_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	47
				1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	95
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	88
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	89
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	39
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTS		
Lab Sample ID	BLANK-106615	Matrix	Solid
Filename	U230608B_10	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	06/05/2023 14:25
ICAL ID	U230524	Analyzed	06/09/2023 04:58
CCal Filename(s)	U230608B_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	66
				1,2,3,7,8-PeCDF-13C	2.00	89
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	94
				1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106605		
Filename	U230608A_02	Matrix	Solid
Total Amount Extracted	10.2 g	Dilution	NA
ICAL ID	U230524	Extracted	06/02/2023 15:12
CCal Filename	U230608A_01	Analyzed	06/08/2023 03:25
Method Blank ID	BLANK-106604	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.	
2,3,7,8-TCDF	10	9.7	7.5	15.8	97	
2,3,7,8-TCDD	10	9.6	6.7	15.8	96	
1,2,3,7,8-PeCDF	50	48	40.0	67.0	95	
2,3,4,7,8-PeCDF	50	48	34.0	80.0	96	
1,2,3,7,8-PeCDD	50	43	35.0	71.0	86	
1,2,3,4,7,8-HxCDF	50	47	36.0	67.0	95	
1,2,3,6,7,8-HxCDF	50	49	42.0	65.0	98	
2,3,4,6,7,8-HxCDF	50	48	35.0	78.0	96	
1,2,3,7,8,9-HxCDF	50	51	39.0	65.0	102	
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	102	
1,2,3,6,7,8-HxCDD	50	47	38.0	67.0	94	
1,2,3,7,8,9-HxCDD	50	50	32.0	81.0	101	
1,2,3,4,6,7,8-HpCDF	50	49	41.0	61.0	97	
1,2,3,4,7,8,9-HpCDF	50	51	39.0	69.0	102	
1,2,3,4,6,7,8-HpCDD	50	43	35.0	70.0	87	
OCDF	100	100	63.0	170.0	100	
OCDD	100	100	78.0	144.0	101	
2,3,7,8-TCDD-37Cl4	10	2.7	3.1	19.1	27	R
2,3,7,8-TCDF-13C	100	82	22.0	152.0	82	
2,3,7,8-TCDD-13C	100	33	20.0	175.0	33	
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89	
2,3,4,7,8-PeCDF-13C	100	93	13.0	328.0	93	
1,2,3,7,8-PeCDD-13C	100	100	21.0	227.0	101	
1,2,3,4,7,8-HxCDF-13C	100	94	19.0	202.0	94	
1,2,3,6,7,8-HxCDF-13C	100	94	21.0	159.0	94	
2,3,4,6,7,8-HxCDF-13C	100	88	22.0	176.0	88	
1,2,3,7,8,9-HxCDF-13C	100	80	17.0	205.0	80	
1,2,3,4,7,8-HxCDD-13C	100	80	21.0	193.0	80	
1,2,3,6,7,8-HxCDD-13C	100	94	25.0	163.0	94	
1,2,3,4,6,7,8-HpCDF-13C	100	65	21.0	158.0	65	
1,2,3,4,7,8,9-HpCDF-13C	100	57	20.0	186.0	57	
1,2,3,4,6,7,8-HpCDD-13C	100	70	26.0	166.0	70	
OCDD-13C	200	100	26.0	397.0	52	

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106616		
Filename	U230608B_06	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	U230524	Extracted	06/05/2023 14:25
CCal Filename	U230608B_01	Analyzed	06/09/2023 01:53
Method Blank ID	BLANK-106615	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	106
2,3,7,8-TCDD	10	11	6.7	15.8	107
1,2,3,7,8-PeCDF	50	52	40.0	67.0	103
2,3,4,7,8-PeCDF	50	53	34.0	80.0	107
1,2,3,7,8-PeCDD	50	48	35.0	71.0	95
1,2,3,4,7,8-HxCDF	50	51	36.0	67.0	102
1,2,3,6,7,8-HxCDF	50	54	42.0	65.0	109
2,3,4,6,7,8-HxCDF	50	50	35.0	78.0	100
1,2,3,7,8,9-HxCDF	50	54	39.0	65.0	108
1,2,3,4,7,8-HxCDD	50	53	35.0	82.0	106
1,2,3,6,7,8-HxCDD	50	52	38.0	67.0	103
1,2,3,7,8,9-HxCDD	50	53	32.0	81.0	106
1,2,3,4,6,7,8-HpCDF	50	53	41.0	61.0	105
1,2,3,4,7,8,9-HpCDF	50	50	39.0	69.0	100
1,2,3,4,6,7,8-HpCDD	50	48	35.0	70.0	96
OCDF	100	110	63.0	170.0	108
OCDD	100	110	78.0	144.0	109
2,3,7,8-TCDD-37Cl4	10	5.7	3.1	19.1	57
2,3,7,8-TCDF-13C	100	72	22.0	152.0	72
2,3,7,8-TCDD-13C	100	65	20.0	175.0	65
1,2,3,7,8-PeCDF-13C	100	79	21.0	192.0	79
2,3,4,7,8-PeCDF-13C	100	81	13.0	328.0	81
1,2,3,7,8-PeCDD-13C	100	84	21.0	227.0	84
1,2,3,4,7,8-HxCDF-13C	100	78	19.0	202.0	78
1,2,3,6,7,8-HxCDF-13C	100	76	21.0	159.0	76
2,3,4,6,7,8-HxCDF-13C	100	74	22.0	176.0	74
1,2,3,7,8,9-HxCDF-13C	100	69	17.0	205.0	69
1,2,3,4,7,8-HxCDD-13C	100	66	21.0	193.0	66
1,2,3,6,7,8-HxCDD-13C	100	75	25.0	163.0	75
1,2,3,4,6,7,8-HpCDF-13C	100	51	21.0	158.0	51
1,2,3,4,7,8,9-HpCDF-13C	100	48	20.0	186.0	48
1,2,3,4,6,7,8-HpCDD-13C	100	53	26.0	166.0	53
OCDD-13C	200	82	26.0	397.0	41

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

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Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**L230610**	Data Files:		Time	Injected
Calibration Date	06/10/2023	CS-1	L230610A_02	11:31	CVS
Instrument	10MSHR15 (L)	CS-2	L230610A_03	12:14	CVS
Column Phase	DB-5MS 0.25mm	CS-3	L230610A_06	14:39	CVS
Column ID No.	US3225411H	CS-4	L230610A_05	13:53	CVS
		CS-5	L230610A_04	13:10	CVS

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.5047	0.5260	0.5492	0.5391	0.5620	0.5362	4.10
2,3,7,8-TCDD	0.6406	0.6418	0.6670	0.6707	0.6933	0.6627	3.32
1,2,3,7,8-PeCDF	0.5468	0.5421	0.5654	0.5785	0.5938	0.5653	3.82
2,3,4,7,8-PeCDF	0.5835	0.5747	0.6085	0.6290	0.6605	0.6112	5.70
1,2,3,7,8-PeCDD	0.5721	0.5592	0.5972	0.6002	0.6140	0.5886	3.79
1,2,3,4,7,8-HxCDF	0.6802	0.6939	0.7218	0.7556	0.7647	0.7233	5.12
1,2,3,6,7,8-HxCDF	0.7049	0.6924	0.7140	0.7491	0.7410	0.7203	3.34
2,3,4,6,7,8-HxCDF	0.7027	0.6923	0.7439	0.7806	0.7707	0.7380	5.36
1,2,3,7,8,9-HxCDF	0.6769	0.6584	0.6745	0.7233	0.7268	0.6920	4.49
1,2,3,4,7,8-HxCDD	0.5960	0.6102	0.6138	0.6562	0.6751	0.6303	5.34
1,2,3,6,7,8-HxCDD	0.5931	0.6191	0.6201	0.6575	0.6516	0.6283	4.20
1,2,3,7,8,9-HxCDD	0.5884	0.5702	0.6210	0.6206	0.6541	0.6108	5.32
1,2,3,4,6,7,8-HpCDF	0.9541	1.0105	0.9989	1.0629	1.0662	1.0185	4.62
1,2,3,4,7,8,9-HpCDF	0.9857	1.0216	1.0415	1.0528	1.0540	1.0311	2.77
1,2,3,4,6,7,8-HpCDD	0.8476	0.8974	0.9164	0.9497	0.9512	0.9125	4.69
OCDF	0.3642	0.3619	0.4437	0.4774	0.4829	0.4260	13.94
OCDD	0.6388	0.6414	0.7015	0.7217	0.7092	0.6825	5.77
Total PeCDF	0.5652	0.5584	0.5869	0.6037	0.6272	0.5883	4.79
Total HxCDF	0.6912	0.6842	0.7136	0.7522	0.7508	0.7184	4.47
Total HxCDD	0.5925	0.5998	0.6183	0.6447	0.6603	0.6231	4.65
Total HpCDF	0.9699	1.0160	1.0202	1.0579	1.0601	1.0248	3.60
2,3,7,8-TCDF-13C	0.8007	0.7840	0.7939	0.8142	0.8927	0.8171	5.35
2,3,7,8-TCDD-13C	1.1338	1.0593	1.1038	1.0946	1.2234	1.1230	5.53
2,3,7,8-TCDD-37Cl4	0.7885	0.7732	0.8611	0.8669	0.9898	0.8559	10.03
1,2,3,7,8-PeCDF-13C	0.4721	0.4373	0.4767	0.4676	0.5786	0.4865	11.05
2,3,4,7,8-PeCDF-13C	0.4625	0.4204	0.4548	0.4532	0.5665	0.4715	11.78
1,2,3,7,8-PeCDD-13C	0.5738	0.5263	0.5537	0.5652	0.7080	0.5854	12.10
1,2,3,4,7,8-HxCDF-13C	0.5606	0.6802	0.6139	0.6034	0.5785	0.6073	7.54
1,2,3,6,7,8-HxCDF-13C	0.6000	0.7189	0.6830	0.6543	0.6347	0.6582	6.90
2,3,4,6,7,8-HxCDF-13C	0.5758	0.6296	0.6120	0.5818	0.5897	0.5978	3.76
1,2,3,7,8,9-HxCDF-13C	0.4515	0.4447	0.4764	0.4341	0.4735	0.4560	4.03
1,2,3,4,7,8-HxCDD-13C	0.9152	0.9938	0.9530	0.9146	0.9094	0.9372	3.85
1,2,3,6,7,8-HxCDD-13C	0.9753	1.0425	1.0331	0.9946	0.9755	1.0042	3.17
1,2,3,4,6,7,8-HpCDF-13C	1.4020	1.4515	1.3988	1.3601	1.3817	1.3988	2.42
1,2,3,4,7,8,9-HpCDF-13C	0.9971	0.9272	0.9403	0.8763	0.9674	0.9416	4.81
1,2,3,4,6,7,8-HpCDD-13C	1.3523	1.3096	1.2664	1.1927	1.2699	1.2782	4.63
OCDD-13C	0.8985	0.8238	0.7557	0.6976	0.8849	0.8121	10.52

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Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**L230610**	Data Files:		Time	Injected
Calibration Date	06/10/2023	CS-1	L230610A_02	11:31	CVS
Instrument	10MSHR15 (L)	CS-2	L230610A_03	12:14	CVS
Column Phase	DB-5MS 0.25mm	CS-3	L230610A_06	14:39	CVS
Column ID No.	US3225411H	CS-4	L230610A_05	13:53	CVS
		CS-5	L230610A_04	13:10	CVS

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.79	0.74	0.69	0.74	0.74	0.65 - 0.89
2,3,7,8-TCDD	0.70	0.77	0.72	0.73	0.72	0.65 - 0.89
1,2,3,7,8-PeCDF	1.34	1.43	1.38	1.38	1.42	1.32 - 1.78
2,3,4,7,8-PeCDF	1.32	1.37	1.36	1.39	1.42	1.32 - 1.78
1,2,3,7,8-PeCDD	0.57	0.58	0.57	0.57	0.56	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.13	1.13	1.16	1.14	1.14	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.11	1.17	1.15	1.14	1.15	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.19	1.19	1.17	1.12	1.15	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.13	1.18	1.23	1.17	1.14	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.13	1.18	1.16	1.15	1.13	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.07	1.11	1.14	1.14	1.13	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.19	1.15	1.11	1.13	1.14	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.00	1.01	0.99	1.01	1.00	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	0.93	1.00	1.01	1.00	1.01	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.00	1.07	1.02	1.03	1.01	0.88 - 1.20
OCDF	0.83	0.83	0.84	0.82	0.83	0.76 - 1.02
OCDD	0.80	0.82	0.84	0.84	0.85	0.76 - 1.02
1,2,3,4-TCDD-13C	0.83	0.81	0.82	0.80	0.81	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.15	1.17	1.20	1.15	1.20	1.05 - 1.43
2,3,7,8-TCDF-13C	0.70	0.70	0.72	0.71	0.71	0.65 - 0.89
2,3,7,8-TCDD-13C	0.80	0.80	0.82	0.81	0.81	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.44	1.42	1.45	1.46	1.46	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.42	1.44	1.44	1.45	1.44	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.51	1.56	1.49	1.50	1.52	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.48	0.47	0.47	0.48	0.47	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.49	0.48	0.49	0.48	0.49	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.49	0.47	0.48	0.48	0.48	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.48	0.47	0.47	0.47	0.48	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.19	1.20	1.20	1.22	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.17	1.18	1.18	1.18	1.17	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.44	0.44	0.43	0.45	0.44	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.45	0.44	0.43	0.44	0.44	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.06	1.05	1.05	1.05	1.07	0.88 - 1.20
OCDD-13C	0.81	0.84	0.81	0.81	0.83	0.76 - 1.02

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Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**U230524**	Data Files:		Time	Injected
Calibration Date	05/24/2023	CS-1	U230524B_04	12:45	AH5
Instrument	10MSHR06 (U)	CS-2	U230524B_03	12:00	AH5
Column Phase	DB-5MS 0.25mm	CS-3	U230524B_02	11:09	CVS
Column ID No.	US1246423H	CS-4	U230524B_06	14:27	AH5
		CS-5	U230524B_05	13:43	AH5

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.9953	0.9137	0.9038	0.8826	0.8483	0.9087	6.00
2,3,7,8-TCDD	1.0770	0.9863	1.0142	0.9478	0.9152	0.9881	6.31
1,2,3,7,8-PeCDF	0.9276	0.9087	0.8553	0.8372	0.8655	0.8789	4.31
2,3,4,7,8-PeCDF	0.9938	0.9552	0.9167	0.9057	0.9490	0.9441	3.69
1,2,3,7,8-PeCDD	0.9704	0.9190	0.8966	0.8871	0.8749	0.9096	4.14
1,2,3,4,7,8-HxCDF	1.0868	1.1221	1.0566	1.0776	1.0391	1.0764	2.93
1,2,3,6,7,8-HxCDF	1.0126	1.1107	0.9960	1.0114	0.9981	1.0258	4.69
2,3,4,6,7,8-HxCDF	1.1834	1.0838	1.0786	1.0488	1.0529	1.0895	5.02
1,2,3,7,8,9-HxCDF	1.0617	1.0410	0.9654	0.9687	0.9559	0.9985	4.91
1,2,3,4,7,8-HxCDD	1.0422	0.9668	0.9220	0.9242	0.9125	0.9535	5.64
1,2,3,6,7,8-HxCDD	0.9897	0.9375	0.9173	0.9067	0.9322	0.9367	3.42
1,2,3,7,8,9-HxCDD	0.9340	0.9221	0.9902	0.8915	0.9250	0.9326	3.86
1,2,3,4,6,7,8-HpCDF	1.2734	1.2575	1.1881	1.2479	1.2594	1.2453	2.67
1,2,3,4,7,8,9-HpCDF	1.1862	1.2903	1.1526	1.2041	1.1918	1.2050	4.26
1,2,3,4,6,7,8-HpCDD	1.0950	1.1424	0.9866	1.0529	1.0262	1.0606	5.70
OCDF	0.9499	0.9382	0.8886	0.9323	0.9920	0.9402	3.95
OCDD	0.9807	0.9618	0.9212	0.9033	0.9407	0.9416	3.28
Total PeCDF	0.9607	0.9319	0.8860	0.8715	0.9072	0.9115	3.92
Total HxCDF	1.0861	1.0894	1.0241	1.0266	1.0115	1.0475	3.55
Total HxCDD	0.9886	0.9421	0.9432	0.9075	0.9232	0.9409	3.24
Total HpCDF	1.2298	1.2739	1.1704	1.2260	1.2256	1.2251	3.00
2,3,7,8-TCDF-13C	1.2317	1.2906	1.2368	1.3198	1.3355	1.2829	3.68
2,3,7,8-TCDD-13C	1.0599	1.0792	1.1090	1.1019	1.1575	1.1015	3.34
2,3,7,8-TCDD-37Cl4	1.1913	1.0866	1.0484	1.0386	1.0334	1.0797	6.09
1,2,3,7,8-PeCDF-13C	0.8274	0.8262	0.9790	0.9183	1.0968	0.9295	12.23
2,3,4,7,8-PeCDF-13C	0.8173	0.8398	0.9375	0.9089	0.9866	0.8980	7.76
1,2,3,7,8-PeCDD-13C	0.6145	0.6504	0.7342	0.6856	0.7459	0.6861	8.08
1,2,3,4,7,8-HxCDF-13C	0.9154	0.9649	0.8634	1.0046	1.0261	0.9549	6.94
1,2,3,6,7,8-HxCDF-13C	1.0657	1.0616	0.9992	1.1612	1.1568	1.0889	6.36
2,3,4,6,7,8-HxCDF-13C	0.9725	1.0130	0.9160	1.0591	1.0373	0.9996	5.67
1,2,3,7,8,9-HxCDF-13C	0.8320	0.8317	0.7930	0.9207	0.9069	0.8569	6.37
1,2,3,4,7,8-HxCDD-13C	0.8257	0.8471	0.8113	0.9098	0.9052	0.8598	5.28
1,2,3,6,7,8-HxCDD-13C	0.9499	1.0107	0.9494	1.0282	1.0063	0.9889	3.72
1,2,3,4,6,7,8-HpCDF-13C	1.1103	1.1509	1.0946	1.1824	1.1518	1.1380	3.10
1,2,3,4,7,8,9-HpCDF-13C	0.9095	0.8714	0.8484	0.9366	0.9403	0.9013	4.48
1,2,3,4,6,7,8-HpCDD-13C	0.9442	0.9478	0.9275	0.9576	0.9673	0.9489	1.58
OCDD-13C	0.7887	0.7484	0.6949	0.8624	0.8647	0.7918	9.28

REPORT OF LABORATORY ANALYSIS

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Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**U230524**	Data Files:		Time	Injected
Calibration Date	05/24/2023	CS-1	U230524B_04	12:45	AH5
Instrument	10MSHR06 (U)	CS-2	U230524B_03	12:00	AH5
Column Phase	DB-5MS 0.25mm	CS-3	U230524B_02	11:09	CVS
Column ID No.	US1246423H	CS-4	U230524B_06	14:27	AH5
		CS-5	U230524B_05	13:43	AH5

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.89	0.79	0.83	0.77	0.73	0.65 - 0.89
2,3,7,8-TCDD	0.82	0.75	0.75	0.78	0.76	0.65 - 0.89
1,2,3,7,8-PeCDF	1.48	1.57	1.51	1.55	1.51	1.32 - 1.78
2,3,4,7,8-PeCDF	1.57	1.55	1.45	1.52	1.50	1.32 - 1.78
1,2,3,7,8-PeCDD	0.69	0.60	0.61	0.62	0.62	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.24	1.27	1.24	1.24	1.27	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.27	1.15	1.28	1.21	1.26	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.27	1.22	1.23	1.24	1.20	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.11	1.21	1.29	1.26	1.26	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.32	1.21	1.23	1.21	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.17	1.27	1.25	1.21	1.22	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.07	1.30	1.22	1.19	1.21	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.03	1.04	1.01	1.02	1.03	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	1.04	0.99	1.01	1.07	1.05	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.04	1.03	1.05	1.04	1.05	0.88 - 1.20
OCDF	0.86	0.90	0.91	0.85	0.90	0.76 - 1.02
OCDD	0.82	0.87	0.88	0.89	0.91	0.76 - 1.02
1,2,3,4-TCDD-13C	0.77	0.79	0.81	0.80	0.79	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.22	1.24	1.25	1.19	1.22	1.05 - 1.43
2,3,7,8-TCDF-13C	0.78	0.76	0.76	0.77	0.77	0.65 - 0.89
2,3,7,8-TCDD-13C	0.78	0.78	0.78	0.77	0.77	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.56	1.51	1.46	1.50	1.52	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.47	1.52	1.55	1.49	1.53	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.51	1.54	1.51	1.57	1.53	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.52	0.51	0.53	0.53	0.52	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.52	0.52	0.50	0.52	0.50	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.51	0.52	0.52	0.53	0.52	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.52	0.54	0.51	0.52	0.52	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.26	1.23	1.27	1.25	1.25	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.22	1.23	1.26	1.22	1.23	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.45	0.45	0.46	0.45	0.45	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.44	0.46	0.47	0.47	0.45	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.03	1.07	1.04	1.02	1.06	0.88 - 1.20
OCDD-13C	0.88	0.90	0.93	0.88	0.84	0.76 - 1.02

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Labeled Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608A_01	Instrument ID	10MSHR06 (U)
Injected By	SMT	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
Labeled Compounds					
1,2,3,4-TCDD-13C	M/M+2	0.78	0.65 - 0.89	-----	-----
2,3,7,8-TCDD-13C	M/M+2	0.76	0.65 - 0.89	100.0	82 - 121
1,2,3,7,8-PeCDD-13C	M+2/M+4	1.56	1.32 - 1.78	117.1	62 - 160
1,2,3,4,7,8-HxCDD-13C	M+2/M+4	1.28	1.05 - 1.43	100.2	85 - 117
1,2,3,6,7,8-HxCDD-13C	M+2/M+4	1.26	1.05 - 1.43	102.0	85 - 118
1,2,3,7,8,9-HxCDD-13C	M+2/M+4	1.25	1.05 - 1.43	-----	-----
1,2,3,4,6,7,8-HpCDD-13C	M+2/M+4	1.06	0.88 - 1.20	85.2	72 - 138
OCDD-13C	M+2/M+4	0.87	0.76 - 1.02	165.5	96 - 415
2,3,7,8-TCDF-13C	M/M+2	0.76	0.65 - 0.89	100.9	71 - 140
1,2,3,7,8-PeCDF-13C	M+2/M+4	1.57	1.32 - 1.78	104.9	76 - 130
2,3,4,7,8-PeCDF-13C	M+2/M+4	1.55	1.32 - 1.78	117.1	77 - 130
1,2,3,4,7,8-HxCDF-13C	M/M+2	0.54	0.43 - 0.59	105.1	76 - 131
1,2,3,6,7,8-HxCDF-13C	M/M+2	0.53	0.43 - 0.59	105.5	70 - 143
2,3,4,6,7,8-HxCDF-13C	M/M+2	0.52	0.43 - 0.59	98.6	73 - 137
1,2,3,7,8,9-HxCDF-13C	M/M+2	0.51	0.43 - 0.59	100.6	74 - 135
1,2,3,4,6,7,8-HpCDF-13C	M/M+2	0.45	0.37 - 0.51	82.5	78 - 129
1,2,3,4,7,8,9-HpCDF-13C	M/M+2	0.46	0.37 - 0.51	81.6	77 - 129
Cleanup Standard					
2,3,7,8-TCDD-37Cl4	M+2/M+4	(4)		9.4	7.9 - 12.7

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

4. No ion abundance ratio; report concentration found.

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Native Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608A_01	Instrument ID	10MSHR06 (U)
Injected By	SMT	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
2,3,7,8-TCDD	M/M+2	0.79	0.65 - 0.89	10.1	7.8 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	0.61	0.52 - 0.70	49.6	39 - 65
1,2,3,4,7,8-HxCDD	M+2/M+4	1.22	1.05 - 1.43	48.1	39 - 64
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05 - 1.43	49.4	39 - 64
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05 - 1.43	51.6	41 - 61
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88 - 1.20	45.7	43 - 58
OCDD	M+2/M+4	0.92	0.76 - 1.02	97.4	79 - 126
2,3,7,8-TCDF	M/M+2	0.78	0.65 - 0.89	10.3	8.4 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32 - 1.78	51.1	41 - 60
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32 - 1.78	51.2	41 - 61
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05 - 1.43	51.9	45 - 56
1,2,3,6,7,8-HxCDF	M+2/M+4	1.21	1.05 - 1.43	50.7	44 - 57
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05 - 1.43	51.7	44 - 57
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05 - 1.43	51.5	45 - 56
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88 - 1.20	49.1	45 - 55
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88 - 1.20	50.0	43 - 58
OCDF	M+2/M+4	0.90	0.76 - 1.02	96.5	63 - 159

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Labeled Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608B_01	Instrument ID	10MSHR06 (U)
Injected By	SM	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
Labeled Compounds					
1,2,3,4-TCDD-13C	M/M+2	0.79	0.65 - 0.89	-----	-----
2,3,7,8-TCDD-13C	M/M+2	0.80	0.65 - 0.89	100.5	82 - 121
1,2,3,7,8-PeCDD-13C	M+2/M+4	1.58	1.32 - 1.78	96.7	62 - 160
1,2,3,4,7,8-HxCDD-13C	M+2/M+4	1.31	1.05 - 1.43	87.3	85 - 117
1,2,3,6,7,8-HxCDD-13C	M+2/M+4	1.25	1.05 - 1.43	99.2	85 - 118
1,2,3,7,8,9-HxCDD-13C	M+2/M+4	1.29	1.05 - 1.43	-----	-----
1,2,3,4,6,7,8-HpCDD-13C	M+2/M+4	1.08	0.88 - 1.20	89.4	72 - 138
OCDD-13C	M+2/M+4	0.87	0.76 - 1.02	170.4	96 - 415
2,3,7,8-TCDF-13C	M/M+2	0.77	0.65 - 0.89	105.7	71 - 140
1,2,3,7,8-PeCDF-13C	M+2/M+4	1.58	1.32 - 1.78	100.8	76 - 130
2,3,4,7,8-PeCDF-13C	M+2/M+4	1.46	1.32 - 1.78	100.2	77 - 130
1,2,3,4,7,8-HxCDF-13C	M/M+2	0.53	0.43 - 0.59	88.2	76 - 131
1,2,3,6,7,8-HxCDF-13C	M/M+2	0.52	0.43 - 0.59	97.8	70 - 143
2,3,4,6,7,8-HxCDF-13C	M/M+2	0.51	0.43 - 0.59	98.3	73 - 137
1,2,3,7,8,9-HxCDF-13C	M/M+2	0.52	0.43 - 0.59	101.7	74 - 135
1,2,3,4,6,7,8-HpCDF-13C	M/M+2	0.44	0.37 - 0.51	88.8	78 - 129
1,2,3,4,7,8,9-HpCDF-13C	M/M+2	0.48	0.37 - 0.51	86.9	77 - 129
Cleanup Standard					
2,3,7,8-TCDD-37Cl4	M+2/M+4	(4)		9.8	7.9 - 12.7

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

4. No ion abundance ratio; report concentration found.

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Native Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608B_01	Instrument ID	10MSHR06 (U)
Injected By	SM	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
2,3,7,8-TCDD	M/M+2	0.77	0.65 - 0.89	10.5	7.8 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	0.63	0.52 - 0.70	51.5	39 - 65
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05 - 1.43	49.1	39 - 64
1,2,3,6,7,8-HxCDD	M+2/M+4	1.19	1.05 - 1.43	50.6	39 - 64
1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05 - 1.43	56.2	41 - 61
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88 - 1.20	48.2	43 - 58
OCDD	M+2/M+4	0.87	0.76 - 1.02	98.8	79 - 126
2,3,7,8-TCDF	M/M+2	0.82	0.65 - 0.89	10.3	8.4 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32 - 1.78	49.7	41 - 60
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32 - 1.78	54.2	41 - 61
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05 - 1.43	53.1	45 - 56
1,2,3,6,7,8-HxCDF	M+2/M+4	1.18	1.05 - 1.43	54.0	44 - 57
2,3,4,6,7,8-HxCDF	M+2/M+4	1.16	1.05 - 1.43	51.9	44 - 57
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05 - 1.43	51.6	45 - 56
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88 - 1.20	48.3	45 - 55
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88 - 1.20	51.3	43 - 58
OCDF	M+2/M+4	0.90	0.76 - 1.02	102.8	63 - 159

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

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Appendix D

Sample Raw Data

REPORT OF LABORATORY ANALYSIS

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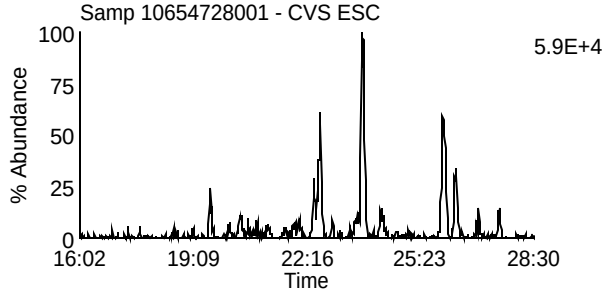
Homologue Group: Tetras

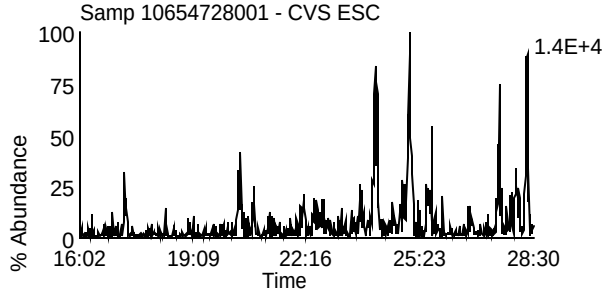
Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

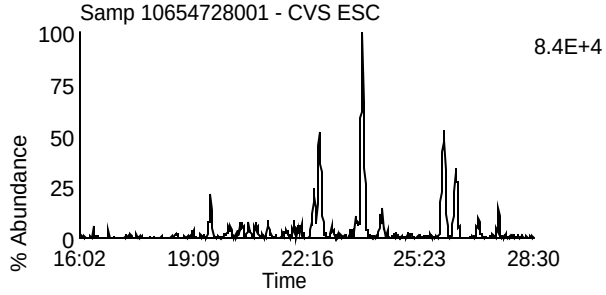
Data File: L230610A_18 G1 C1 - 303.9016
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C7 - 319.8965
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C2 - 305.8987
Samp 10654728001 - CVS ESC



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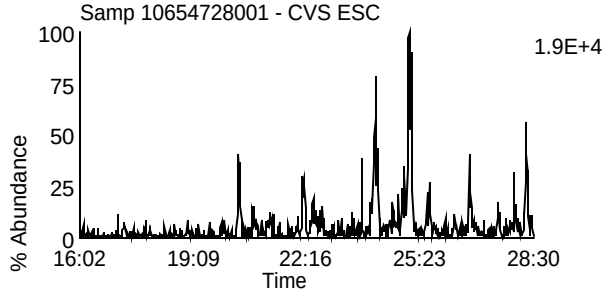
Samp 10654728001 - CVS ESC



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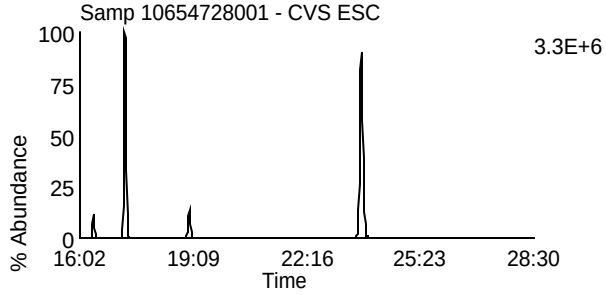
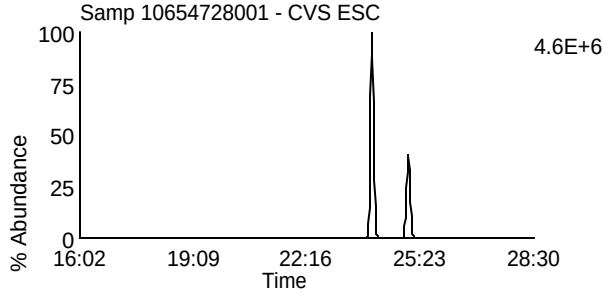
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C10 - 331.9367
Samp 10654728001 - CVS ESC



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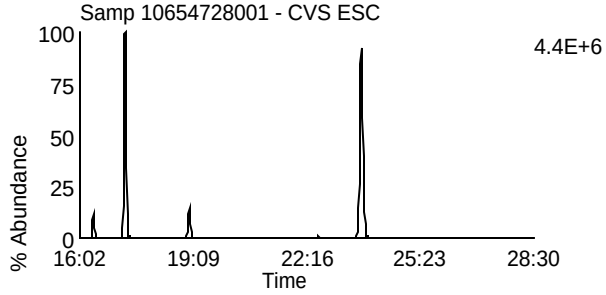
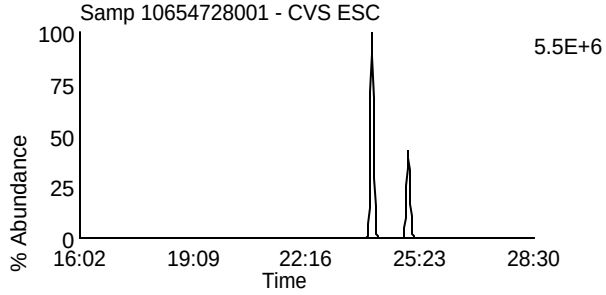
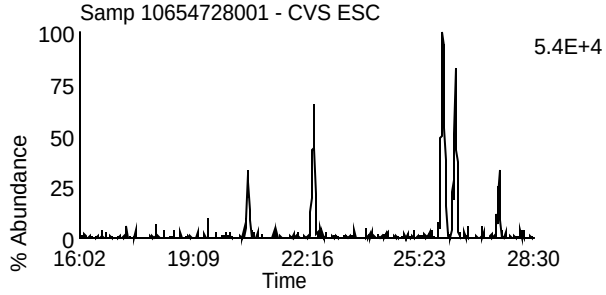
Samp 10654728001 - CVS ESC



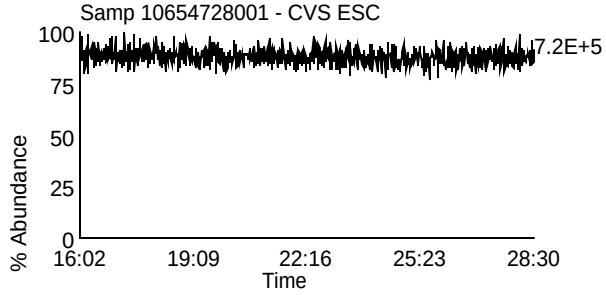
Data File: L230610A_18 G1 C11 - 333.9338
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C14 - 375.8364
Samp 10654728001 - CVS ESC

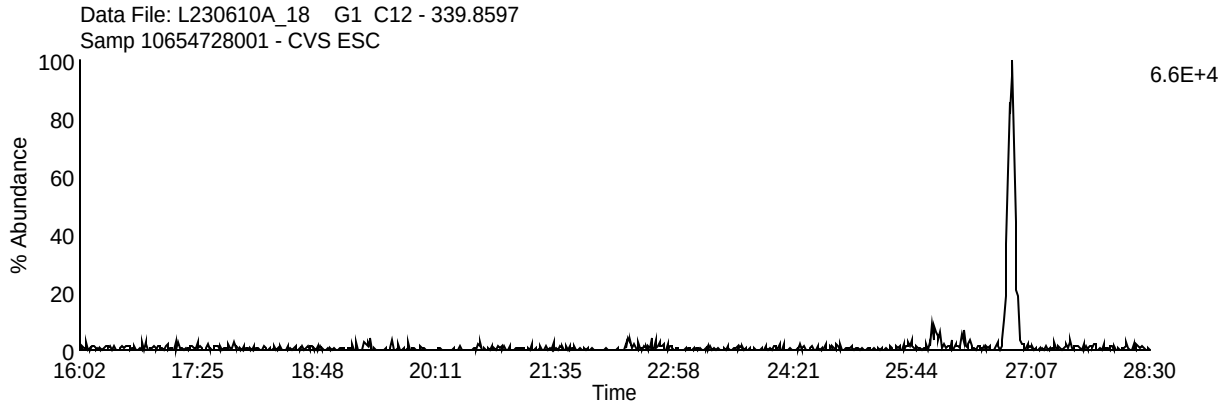


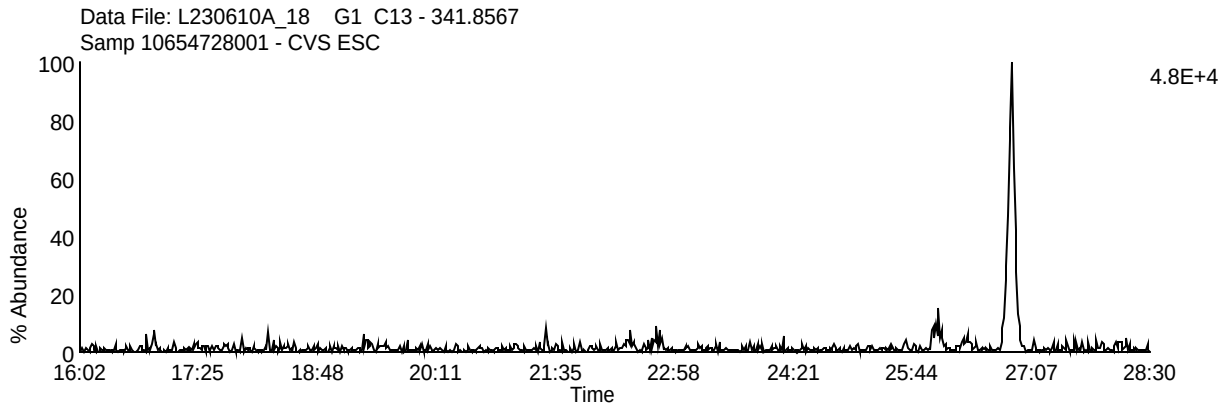
Data File: L230610A_18 G1 C5 - 318.9792
Samp 10654728001 - CVS ESC

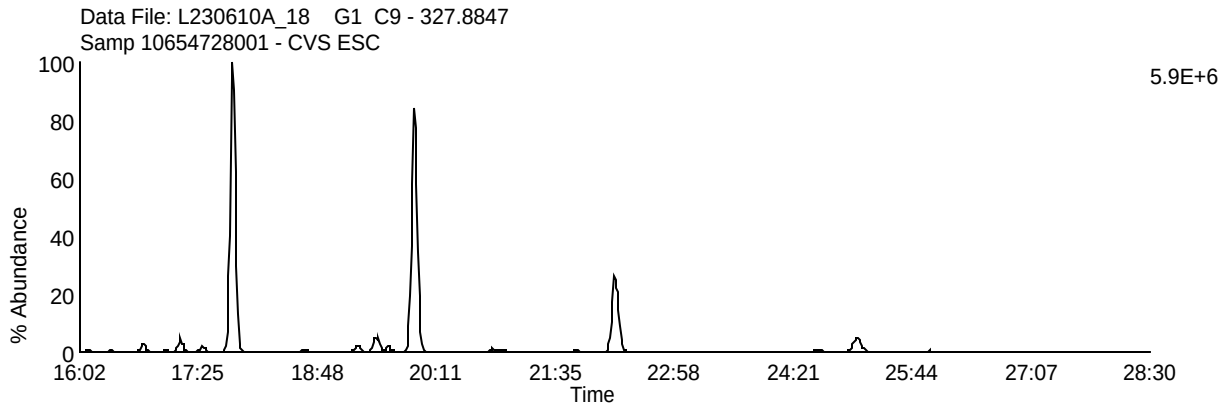


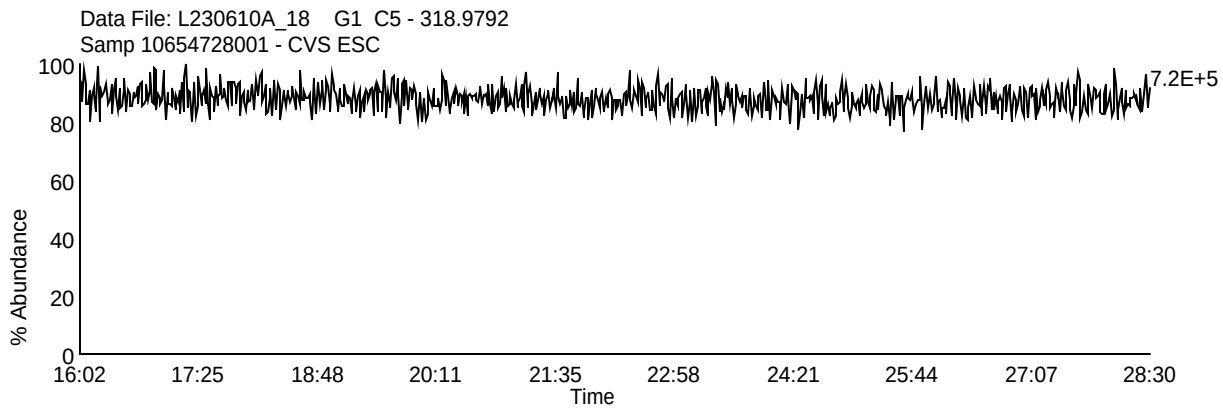
Homologue Group: Penta & Cleanup

Data File Name: L230610A_18
Lab Sample ID: 10654728001
Date Acquired: 6/10/2023
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Sample Description: Samp 10654728001 - CVS ESC
Instrument: 10MSHR15 (L)







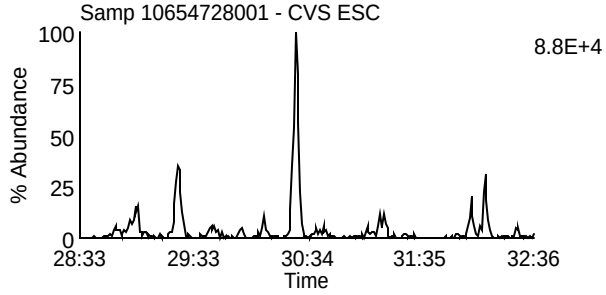


Homologue Group: Pentas

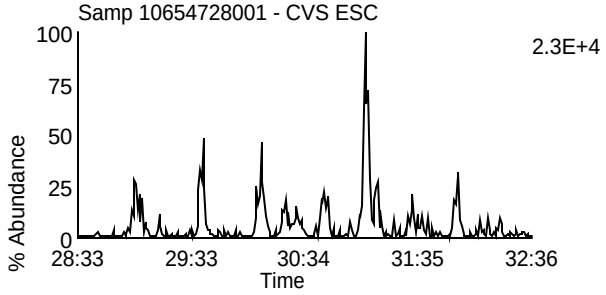
Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

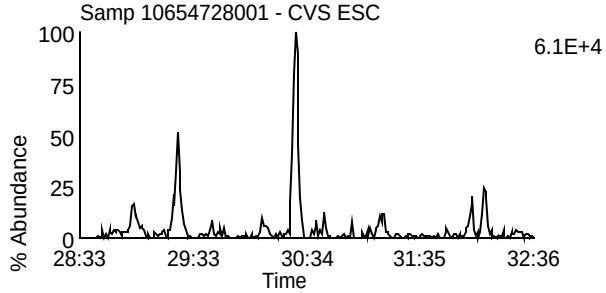
Data File: L230610A_18 G2 C1 - 339.8597
Samp 10654728001 - CVS ESC



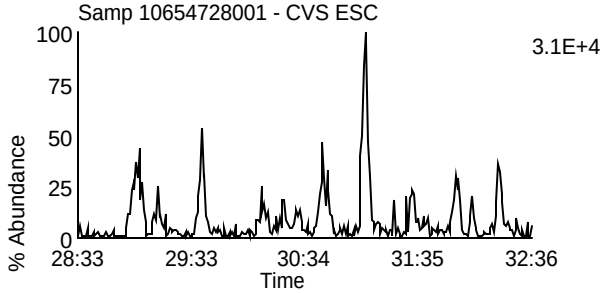
Data File: L230610A_18 G2 C4 - 353.8576
Samp 10654728001 - CVS ESC



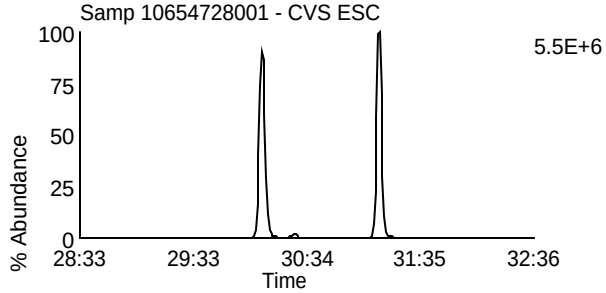
Data File: L230610A_18 G2 C2 - 341.8567
Samp 10654728001 - CVS ESC



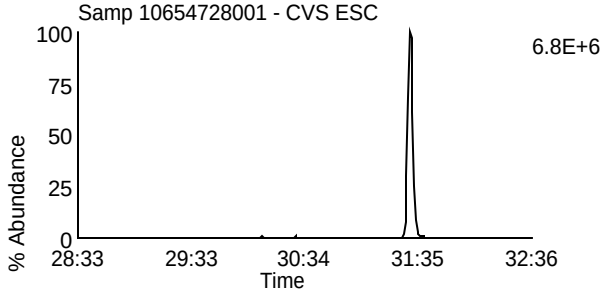
Data File: L230610A_18 G2 C8 - 355.8546
Samp 10654728001 - CVS ESC



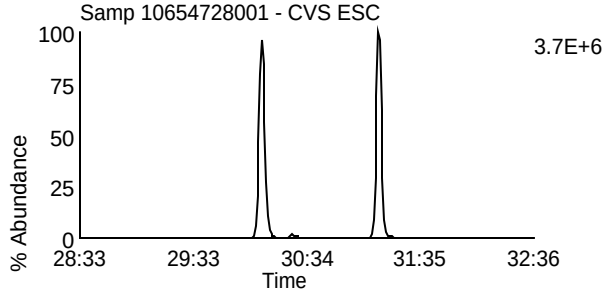
Data File: L230610A_18 G2 C3 - 351.8999
Samp 10654728001 - CVS ESC



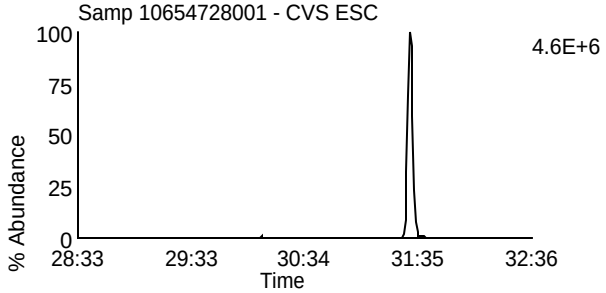
Data File: L230610A_18 G2 C10 - 367.8948
Samp 10654728001 - CVS ESC



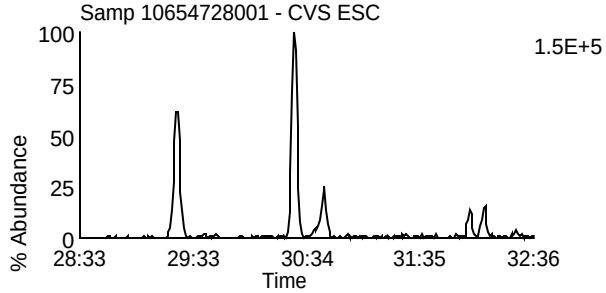
Data File: L230610A_18 G2 C5 - 353.8969
Samp 10654728001 - CVS ESC



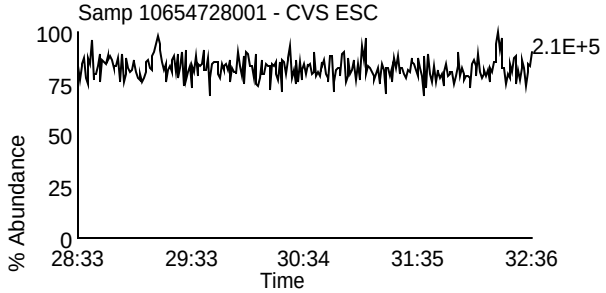
Data File: L230610A_18 G2 C11 - 369.8918
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G2 C12 - 409.7974
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G2 C6 - 354.9792
Samp 10654728001 - CVS ESC

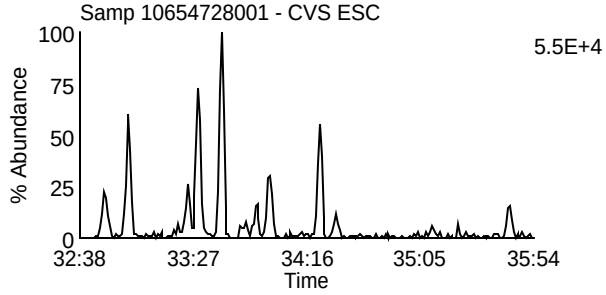


Homologue Group: Hexas

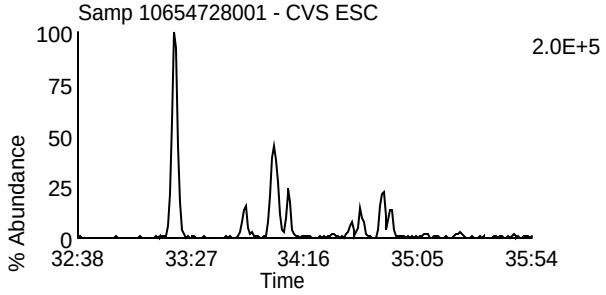
Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

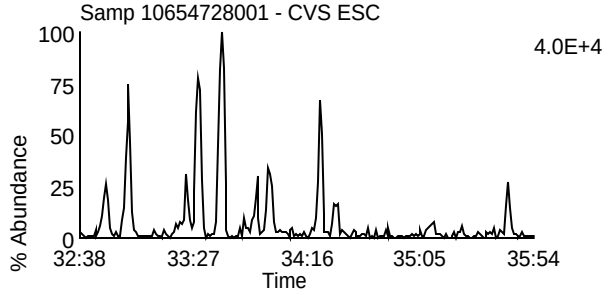
Data File: L230610A_18 G3 C1 - 373.8207
Samp 10654728001 - CVS ESC



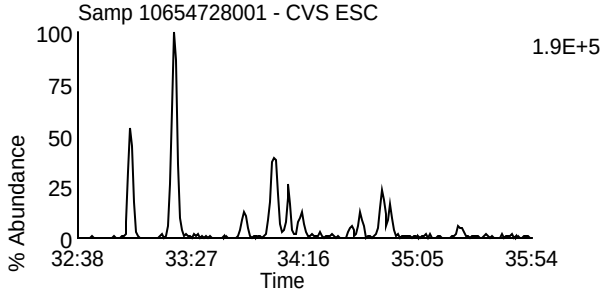
Data File: L230610A_18 G3 C7 - 389.8156
Samp 10654728001 - CVS ESC



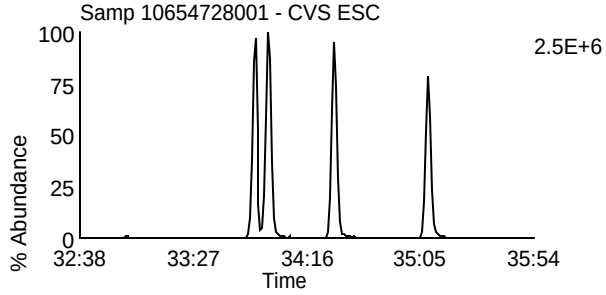
Data File: L230610A_18 G3 C2 - 375.8178
Samp 10654728001 - CVS ESC



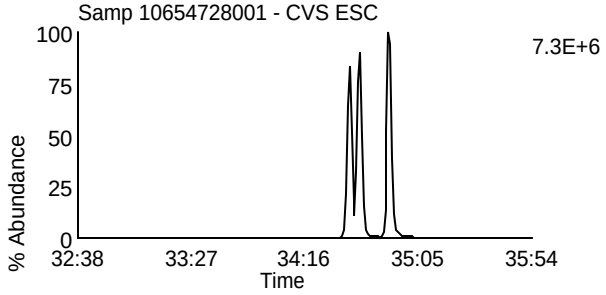
Data File: L230610A_18 G3 C8 - 391.8127
Samp 10654728001 - CVS ESC



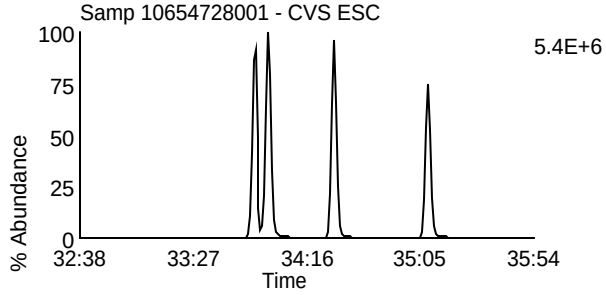
Data File: L230610A_18 G3 C5 - 383.8639
Samp 10654728001 - CVS ESC



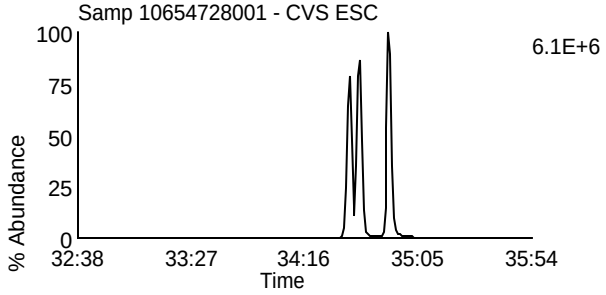
Data File: L230610A_18 G3 C9 - 401.8559
Samp 10654728001 - CVS ESC



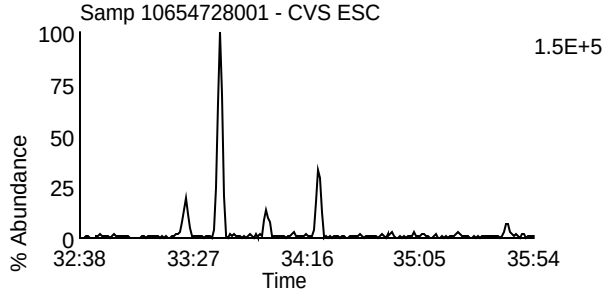
Data File: L230610A_18 G3 C6 - 385.861
Samp 10654728001 - CVS ESC



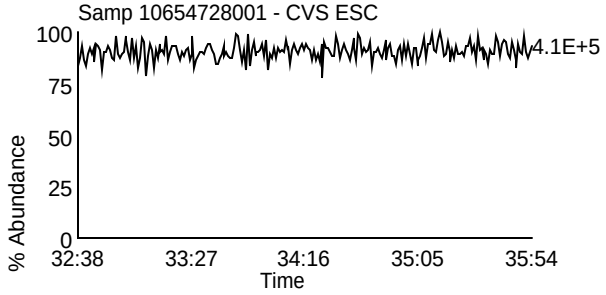
Data File: L230610A_18 G3 C10 - 403.8529
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G3 C11 - 445.7555
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G3 C3 - 380.976
Samp 10654728001 - CVS ESC

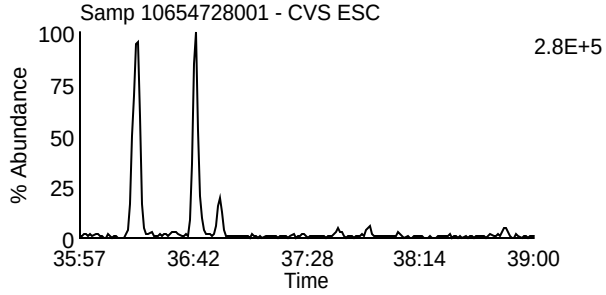


Homologue Group: Heptas

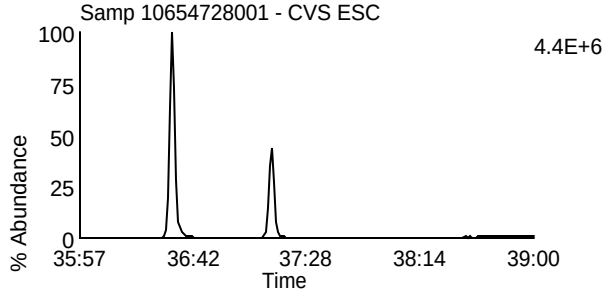
Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

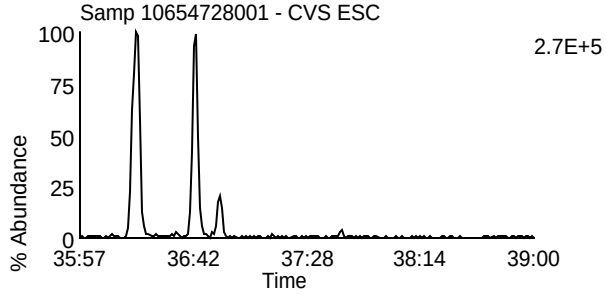
Data File: L230610A_18 G4 C3 - 407.7818
Samp 10654728001 - CVS ESC



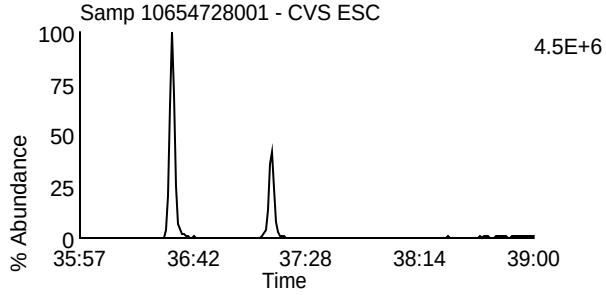
Data File: L230610A_18 G4 C8 - 423.7767
Samp 10654728001 - CVS ESC



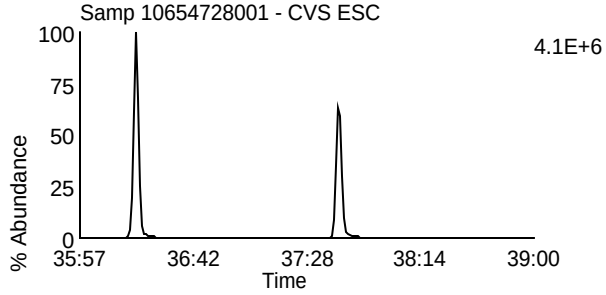
Data File: L230610A_18 G4 C4 - 409.7788
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C9 - 425.7737
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C6 - 417.825
Samp 10654728001 - CVS ESC



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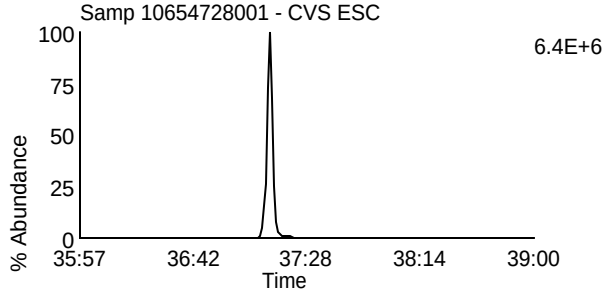
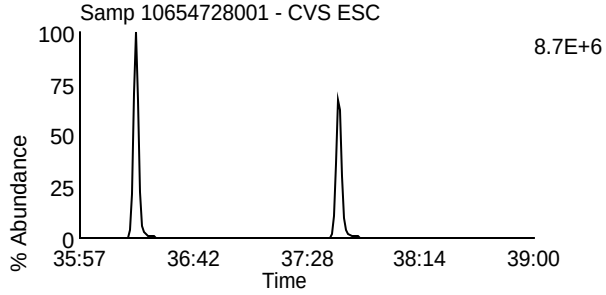
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C7 - 419.822
Samp 10654728001 - CVS ESC



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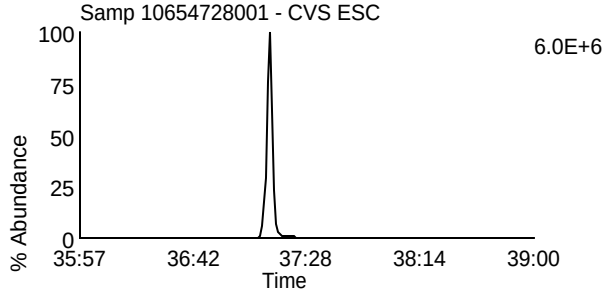
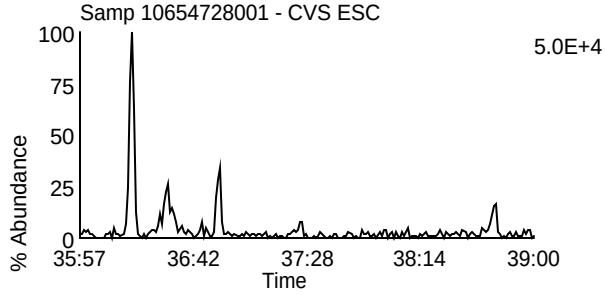
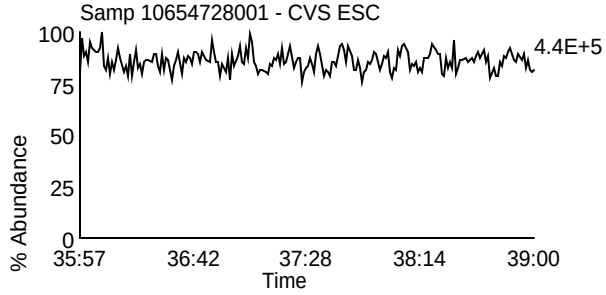
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C13 - 479.7165
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C1 - 380.976
Samp 10654728001 - CVS ESC

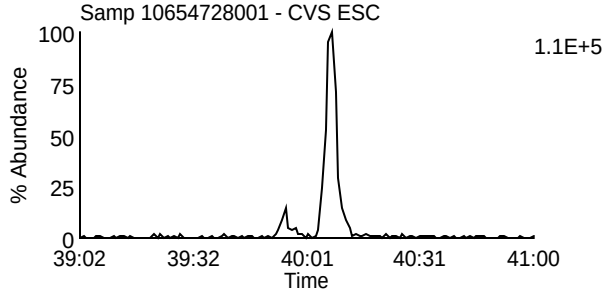


Homologue Group: Octas

Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

Data File: L230610A_18 G5 C4 - 441.7428
Samp 10654728001 - CVS ESC



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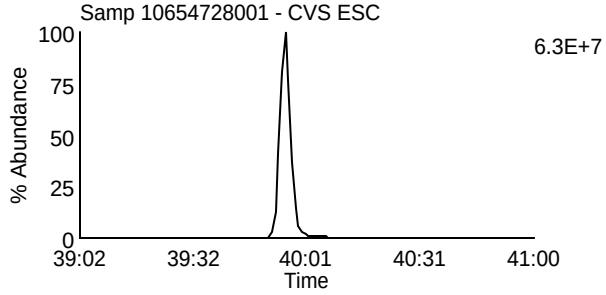
Samp 10654728001 - CVS ESC



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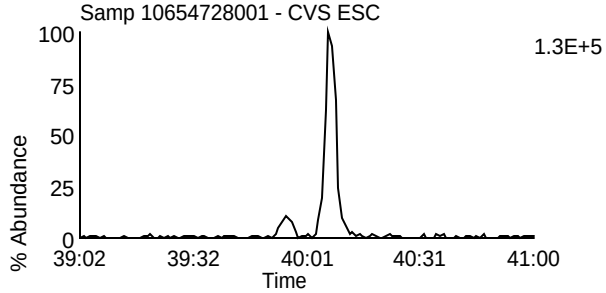
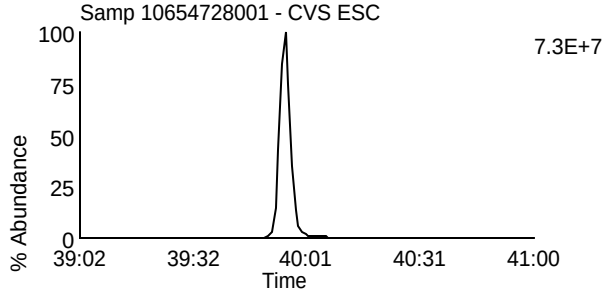
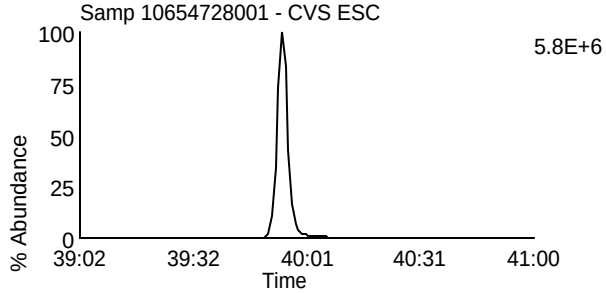
Samp 10654728001 - CVS ESC



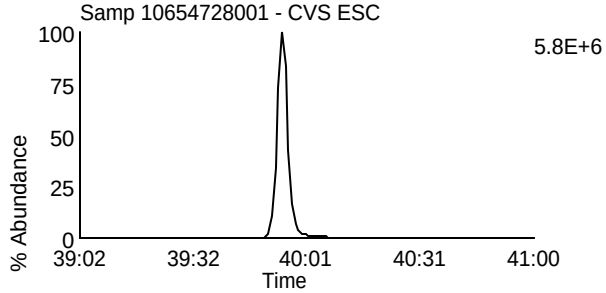
Data File: L230610A_18 G5 C9 - 459.7347
Samp 10654728001 - CVS ESC



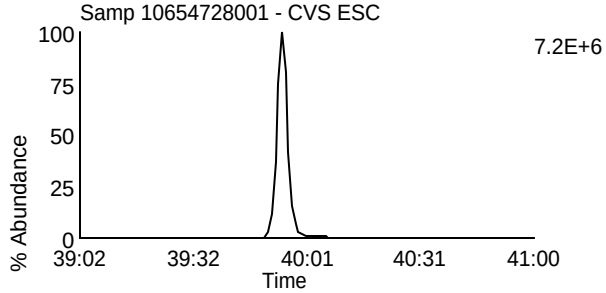
Data File: L230610A_18 G5 C11 - 469.7779
Samp 10654728001 - CVS ESC



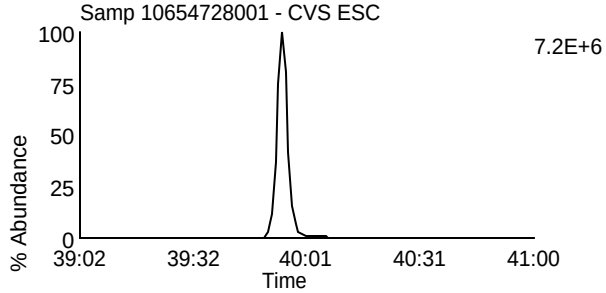
Data File: L230610A_18 G5 C11 - 469.7779
Samp 10654728001 - CVS ESC



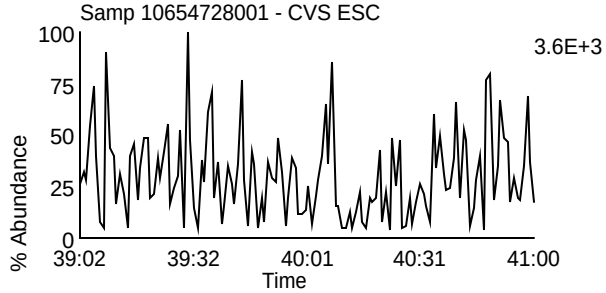
Data File: L230610A_18 G5 C12 - 471.7749
Samp 10654728001 - CVS ESC



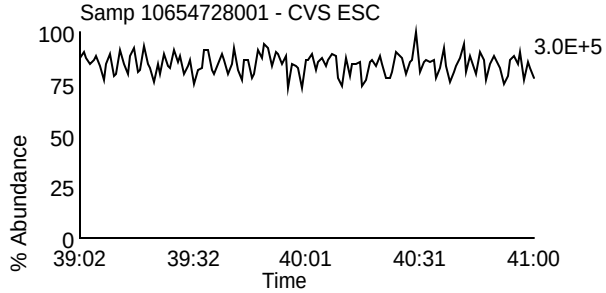
Data File: L230610A_18 G5 C12 - 471.7749
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G5 C13 - 513.6775
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G5 C2 - 430.9728
Samp 10654728001 - CVS ESC

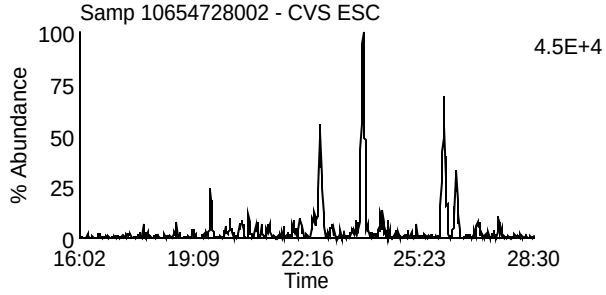


Homologue Group: Tetras

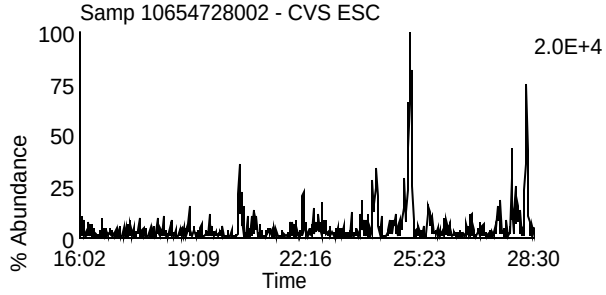
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

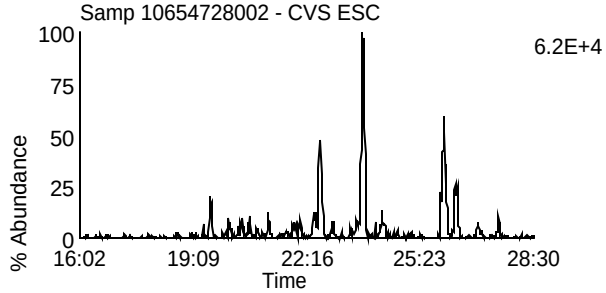
Data File: L230610A_19 G1 C1 - 303.9016
Samp 10654728002 - CVS ESC



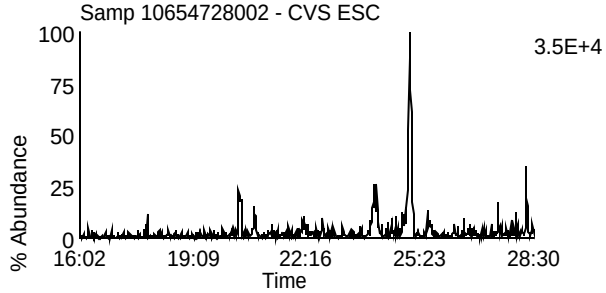
Data File: L230610A_19 G1 C7 - 319.8965
Samp 10654728002 - CVS ESC



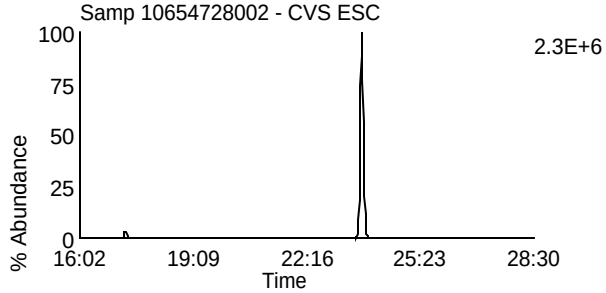
Data File: L230610A_19 G1 C2 - 305.8987
Samp 10654728002 - CVS ESC



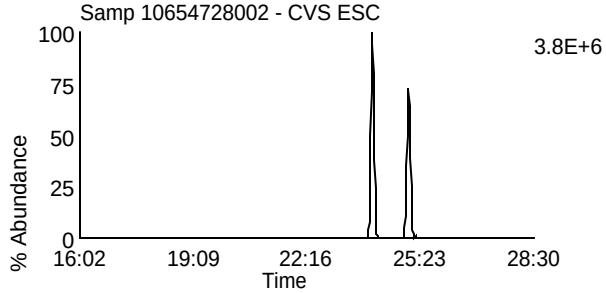
Data File: L230610A_19 G1 C8 - 321.8936
Samp 10654728002 - CVS ESC



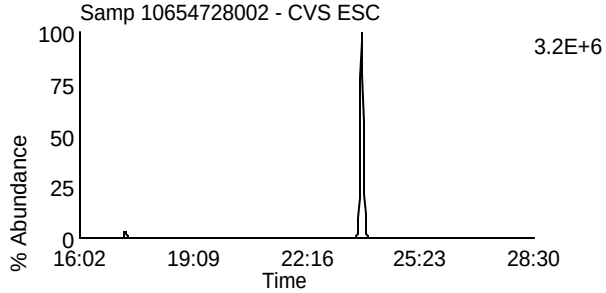
Data File: L230610A_19 G1 C3 - 315.9418
Samp 10654728002 - CVS ESC



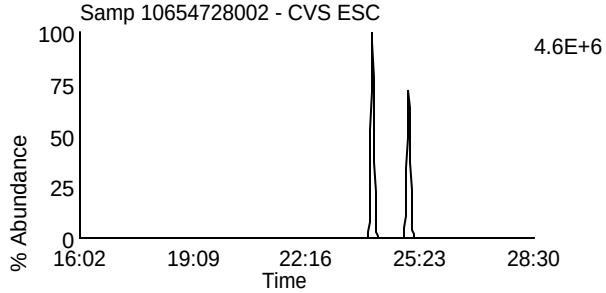
Data File: L230610A_19 G1 C10 - 331.9367
Samp 10654728002 - CVS ESC



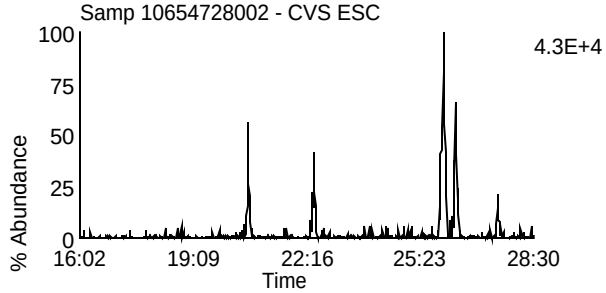
Data File: L230610A_19 G1 C4 - 317.9389
Samp 10654728002 - CVS ESC



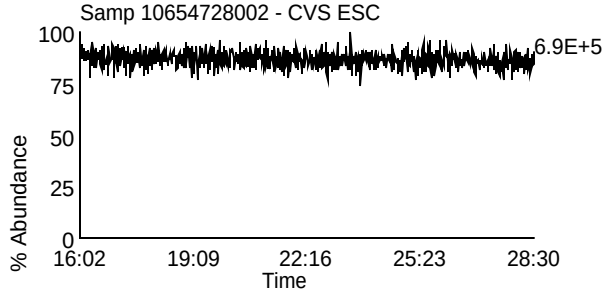
Data File: L230610A_19 G1 C11 - 333.9338
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G1 C14 - 375.8364
Samp 10654728002 - CVS ESC



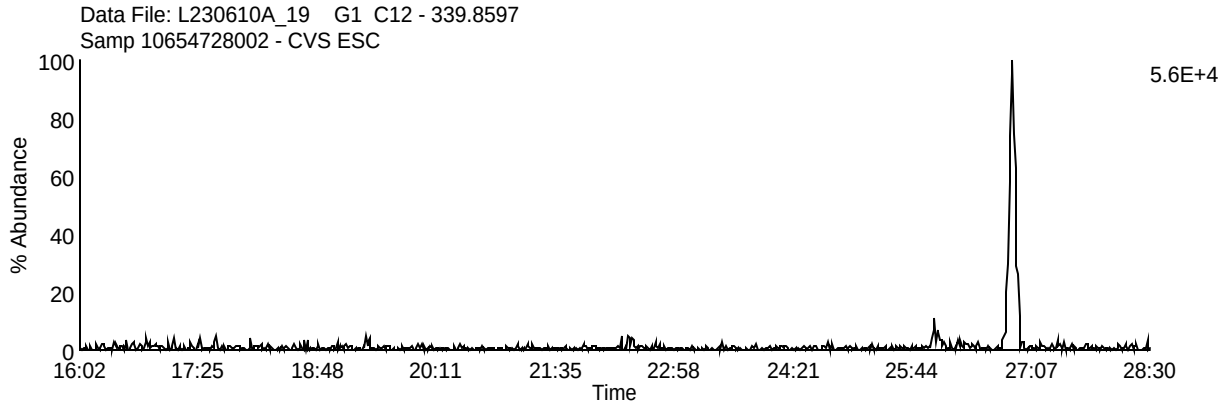
Data File: L230610A_19 G1 C5 - 318.9792
Samp 10654728002 - CVS ESC

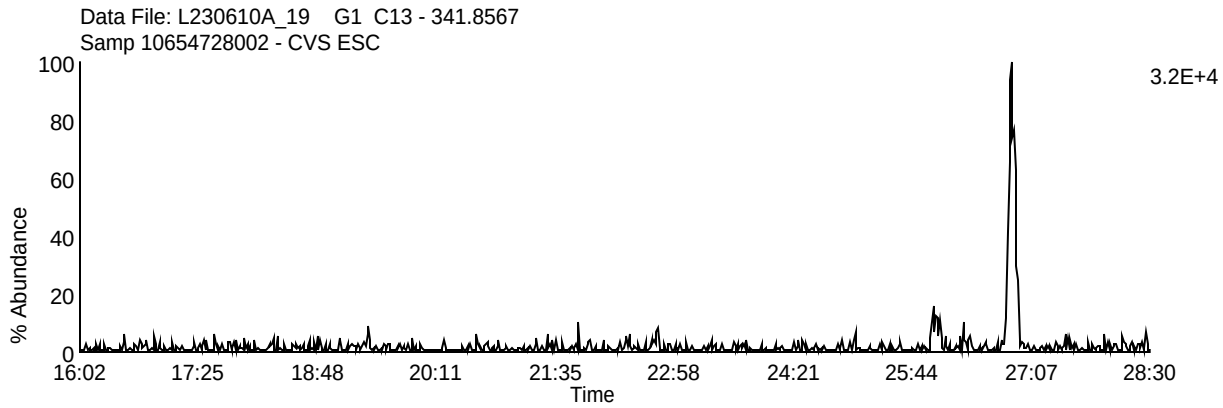


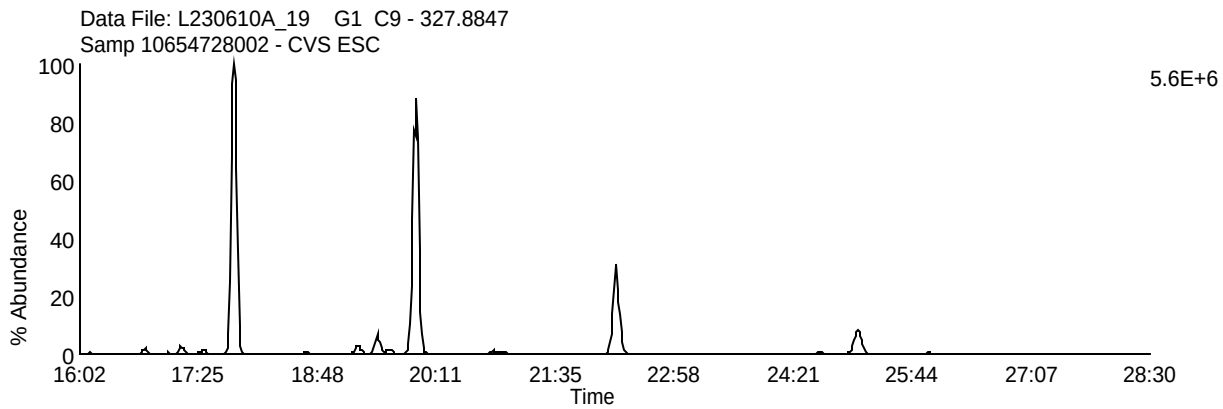
Homologue Group: Penta & Cleanup

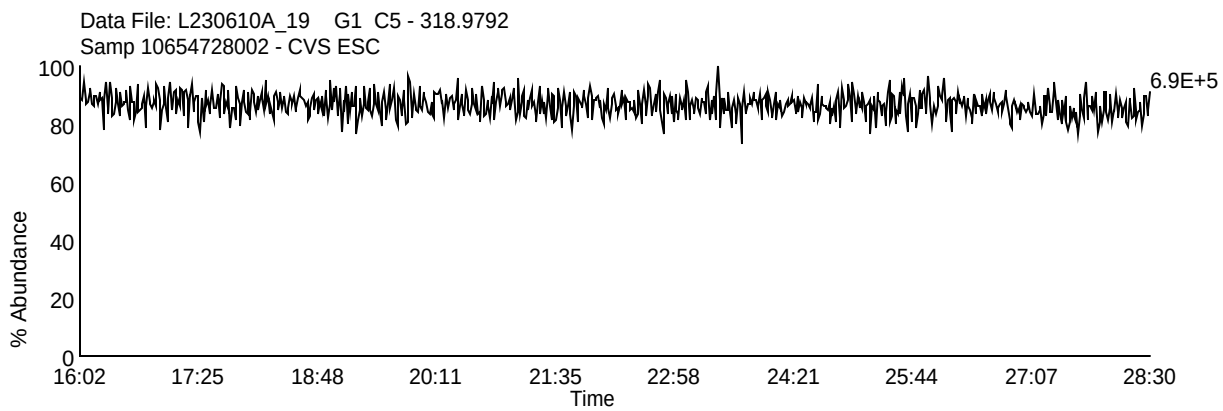
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)







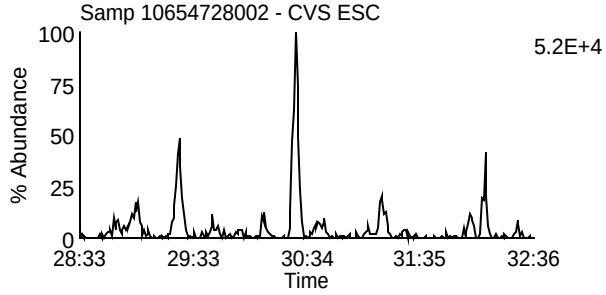


Homologue Group: Pentas

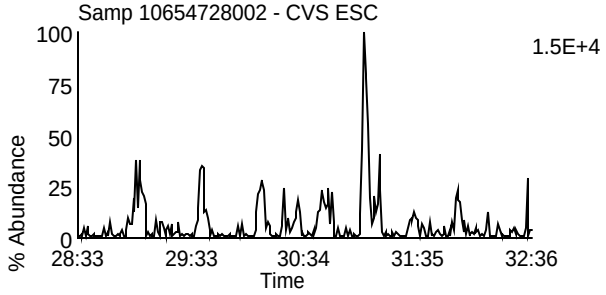
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

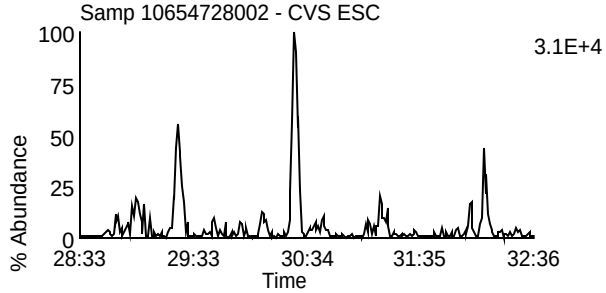
Data File: L230610A_19 G2 C1 - 339.8597
Samp 10654728002 - CVS ESC



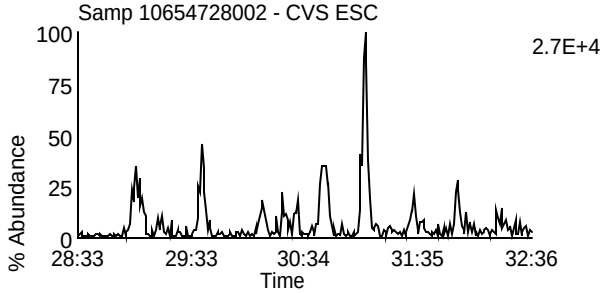
Data File: L230610A_19 G2 C4 - 353.8576
Samp 10654728002 - CVS ESC



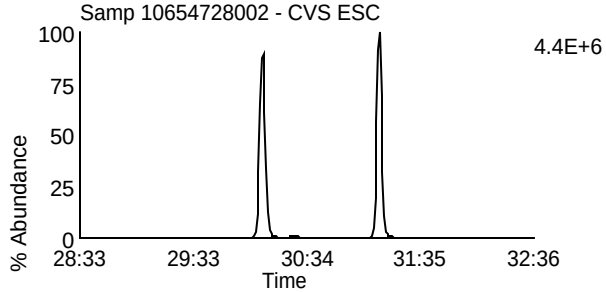
Data File: L230610A_19 G2 C2 - 341.8567
Samp 10654728002 - CVS ESC



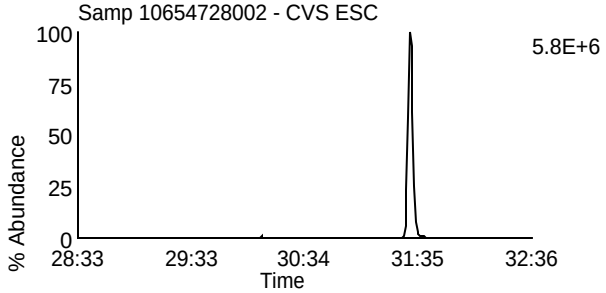
Data File: L230610A_19 G2 C8 - 355.8546
Samp 10654728002 - CVS ESC



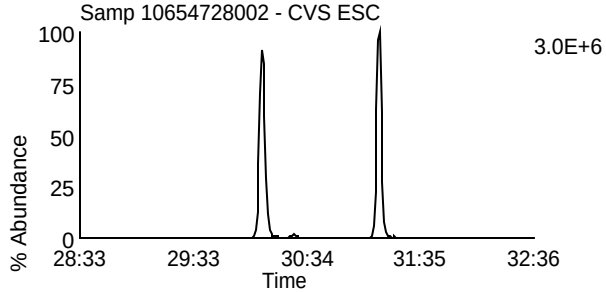
Data File: L230610A_19 G2 C3 - 351.8999
Samp 10654728002 - CVS ESC



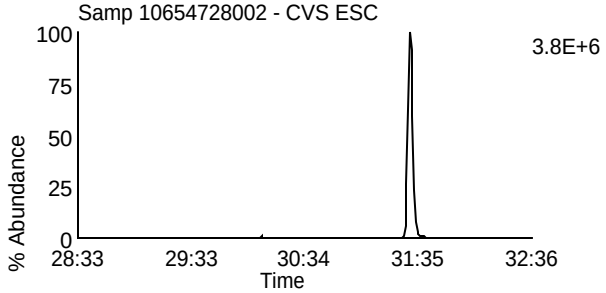
Data File: L230610A_19 G2 C10 - 367.8948
Samp 10654728002 - CVS ESC



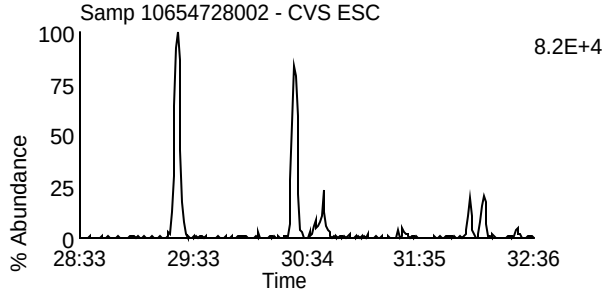
Data File: L230610A_19 G2 C5 - 353.8969
Samp 10654728002 - CVS ESC



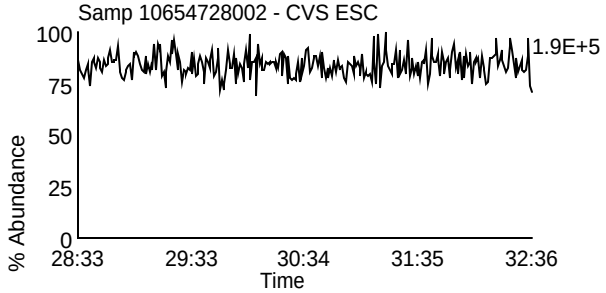
Data File: L230610A_19 G2 C11 - 369.8918
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G2 C12 - 409.7974
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G2 C6 - 354.9792
Samp 10654728002 - CVS ESC

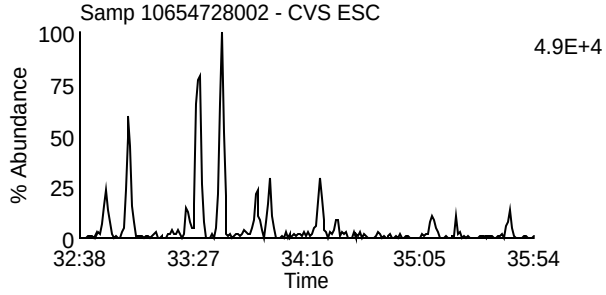


Homologue Group: Hexas

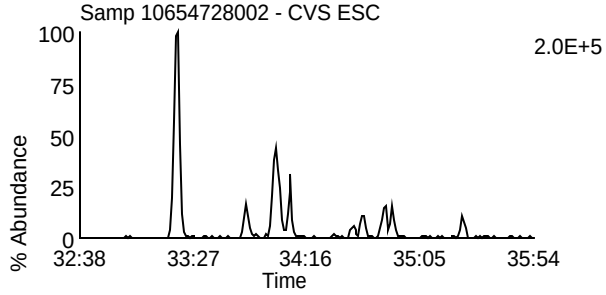
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

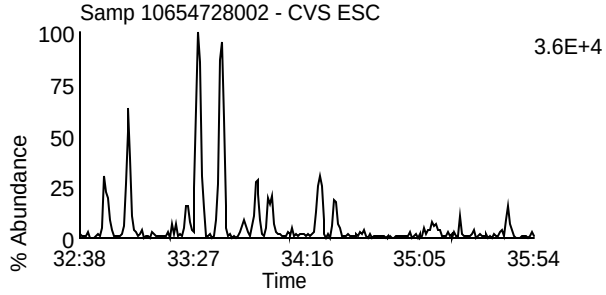
Data File: L230610A_19 G3 C1 - 373.8207
Samp 10654728002 - CVS ESC



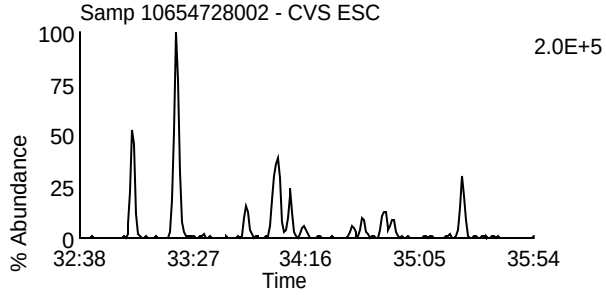
Data File: L230610A_19 G3 C7 - 389.8156
Samp 10654728002 - CVS ESC



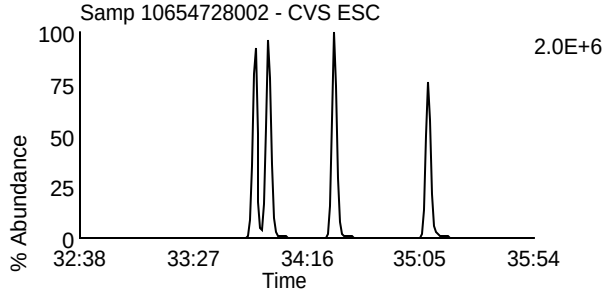
Data File: L230610A_19 G3 C2 - 375.8178
Samp 10654728002 - CVS ESC



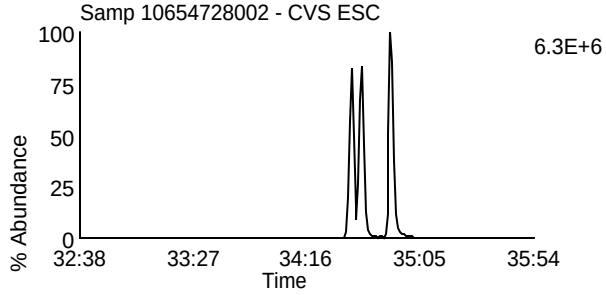
Data File: L230610A_19 G3 C8 - 391.8127
Samp 10654728002 - CVS ESC



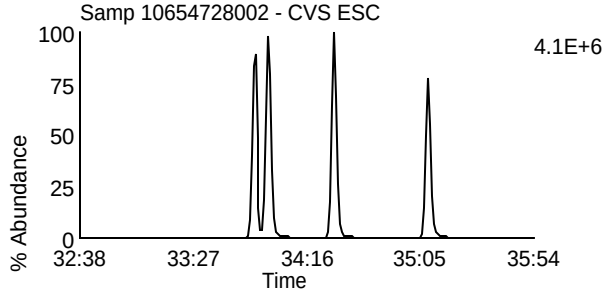
Data File: L230610A_19 G3 C5 - 383.8639
Samp 10654728002 - CVS ESC



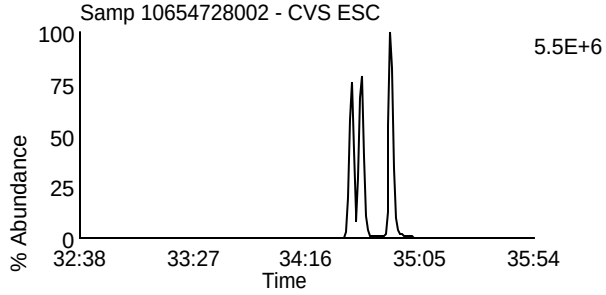
Data File: L230610A_19 G3 C9 - 401.8559
Samp 10654728002 - CVS ESC



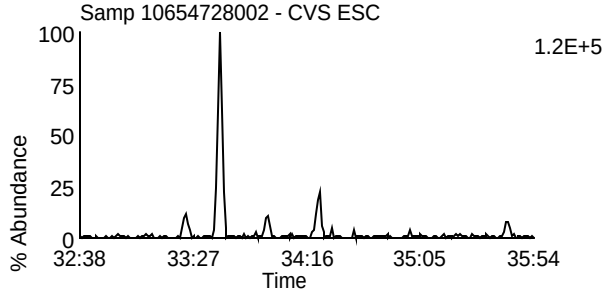
Data File: L230610A_19 G3 C6 - 385.861
Samp 10654728002 - CVS ESC



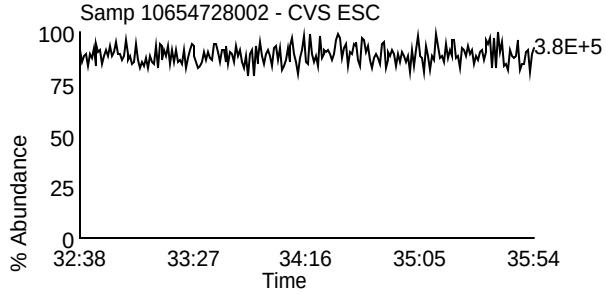
Data File: L230610A_19 G3 C10 - 403.8529
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G3 C11 - 445.7555
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G3 C3 - 380.976
Samp 10654728002 - CVS ESC

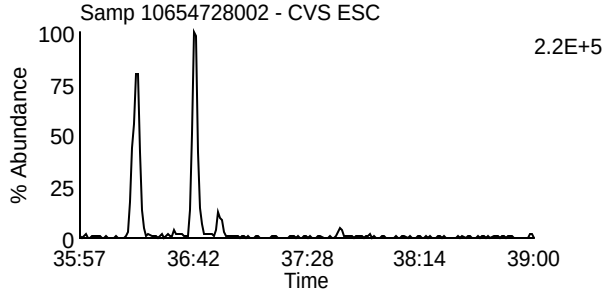


Homologue Group: Heptas

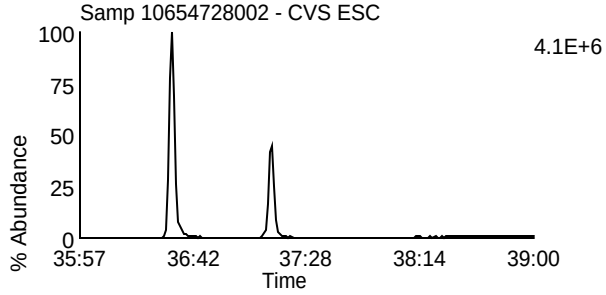
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

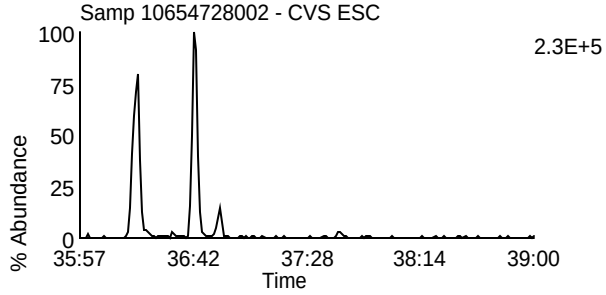
Data File: L230610A_19 G4 C3 - 407.7818
Samp 10654728002 - CVS ESC



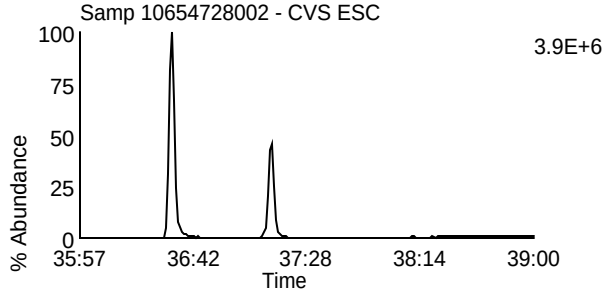
Data File: L230610A_19 G4 C8 - 423.7767
Samp 10654728002 - CVS ESC



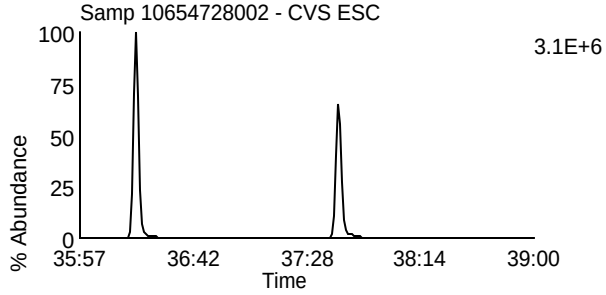
Data File: L230610A_19 G4 C4 - 409.7788
Samp 10654728002 - CVS ESC



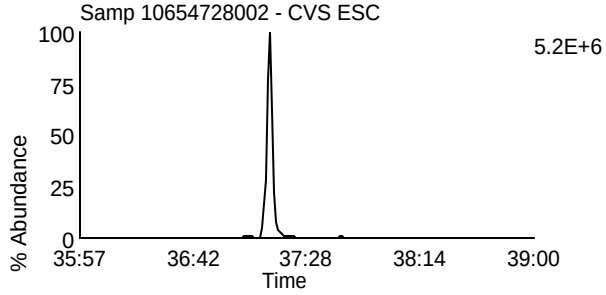
Data File: L230610A_19 G4 C9 - 425.7737
Samp 10654728002 - CVS ESC



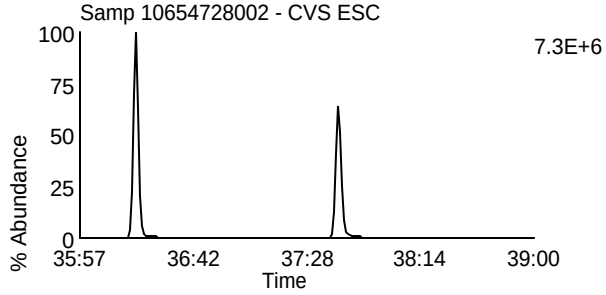
Data File: L230610A_19 G4 C6 - 417.825
Samp 10654728002 - CVS ESC



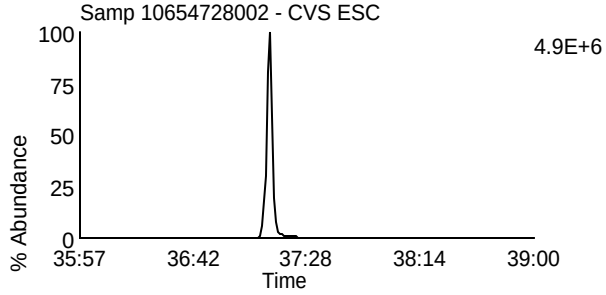
Data File: L230610A_19 G4 C11 - 435.8169
Samp 10654728002 - CVS ESC



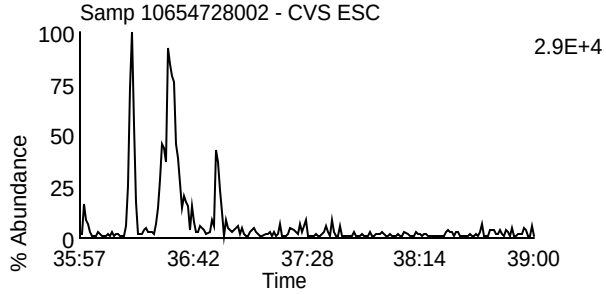
Data File: L230610A_19 G4 C7 - 419.822
Samp 10654728002 - CVS ESC



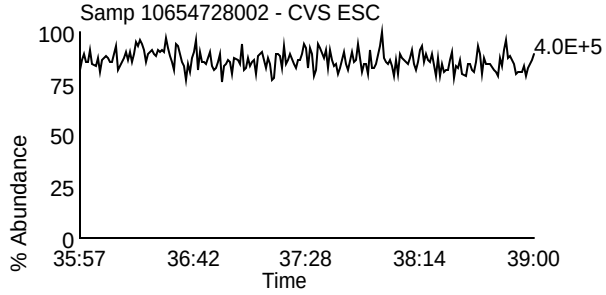
Data File: L230610A_19 G4 C12 - 437.814
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G4 C13 - 479.7165
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G4 C1 - 380.976
Samp 10654728002 - CVS ESC

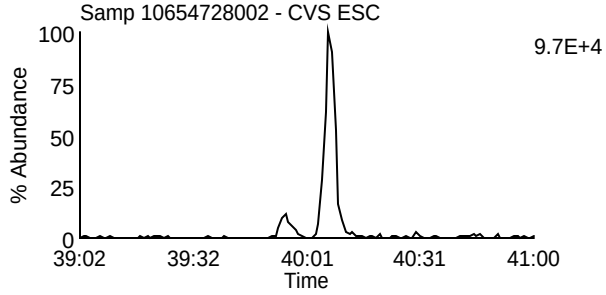


Homologue Group: Octas

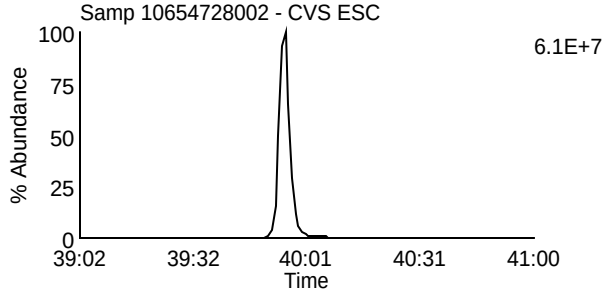
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

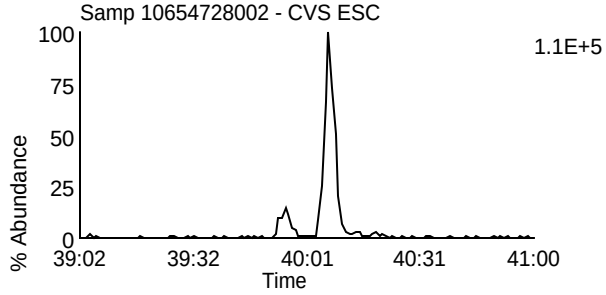
Data File: L230610A_19 G5 C4 - 441.7428
Samp 10654728002 - CVS ESC



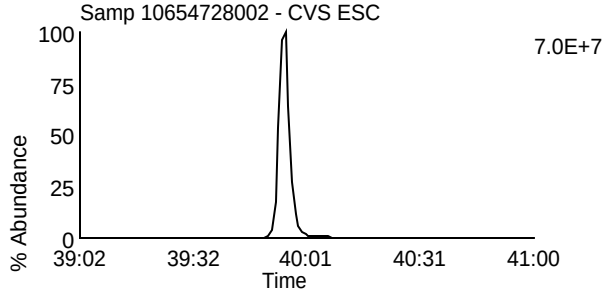
Data File: L230610A_19 G5 C8 - 457.7377
Samp 10654728002 - CVS ESC



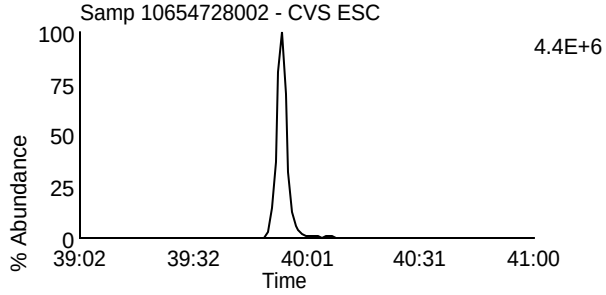
Data File: L230610A_19 G5 C5 - 443.7398
Samp 10654728002 - CVS ESC



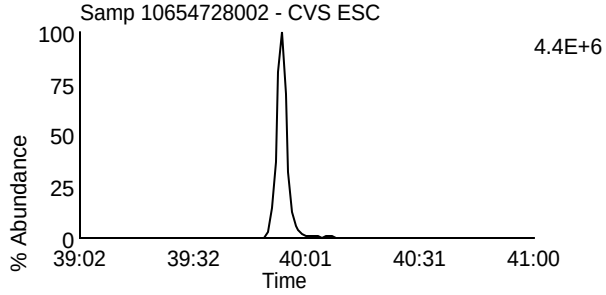
Data File: L230610A_19 G5 C9 - 459.7347
Samp 10654728002 - CVS ESC



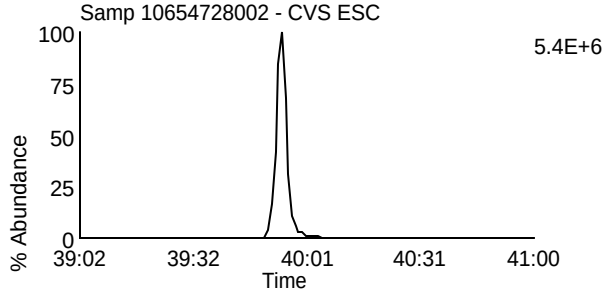
Data File: L230610A_19 G5 C11 - 469.7779
Samp 10654728002 - CVS ESC



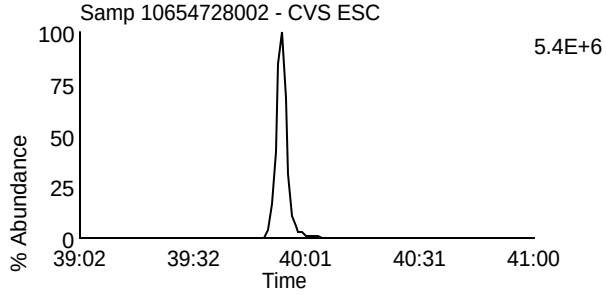
Data File: L230610A_19 G5 C11 - 469.7779
Samp 10654728002 - CVS ESC



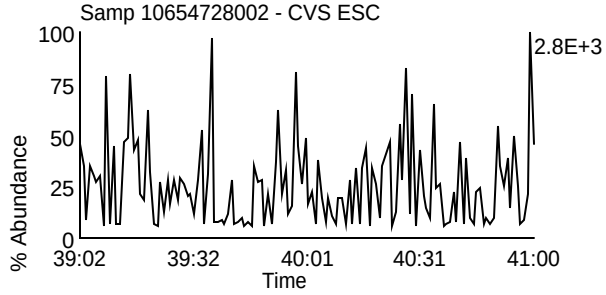
Data File: L230610A_19 G5 C12 - 471.7749
Samp 10654728002 - CVS ESC



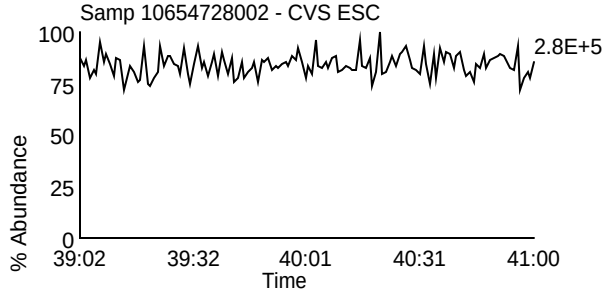
Data File: L230610A_19 G5 C12 - 471.7749
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G5 C13 - 513.6775
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G5 C2 - 430.9728
Samp 10654728002 - CVS ESC

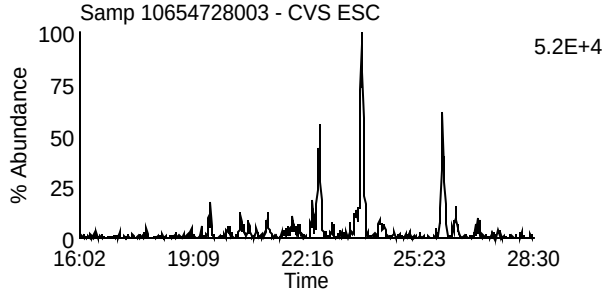


Homologue Group: Tetras

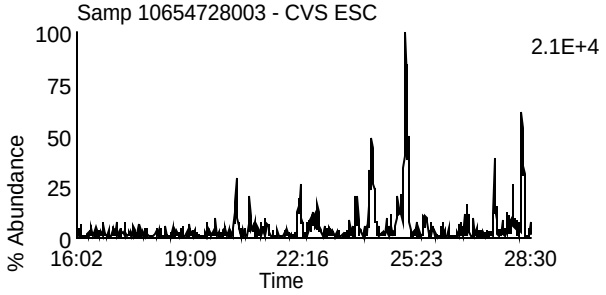
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

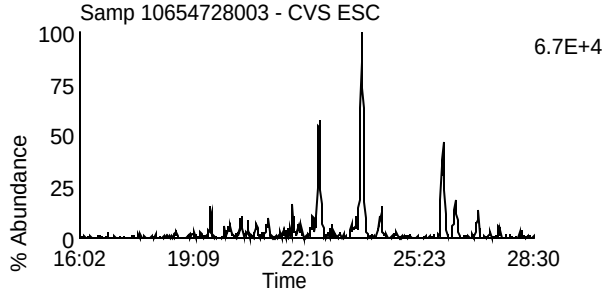
Data File: L230610A_20 G1 C1 - 303.9016
Samp 10654728003 - CVS ESC



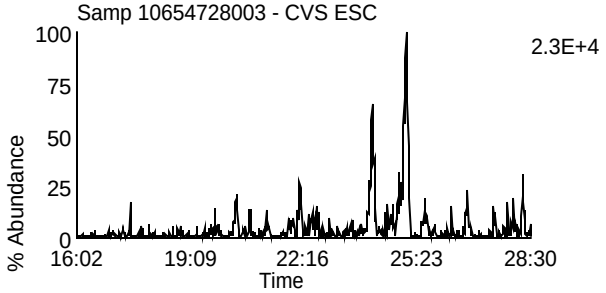
Data File: L230610A_20 G1 C7 - 319.8965
Samp 10654728003 - CVS ESC



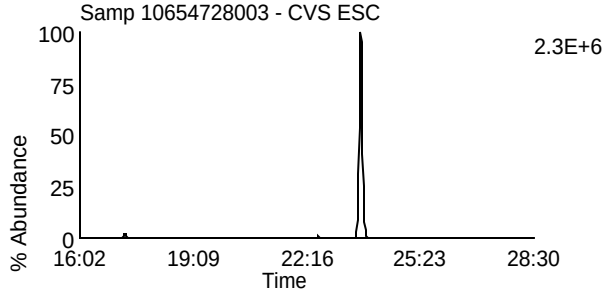
Data File: L230610A_20 G1 C2 - 305.8987
Samp 10654728003 - CVS ESC



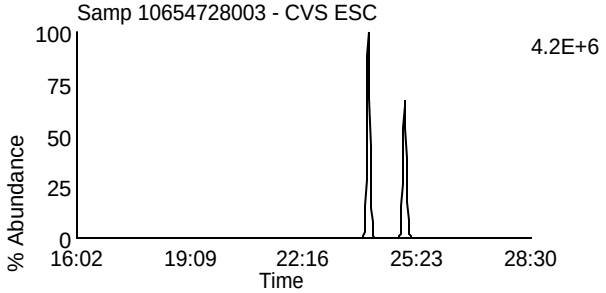
Data File: L230610A_20 G1 C8 - 321.8936
Samp 10654728003 - CVS ESC



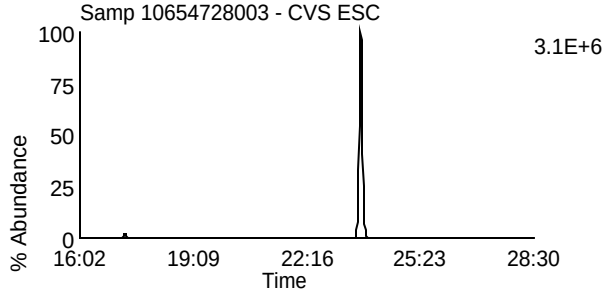
Data File: L230610A_20 G1 C3 - 315.9418
Samp 10654728003 - CVS ESC



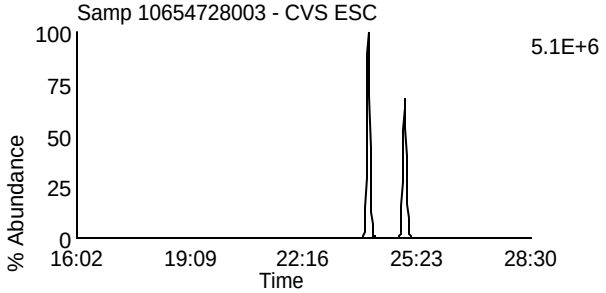
Data File: L230610A_20 G1 C10 - 331.9367
Samp 10654728003 - CVS ESC



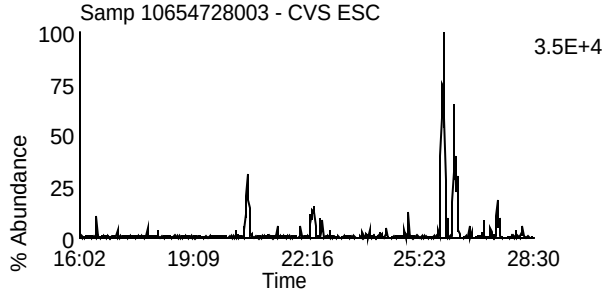
Data File: L230610A_20 G1 C4 - 317.9389
Samp 10654728003 - CVS ESC



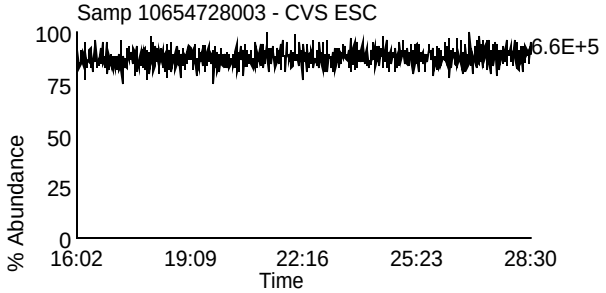
Data File: L230610A_20 G1 C11 - 333.9338
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G1 C14 - 375.8364
Samp 10654728003 - CVS ESC



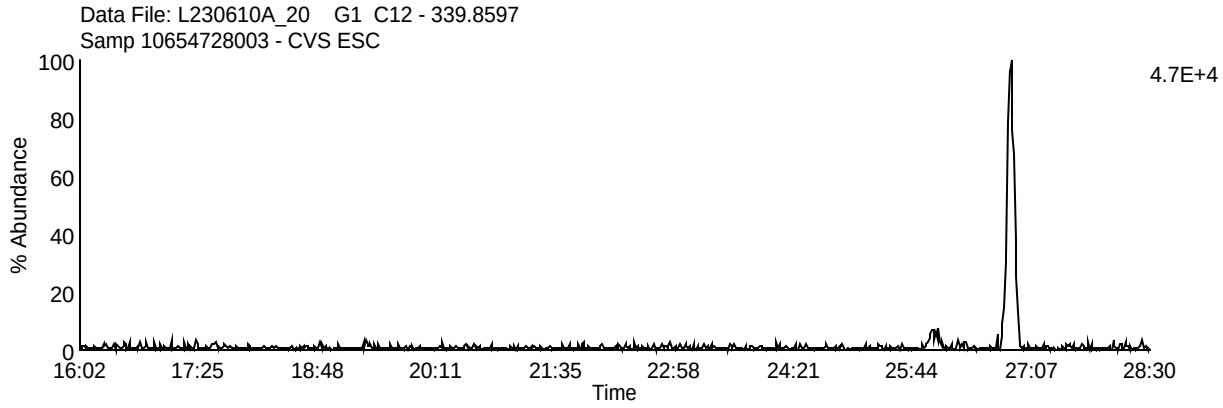
Data File: L230610A_20 G1 C5 - 318.9792
Samp 10654728003 - CVS ESC

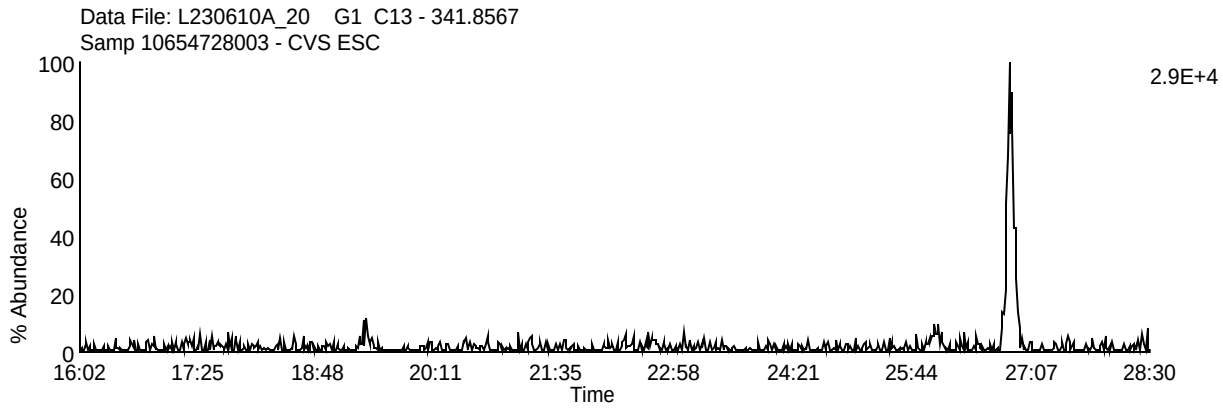


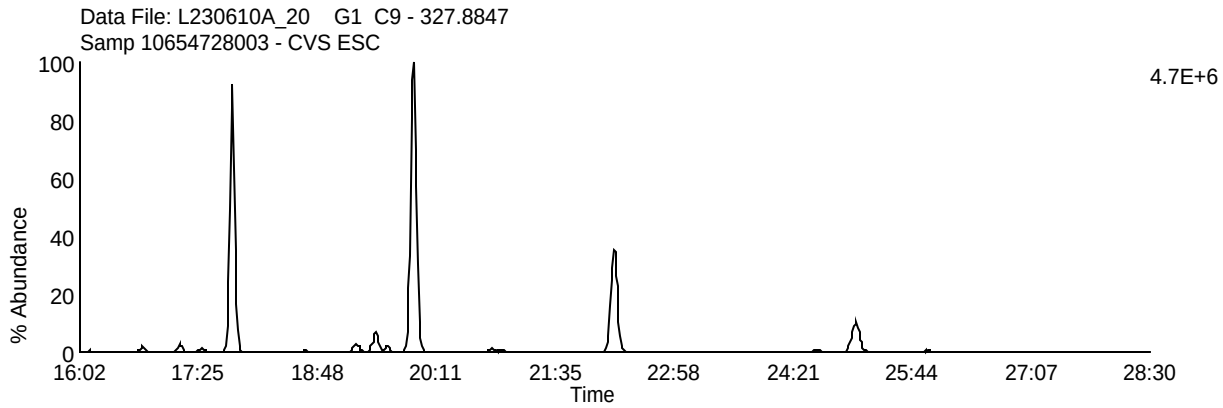
Homologue Group: Penta & Cleanup

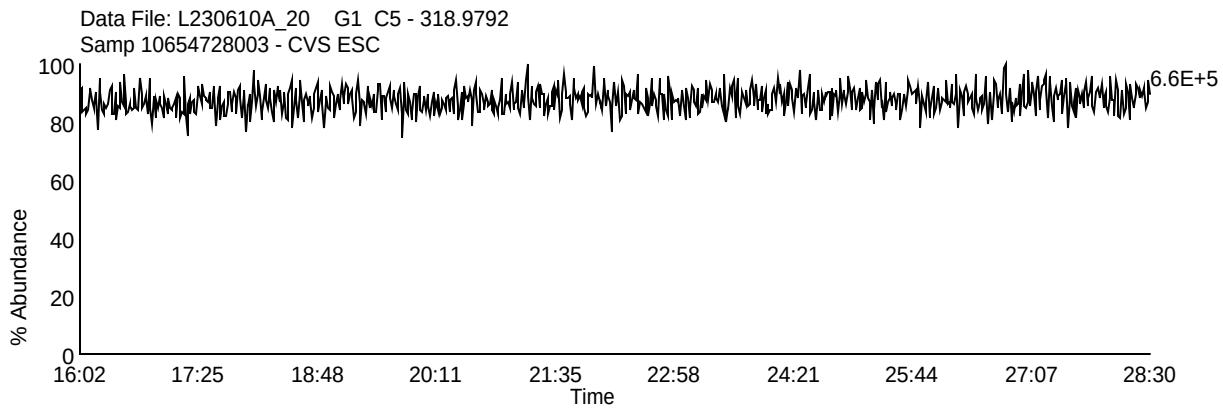
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)







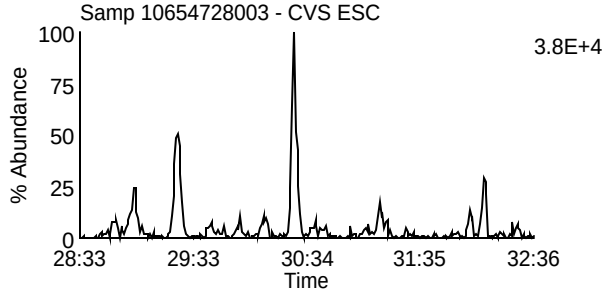


Homologue Group: Pentas

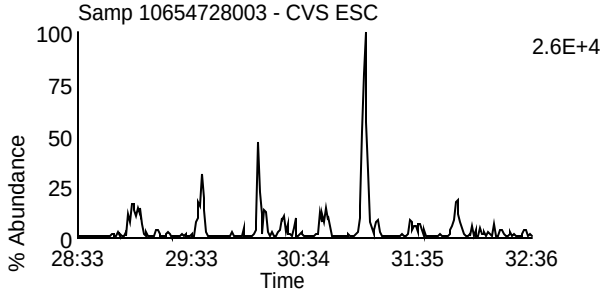
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

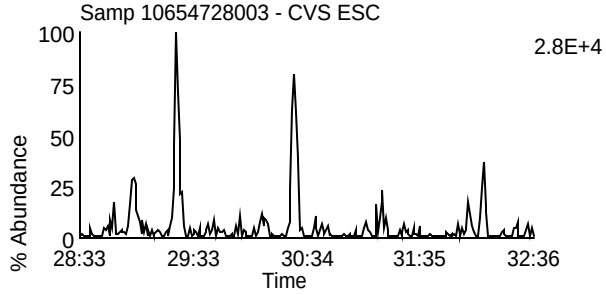
Data File: L230610A_20 G2 C1 - 339.8597
Samp 10654728003 - CVS ESC



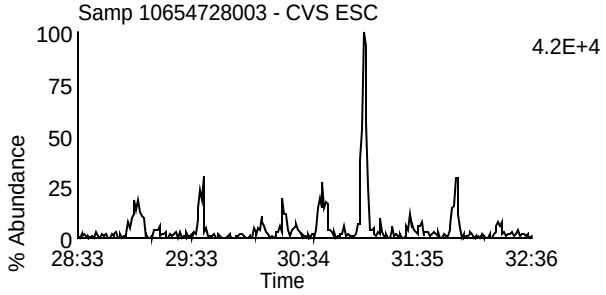
Data File: L230610A_20 G2 C4 - 353.8576
Samp 10654728003 - CVS ESC



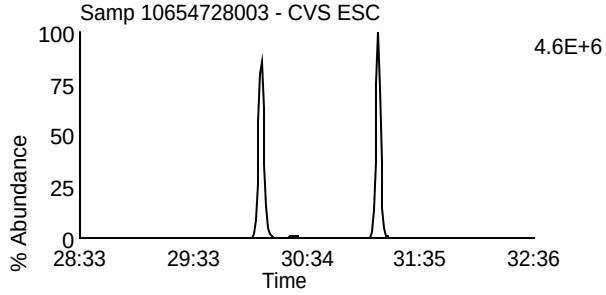
Data File: L230610A_20 G2 C2 - 341.8567
Samp 10654728003 - CVS ESC



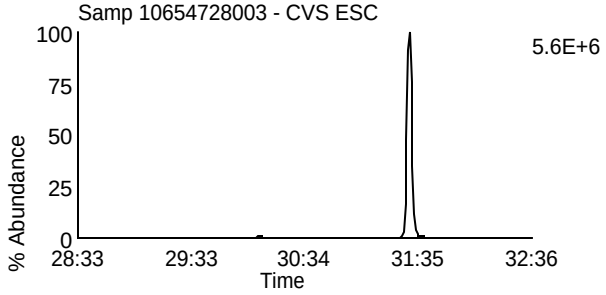
Data File: L230610A_20 G2 C8 - 355.8546
Samp 10654728003 - CVS ESC



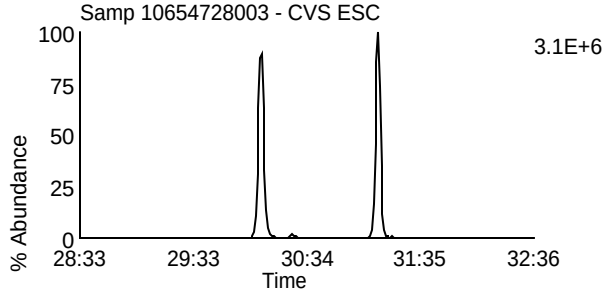
Data File: L230610A_20 G2 C3 - 351.8999
Samp 10654728003 - CVS ESC



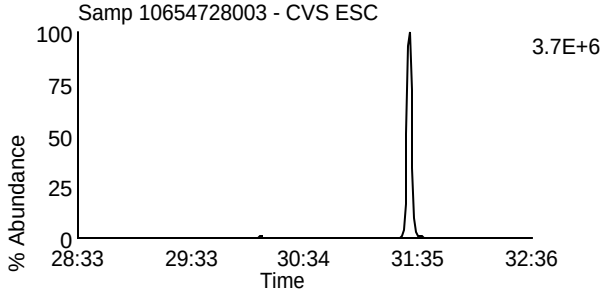
Data File: L230610A_20 G2 C10 - 367.8948
Samp 10654728003 - CVS ESC



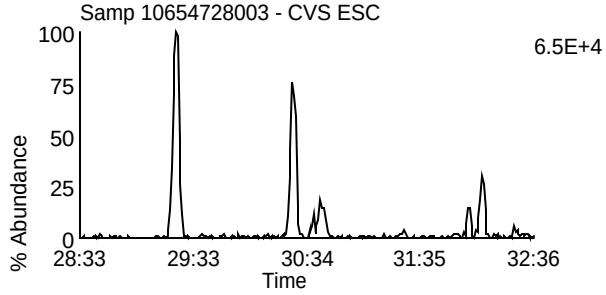
Data File: L230610A_20 G2 C5 - 353.8969
Samp 10654728003 - CVS ESC



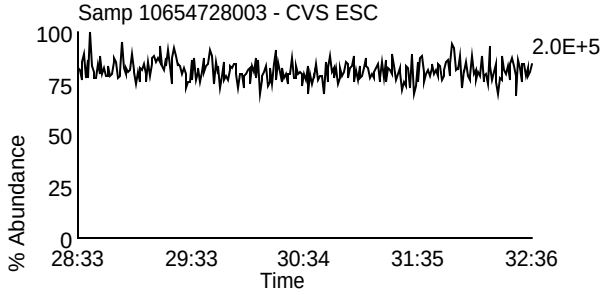
Data File: L230610A_20 G2 C11 - 369.8918
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G2 C12 - 409.7974
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G2 C6 - 354.9792
Samp 10654728003 - CVS ESC

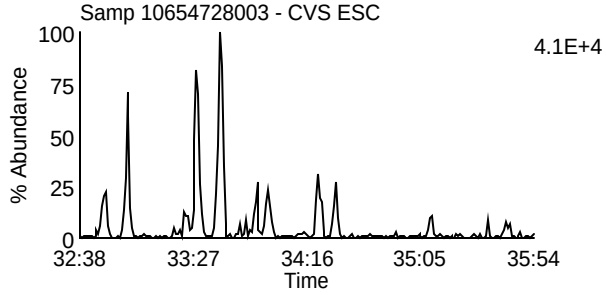


Homologue Group: Hexas

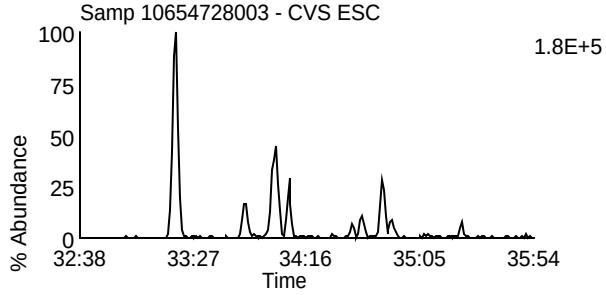
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

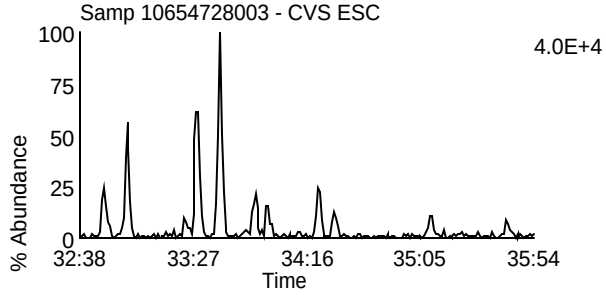
Data File: L230610A_20 G3 C1 - 373.8207
Samp 10654728003 - CVS ESC



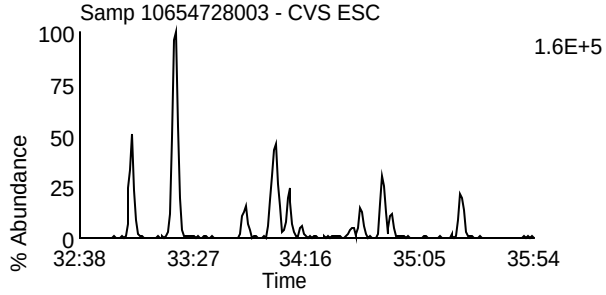
Data File: L230610A_20 G3 C7 - 389.8156
Samp 10654728003 - CVS ESC



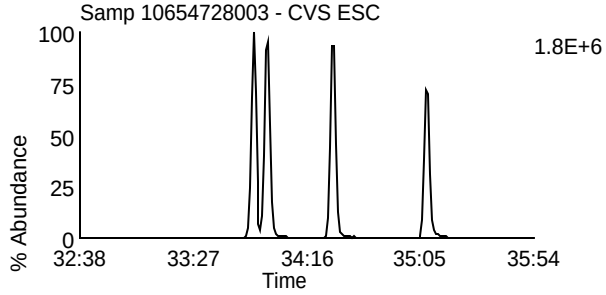
Data File: L230610A_20 G3 C2 - 375.8178
Samp 10654728003 - CVS ESC



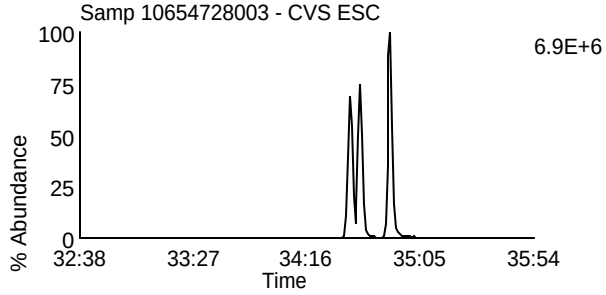
Data File: L230610A_20 G3 C8 - 391.8127
Samp 10654728003 - CVS ESC



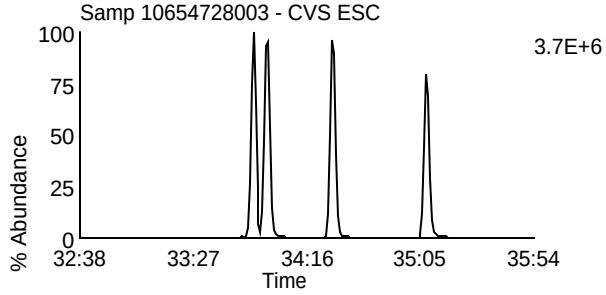
Data File: L230610A_20 G3 C5 - 383.8639
Samp 10654728003 - CVS ESC



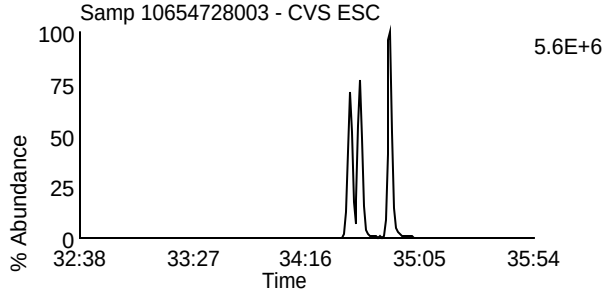
Data File: L230610A_20 G3 C9 - 401.8559
Samp 10654728003 - CVS ESC



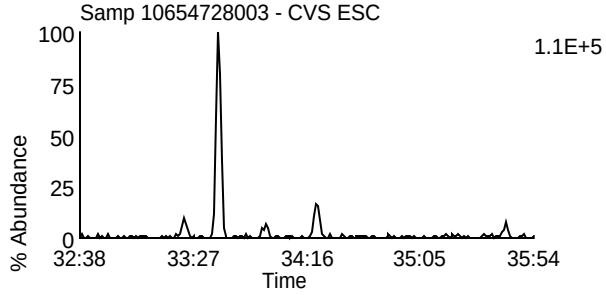
Data File: L230610A_20 G3 C6 - 385.861
Samp 10654728003 - CVS ESC



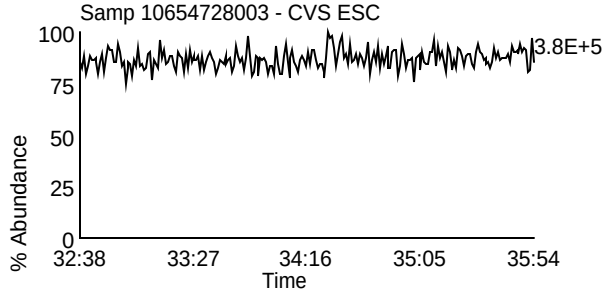
Data File: L230610A_20 G3 C10 - 403.8529
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G3 C11 - 445.7555
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G3 C3 - 380.976
Samp 10654728003 - CVS ESC

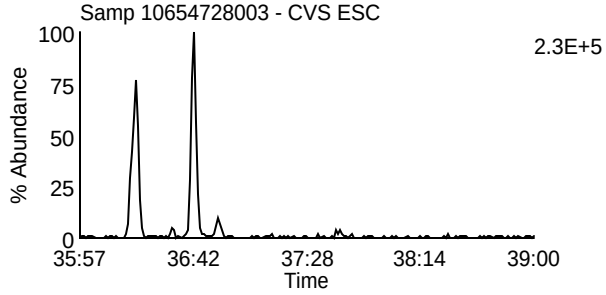


Homologue Group: Heptas

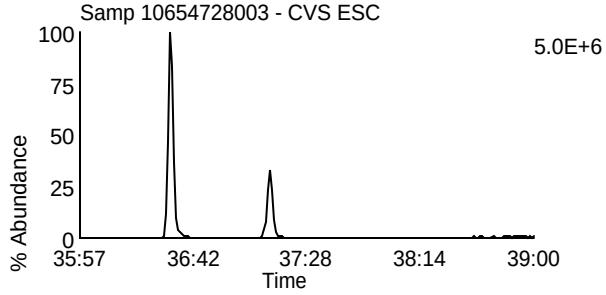
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

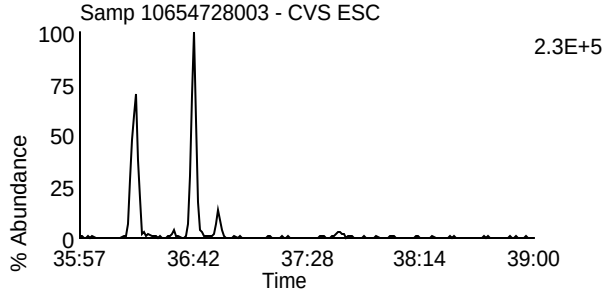
Data File: L230610A_20 G4 C3 - 407.7818
Samp 10654728003 - CVS ESC



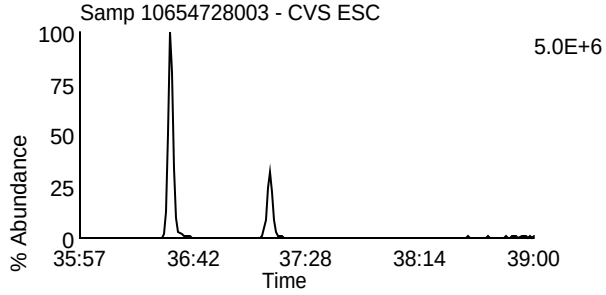
Data File: L230610A_20 G4 C8 - 423.7767
Samp 10654728003 - CVS ESC



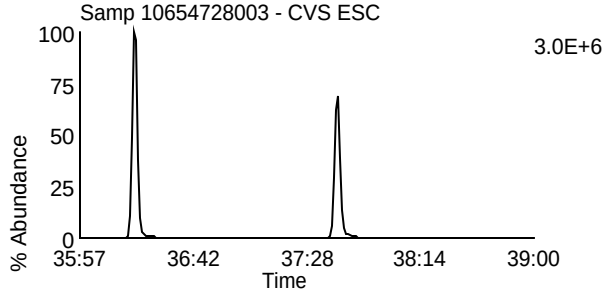
Data File: L230610A_20 G4 C4 - 409.7788
Samp 10654728003 - CVS ESC



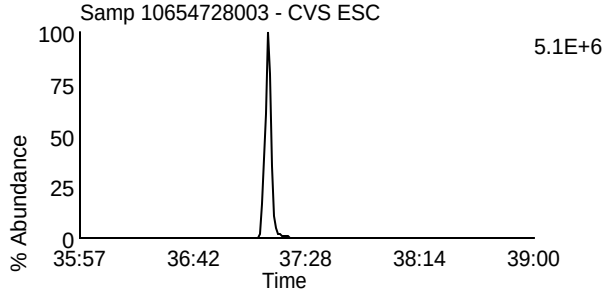
Data File: L230610A_20 G4 C9 - 425.7737
Samp 10654728003 - CVS ESC



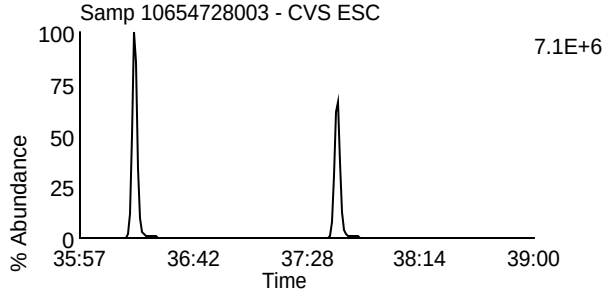
Data File: L230610A_20 G4 C6 - 417.825
Samp 10654728003 - CVS ESC



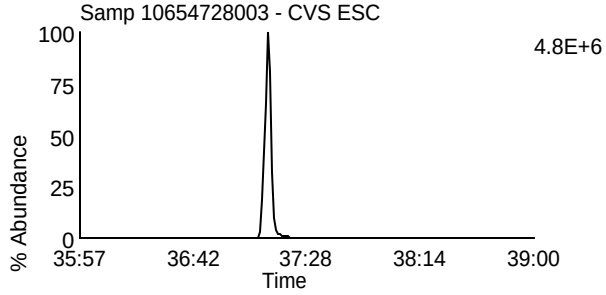
Data File: L230610A_20 G4 C11 - 435.8169
Samp 10654728003 - CVS ESC



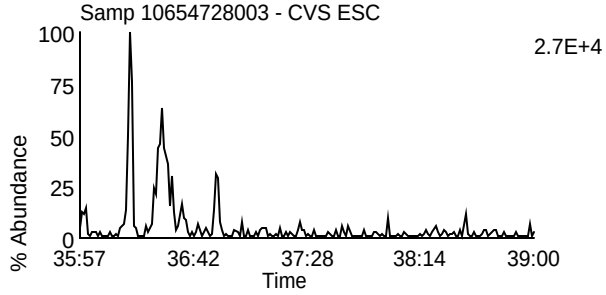
Data File: L230610A_20 G4 C7 - 419.822
Samp 10654728003 - CVS ESC



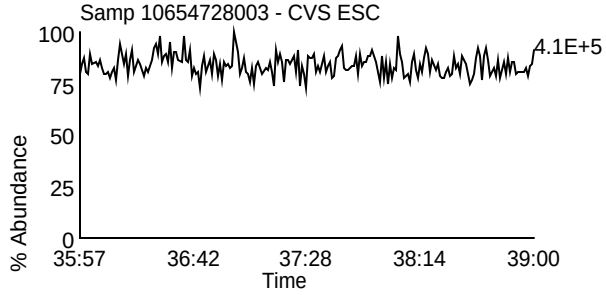
Data File: L230610A_20 G4 C12 - 437.814
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G4 C13 - 479.7165
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G4 C1 - 380.976
Samp 10654728003 - CVS ESC

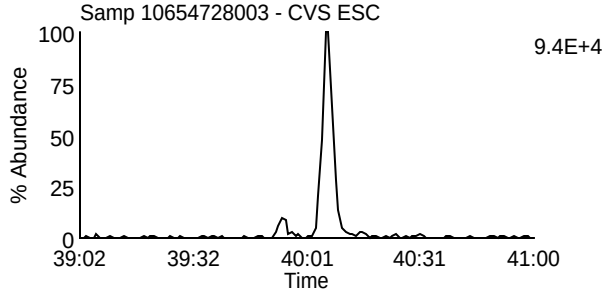


Homologue Group: Octas

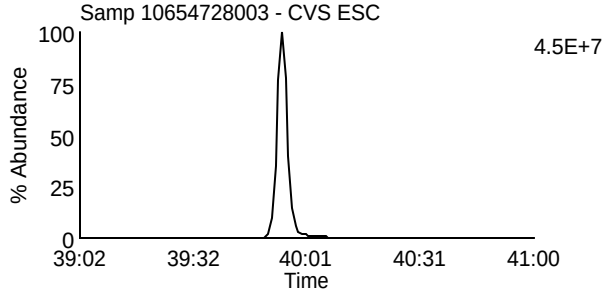
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

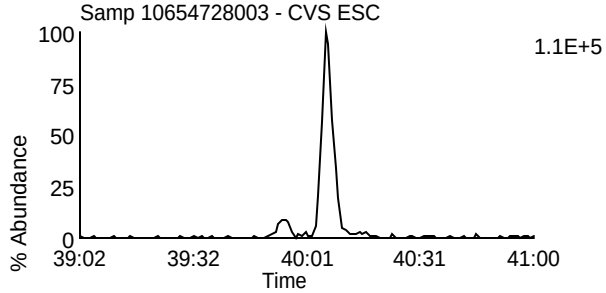
Data File: L230610A_20 G5 C4 - 441.7428
Samp 10654728003 - CVS ESC



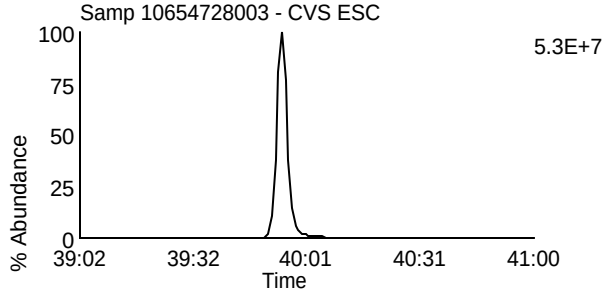
Data File: L230610A_20 G5 C8 - 457.7377
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G5 C5 - 443.7398
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G5 C9 - 459.7347
Samp 10654728003 - CVS ESC



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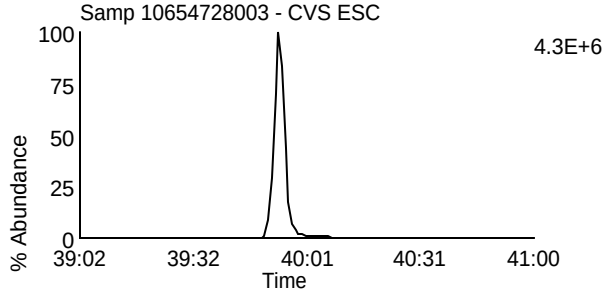
Samp 10654728003 - CVS ESC



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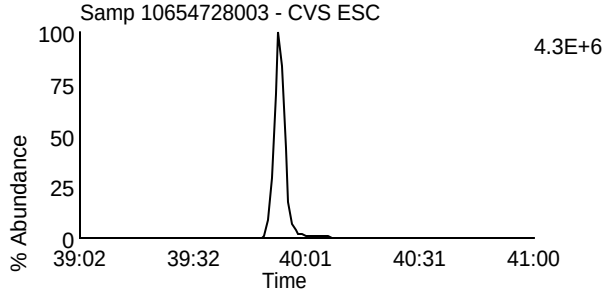
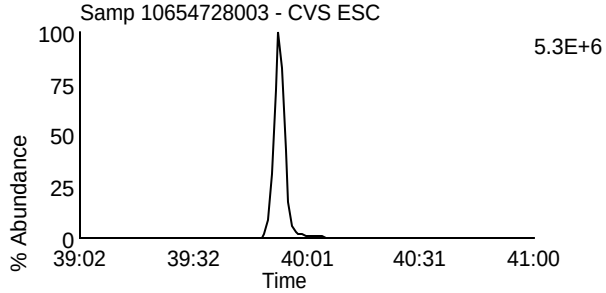


Data File: L230610A_20 G5 C12 - 471.7749
Samp 10654728003 - CVS ESC



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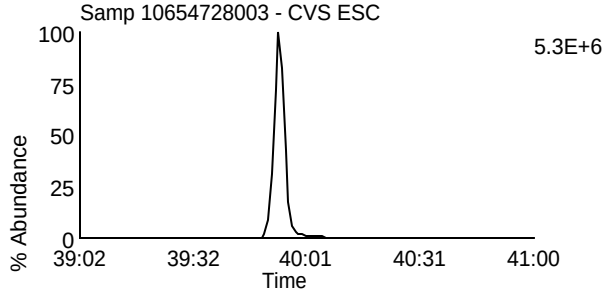
Samp 10654728003 - CVS ESC



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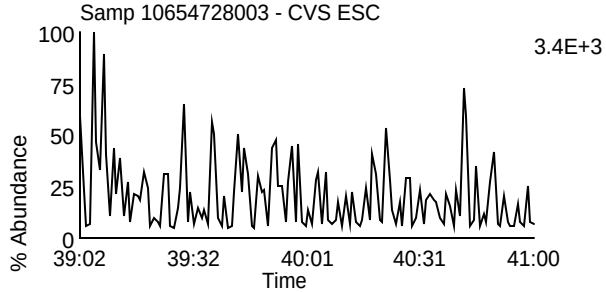
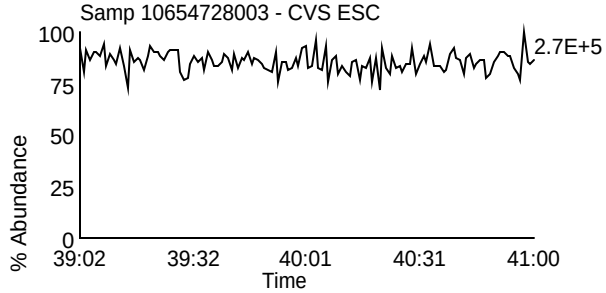
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G5 C2 - 430.9728
Samp 10654728003 - CVS ESC



Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-1	Injected By	CVS
Lab ID	10654728001	Instrument ID	10MSHR15 (L)
Filename	L230610A_18	GC Column ID	US3225411H
Analyzed	06/10/2023 23:53	ICAL ID	L230610

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		23:46	1.92e7	2.64e7	2.95e6	4.09e6	8.026e3	1.197e3	0.73	
2,3,7,8-TCDF		23:47	(M)4.11e5	5.24e5	5.88e4	8.36e4	4.310e2	8.615e2	0.78	
Other TCDF	1	19:09	8.28e3	1.20e4					0.69	
	2	20:09	2.63e4	3.21e4					0.82	
	3	20:27	3.91e4	4.57e4					0.85	
	4	20:52	2.24e4	2.70e4					0.83	
	5	21:12	2.24e4	2.78e4					0.81	
	6	21:40	1.28e4	1.51e4					0.85	
	7	21:53	2.24e4	2.57e4					0.87	
	8	22:58	1.75e4	2.03e4					0.86	
	9	23:36	2.94e4	3.66e4					0.80	
	10	24:19	5.02e4	6.50e4					0.77	
	11	26:59	3.30e4	4.78e4					0.69	
	12	19:37	6.33e4	8.46e4					0.75	
	13	22:37	2.06e5	2.72e5					0.76	
Ethers	1	20:39	1.96e4	2.89e4					0.68	P
	2	22:28	7.10e4	1.09e5					0.65	P
	3	26:00	2.60e5	2.99e5					0.87	P
	4	26:22	1.18e5	1.77e5					0.67	P

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		24:03	3.03e7	3.61e7	4.59e6	5.48e6	2.956e3	1.119e3	0.84	
2,3,7,8-TCDD-13C		25:03	1.28e7	1.58e7	1.86e6	2.33e6	5.935e3	9.363e3	0.81	
2,3,7,8-TCDD-37Cl4		25:06	1.96e6		3.00e5		4.036e3	-----		
2,3,7,8-TCDD		25:06	(M)7.85e4	1.13e5	1.38e4	1.83e4	6.699e2	8.650e2	0.69	
Other TCDD	1	24:55	1.87e4	2.79e4					0.67	
	2	20:27	2.78e4	3.30e4					0.84	
	3	24:08	6.71e4	8.60e4					0.78	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		30:10	1.89e7	1.33e7	4.96e6	3.53e6	2.585e2	1.495e4	1.42	
2,3,4,7,8-PeCDF-13C		31:13	1.82e7	1.24e7	5.49e6	3.69e6	1.000e3	3.778e3	1.47	
1,2,3,7,8-PeCDF		30:12	(M)2.61e4	(M)1.82e4	9.28e3	5.12e3	1.331e2	7.413e2	1.43	
2,3,4,7,8-PeCDF		31:12	(M)1.55e4	(M)1.35e4	1.01e4	6.09e3	9.302e1	7.413e2	1.15	I
Other PeCDF	1	28:51	2.02e4	1.22e4					1.66	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-1	Injected By	CVS
Lab ID	10654728001	Instrument ID	10MSHR15 (L)
Filename	L230610A_18	GC Column ID	US3225411H
Analyzed	06/10/2023 23:53	ICAL ID	L230610

	2	29:43	2.17e4	1.36e4	1.59	
	3	29:04	6.62e4	4.99e4	1.32	
	4	26:54	3.90e5	2.74e5	1.42	
Ethers	1	32:27	1.18e4	8.71e3	1.35	P
	2	32:09	6.92e4	4.36e4	1.59	P
	3	30:28	2.71e5	1.93e5	1.41	P

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	2.25e7	1.51e7	6.84e6	4.64e6	9.498e3	2.865e3	1.49	
1,2,3,7,8-PeCDD	31:31	(M)1.03e4	(M)2.56e4	6.46e3	6.44e3	9.645e2	1.292e3	0.40	I

Other PeCDD	1	31:56	2.14e4	3.40e4	0.63	
	2	29:40	3.26e4	5.03e4	0.65	
	3	31:06	6.94e4	1.15e5	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:54	6.10e6	1.29e7	2.42e6	4.88e6	9.231e2	1.350e3	0.47	
1,2,3,6,7,8-HxCDF-13C	33:59	6.48e6	1.40e7	2.50e6	5.37e6	9.231e2	9.385e2	0.46	
2,3,4,6,7,8-HxCDF-13C	34:28	6.03e6	1.26e7	2.37e6	5.16e6	3.042e2	1.350e3	0.48	
1,2,3,7,8,9-HxCDF-13C	35:09	4.98e6	1.01e7	1.97e6	4.01e6	2.327e3	6.476e3	0.49	
1,2,3,4,7,8-HxCDF	33:55	(M)2.49e4	(M)2.37e4	8.92e3	1.13e4	5.141e2	1.106e3	1.05	
1,2,3,6,7,8-HxCDF	34:00	(M)4.35e4	(M)3.49e4	1.63e4	1.29e4	5.674e2	7.526e2	1.25	P
2,3,4,6,7,8-HxCDF	34:29	(M)1.35e4	(M)1.79e4	5.80e3	5.80e3	5.674e2	1.120e3	0.76	I
1,2,3,7,8,9-HxCDF	35:10	(M)7.64e3	(M)9.12e3	2.41e3	2.02e3	6.190e2	1.106e3	0.84	I

Other HxCDF	1	32:49	3.24e4	2.74e4	1.18	
	2	32:59	9.68e4	8.28e4	1.17	
	3	33:29	9.89e4	8.62e4	1.15	
Ethers	1	33:24	3.59e4	2.73e4	1.32	P
	2	33:39	1.20e5	1.11e5	1.08	P
	3	34:00	4.35e4	3.49e4	1.25	P
	4	34:21	6.80e4	5.90e4	1.15	P

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:35	(M)1.44e7	1.17e7	6.07e6	4.84e6	1.132e3	3.948e2	1.23	
1,2,3,6,7,8-HxCDD-13C	34:40	(M)1.60e7	1.33e7	6.56e6	5.31e6	6.535e3	1.408e3	1.20	
1,2,3,7,8,9-HxCDD-13C	34:52	1.87e7	1.54e7	7.28e6	6.12e6	3.179e3	2.875e3	1.22	
1,2,3,4,7,8-HxCDD	34:35	(M)3.62e4	(M)2.74e4	1.55e4	1.09e4	5.495e2	6.719e2	1.32	
1,2,3,6,7,8-HxCDD	34:40	(M)6.95e4	5.62e4	2.75e4	2.29e4	1.589e3	1.887e3	1.24	
1,2,3,7,8,9-HxCDD	34:54	6.98e4	6.63e4	4.51e4	4.14e4	1.137e3	2.524e3	1.05	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-1	Injected By	CVS
Lab ID	10654728001	Instrument ID	10MSHR15 (L)
Filename	L230610A_18	GC Column ID	US3225411H
Analyzed	06/10/2023 23:53	ICAL ID	L230610

Other HxCDD	1	33:20	5.69e5	4.99e5					1.14	
	2	33:50	7.11e4	6.07e4					1.17	
	3	34:03	3.17e5	2.63e5					1.21	
	4	34:09	1.33e5	1.22e5					1.09	
	5	34:49	1.23e5	1.17e5					1.05	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:19	1.02e7	2.23e7	4.06e6	8.68e6	4.103e3	4.719e3	0.46	
1,2,3,4,7,8,9-HpCDF-13C	37:41	7.54e6	1.70e7	2.55e6	5.85e6	4.103e3	4.719e3	0.44	
1,2,3,4,6,7,8-HpCDF	36:19	(M)7.36e5	(M)7.12e5	2.65e5	2.63e5	2.496e3	1.628e3	1.03	
1,2,3,4,7,8,9-HpCDF	37:41	(M)4.01e4	(M)2.08e4	1.18e4	8.56e3	1.172e3	1.628e3	1.93	I

Other HpCDF	1	36:43	7.67e5	7.45e5					1.03	
Ethers	1	36:53	1.38e5	1.49e5					0.93	P

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:13	1.73e7	1.63e7	6.39e6	6.03e6	2.399e4	3.216e3	1.07	
1,2,3,4,6,7,8-HpCDD	37:14	5.17e6	5.13e6	1.93e6	1.86e6	6.075e3	4.782e3	1.01	

Other HpCDD	1	36:34	1.16e7	1.15e7					1.01	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:08	3.83e5	4.56e5	1.07e5	1.31e5	7.521e2	1.109e3	0.84	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:55	1.89e7	2.29e7	5.80e6	7.17e6	3.763e3	3.395e3	0.83	
OCDD	39:56	2.05e8	2.40e8	6.32e7	7.29e7	9.618e2	1.022e3	0.86	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-2	Injected By	CVS
Lab ID	10654728002	Instrument ID	10MSHR15 (L)
Filename	L230610A_19	GC Column ID	US3225411H
Analyzed	06/11/2023 00:38	ICAL ID	L230610

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		23:46	1.47e7	2.04e7	2.33e6	3.18e6	3.046e3	1.205e3	0.72	
2,3,7,8-TCDF		23:49	2.84e5	(M)3.84e5	4.48e4	6.14e4	4.118e2	7.218e2	0.74	
Other TCDF	1	19:36	4.53e4	6.85e4					0.66	
	2	20:28	2.58e4	3.31e4					0.78	
	3	22:05	2.41e4	2.70e4					0.89	
	4	22:38	1.47e5	1.96e5					0.75	
	5	23:37	2.42e4	3.61e4					0.67	
	6	24:21	3.29e4	4.14e4					0.80	
	7	27:01	1.93e4	2.48e4					0.78	
Ethers	1	20:40	1.44e4	2.04e4					0.71	P
	2	27:32	2.03e4	2.55e4					0.79	P
	3	26:01	1.89e5	2.44e5					0.78	P
	4	26:22	7.24e4	1.00e5					0.72	P

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		24:04	2.38e7	2.90e7	3.80e6	4.63e6	3.152e3	1.463e3	0.82	
2,3,7,8-TCDD-13C		25:03	1.88e7	2.25e7	2.75e6	3.31e6	3.537e3	5.128e3	0.84	
2,3,7,8-TCDD-37Cl4		25:06	3.01e6		4.46e5		1.101e3	-----		
2,3,7,8-TCDD		25:06	(M)1.19e5	2.02e5	1.96e4	3.39e4	7.555e2	1.119e3	0.59	I
Other TCDD	1	25:35	1.93e4	2.45e4					0.79	
	2	20:25	3.03e4	4.12e4					0.74	
	3	22:10	1.48e4	1.88e4					0.79	
	4	24:11	4.50e4	6.65e4					0.68	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		30:11	1.44e7	9.91e6	3.92e6	2.74e6	6.566e2	5.939e2	1.45	
2,3,4,7,8-PeCDF-13C		31:13	1.40e7	9.61e6	4.37e6	3.01e6	1.532e3	1.117e3	1.45	
1,2,3,7,8-PeCDF		30:12	(M)1.72e4	(M)1.33e4	6.08e3	3.41e3	6.070e2	8.376e2	1.29	I
2,3,4,7,8-PeCDF		31:13	(M)2.90e4	(M)1.53e4	1.02e4	5.77e3	4.200e2	8.376e2	1.90	I
Other PeCDF	1	28:51	1.36e4	9.02e3					1.51	
	2	29:02	3.61e4	2.53e4					1.43	
	3	26:54	3.09e5	1.78e5					1.74	
Ethers	1	32:01	2.04e4	1.28e4					1.59	P
	2	32:09	4.72e4	3.34e4					1.41	P

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-2	Injected By	CVS
Lab ID	10654728002	Instrument ID	10MSHR15 (L)
Filename	L230610A_19	GC Column ID	US3225411H
Analyzed	06/11/2023 00:38	ICAL ID	L230610

	3	30:44	2.45e4	1.67e4	1.47	P
	4	29:26	9.31e4	6.99e4	1.33	P
	5	30:28	1.61e5	1.06e5	1.53	P

Penta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C		31:30	1.81e7	1.20e7	5.76e6	3.83e6	8.567e3	1.310e3	1.51	
1,2,3,7,8-PeCDD		31:30	(M)2.96e3	(M)7.58e3	4.49e3	4.95e3	6.400e2	1.302e3	0.39	I
Other PeCDD	1	31:56	1.20e4	2.00e4					0.60	
	2	29:04	2.72e4	4.62e4					0.59	
	3	30:29	7.65e3	1.41e4					0.54	
	4	31:33	4.51e3	8.53e3					0.53	

Hexa-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C		33:54	4.63e6	9.67e6	1.82e6	3.64e6	8.593e2	1.476e3	0.48	
1,2,3,6,7,8-HxCDF-13C		33:59	4.76e6	1.01e7	1.90e6	4.00e6	3.886e2	6.007e3	0.47	
2,3,4,6,7,8-HxCDF-13C		34:28	4.63e6	9.58e6	1.98e6	4.08e6	5.253e2	6.839e2	0.48	
1,2,3,7,8,9-HxCDF-13C		35:09	3.75e6	7.77e6	1.49e6	3.18e6	4.085e2	2.481e3	0.48	
1,2,3,4,7,8-HxCDF		33:55	(M)3.20e4	(M)2.97e4	1.10e4	9.97e3	3.814e2	4.067e2	1.08	
1,2,3,6,7,8-HxCDF		34:00	(M)2.66e4	(M)1.96e4	1.39e4	1.01e4	3.814e2	1.893e2	1.36	P
2,3,4,6,7,8-HxCDF		34:28	(M)9.92e3	(M)1.48e4	3.67e3	6.32e3	9.278e2	2.027e2	0.67	I
1,2,3,7,8,9-HxCDF		35:10	(M)1.53e4	(M)1.16e4	4.93e3	2.51e3	4.474e2	3.935e2	1.32	
Other HxCDF	1	32:49	2.79e4	2.56e4					1.09	
	2	32:59	8.18e4	5.88e4					1.39	
	3	33:30	1.09e5	9.29e4					1.17	
Ethers	1	35:43	1.38e4	1.18e4					1.16	P
	2	33:24	1.72e4	1.37e4					1.25	P
	3	34:21	3.53e4	3.07e4					1.15	P
	4	34:00	2.66e4	1.96e4					1.36	P
	5	33:39	1.08e5	8.70e4					1.24	P

Hexa-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C		34:35	1.17e7	9.47e6	5.19e6	4.14e6	3.667e3	1.740e3	1.23	
1,2,3,6,7,8-HxCDD-13C		34:40	1.24e7	1.03e7	5.27e6	4.29e6	3.894e3	1.740e3	1.21	
1,2,3,7,8,9-HxCDD-13C		34:52	1.57e7	1.32e7	6.31e6	5.47e6	1.714e3	1.191e3	1.18	
1,2,3,4,7,8-HxCDD		34:36	(M)3.39e4	(M)2.57e4	2.14e4	1.00e4	2.791e2	5.878e2	1.32	
1,2,3,6,7,8-HxCDD		34:41	(M)5.53e4	(M)4.72e4	2.12e4	1.79e4	7.789e2	7.697e2	1.17	
1,2,3,7,8,9-HxCDD		34:52	6.27e4	(M)4.66e4	3.00e4	2.50e4	7.789e2	5.459e2	1.34	
Other HxCDD	1	33:20	5.45e5	4.70e5					1.16	

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-2	Injected By	CVS
Lab ID	10654728002	Instrument ID	10MSHR15 (L)
Filename	L230610A_19	GC Column ID	US3225411H
Analyzed	06/11/2023 00:38	ICAL ID	L230610

	2	33:50	8.08e4	7.40e4	1.09	
	3	34:03	2.98e5	2.67e5	1.12	
	4	34:09	1.29e5	1.22e5	1.06	
	5	34:48	8.07e4	7.34e4	1.10	

Hepta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C		36:19	8.12e6	1.84e7	3.12e6	7.26e6	2.895e3	3.506e3	0.44	
1,2,3,4,7,8,9-HpCDF-13C		37:41	5.89e6	1.34e7	2.04e6	4.62e6	1.866e3	2.122e3	0.44	
1,2,3,4,6,7,8-HpCDF		36:19	(M)4.55e5	(M)4.61e5	1.70e5	1.79e5	1.430e3	1.045e3	0.99	
1,2,3,4,7,8,9-HpCDF		37:42	(M)2.51e4	(M)1.95e4	9.99e3	5.93e3	1.183e3	9.799e2	1.29	I
Other HpCDF	1	36:43	6.22e5	6.25e5					1.00	
Ethers	1	36:52	7.99e4	8.29e4					0.96	P

Hepta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C		37:13	1.38e7	1.32e7	5.18e6	4.89e6	1.401e4	1.644e4	1.05	
1,2,3,4,6,7,8-HpCDD		37:14	5.22e6	5.23e6	1.82e6	1.78e6	6.024e3	4.215e3	1.00	
Other HpCDD	1	36:34	1.14e7	1.09e7					1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:07	(M)3.16e5	3.59e5	9.67e4	1.14e5	7.739e1	2.853e2	0.88	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:55	(M)1.37e7	1.75e7	4.38e6	5.40e6	2.001e3	3.970e2	0.78	
OCDD	39:56	1.99e8	2.32e8	6.08e7	6.98e7	8.004e2	1.644e3	0.86	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-3	Injected By	CVS
Lab ID	10654728003	Instrument ID	10MSHR15 (L)
Filename	L230610A_20	GC Column ID	US3225411H
Analyzed	06/11/2023 01:24	ICAL ID	L230610

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		23:45	1.52e7	2.10e7	2.32e6	3.14e6	1.954e3	2.472e3	0.73	
2,3,7,8-TCDF		23:46	3.16e5	4.13e5	5.14e4	6.62e4	9.258e2	9.419e2	0.77	
Other TCDF	1	19:37	3.39e4	3.97e4					0.85	
	2	20:07	1.80e4	2.59e4					0.70	
	3	20:26	3.15e4	3.70e4					0.85	
	4	22:05	1.76e4	2.30e4					0.77	
	5	24:16	3.59e4	5.11e4					0.70	
	6	22:37	1.46e5	2.14e5					0.68	
Ethers	1	26:00	1.61e5	2.01e5					0.80	P

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		24:02	2.76e7	3.35e7	4.24e6	5.12e6	3.219e3	1.137e3	0.82	
2,3,7,8-TCDD-13C		25:02	1.91e7	2.35e7	2.83e6	3.46e6	2.225e3	4.106e3	0.81	
2,3,7,8-TCDD-37Cl4		25:05	3.13e6		4.69e5		2.063e3	-----		
2,3,7,8-TCDD		25:04	1.18e5	(M)1.58e5	2.09e4	2.28e4	6.470e2	7.832e2	0.75	
Other TCDD	1	22:10	2.39e4	3.15e4					0.76	
	2	24:07	7.55e4	1.02e5					0.74	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		30:10	1.43e7	1.00e7	3.95e6	2.75e6	5.625e3	6.416e2	1.42	
2,3,4,7,8-PeCDF-13C		31:12	1.36e7	9.51e6	4.62e6	3.08e6	1.725e3	2.276e3	1.43	
1,2,3,7,8-PeCDF		30:11	(M)1.36e4	(M)1.13e4	3.92e3	3.05e3	3.839e2	5.442e2	1.20	I
2,3,4,7,8-PeCDF		31:13	(M)2.25e4	(M)1.87e4	6.18e3	6.21e3	3.682e2	4.017e2	1.21	I
Other PeCDF	1	29:43	9.84e3	6.24e3					1.58	
	2	29:59	8.67e3	5.71e3					1.52	
	3	26:53	2.91e5	1.69e5					1.73	
Ethers	1	32:09	3.09e4	2.33e4					1.33	P
	2	30:27	1.05e5	7.37e4					1.43	P

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	1.77e7	1.18e7	5.55e6	3.70e6	8.661e3	5.086e3	1.51	

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-3	Injected By	CVS
Lab ID	10654728003	Instrument ID	10MSHR15 (L)
Filename	L230610A_20	GC Column ID	US3225411H
Analyzed	06/11/2023 01:24	ICAL ID	L230610

1,2,3,7,8-PeCDD		31:30	(M)6.42e3	(M)1.17e4	6.15e3	4.24e3	8.539e2	1.227e3	0.55	
Other PeCDD	1	29:02	2.55e4	4.37e4					0.58	
	2	29:39	2.36e4	3.54e4					0.67	
	3	31:06	7.65e4	1.32e5					0.58	

Hexa-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C		33:53	4.38e6	8.99e6	1.78e6	3.67e6	3.223e2	8.499e2	0.49	
1,2,3,6,7,8-HxCDF-13C		33:59	4.60e6	9.59e6	1.69e6	3.49e6	5.456e2	8.427e2	0.48	
2,3,4,6,7,8-HxCDF-13C		34:27	4.39e6	9.06e6	1.66e6	3.54e6	5.456e2	3.570e2	0.48	
1,2,3,7,8,9-HxCDF-13C		35:08	3.41e6	7.42e6	1.28e6	2.90e6	1.614e3	3.483e3	0.46	
1,2,3,4,7,8-HxCDF		33:54	(M)2.06e4	(M)2.19e4	1.03e4	7.98e3	4.547e2	4.281e2	0.94	I
1,2,3,6,7,8-HxCDF		33:59	(M)2.30e4	(M)1.63e4	8.83e3	5.86e3	3.906e2	4.043e2	1.41	P
2,3,4,6,7,8-HxCDF		34:29	(M)1.96e4	(M)1.07e4	1.07e4	4.87e3	4.133e2	9.316e1	1.82	I
1,2,3,7,8,9-HxCDF		35:10	(M)8.26e3	(M)1.03e4	4.04e3	3.82e3	4.547e2	4.748e2	0.80	I
Other HxCDF	1	33:29	8.12e4	7.34e4					1.11	
	2	32:58	6.35e4	5.84e4					1.09	
Ethers	1	33:23	1.15e4	8.88e3					1.29	P
	2	33:38	9.64e4	8.14e4					1.18	P
	3	33:59	2.30e4	1.63e4					1.41	P
	4	34:21	3.01e4	2.18e4					1.38	P

Hexa-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C		34:34	1.10e7	9.15e6	4.77e6	4.00e6	4.682e3	2.813e3	1.21	
1,2,3,6,7,8-HxCDD-13C		34:39	1.20e7	1.01e7	5.20e6	4.33e6	4.135e3	3.834e2	1.19	
1,2,3,7,8,9-HxCDD-13C		34:52	1.74e7	1.47e7	6.94e6	5.64e6	2.992e3	2.713e3	1.19	
1,2,3,4,7,8-HxCDD		34:35	(M)2.59e4	(M)2.26e4	1.93e4	2.18e4	1.065e3	3.074e2	1.15	
1,2,3,6,7,8-HxCDD		34:40	(M)4.57e4	(M)5.15e4	1.93e4	2.19e4	1.065e3	3.928e2	0.89	I
1,2,3,7,8,9-HxCDD		34:53	(M)4.49e4	(M)4.30e4	5.05e4	4.66e4	1.065e3	3.928e2	1.04	I
Other HxCDD	1	33:20	4.75e5	4.33e5					1.10	
	2	33:50	8.52e4	6.82e4					1.25	
	3	34:03	2.66e5	2.35e5					1.13	
	4	34:08	1.23e5	1.07e5					1.14	
	5	34:48	1.20e5	1.06e5					1.13	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:18	8.23e6	1.82e7	3.04e6	7.08e6	1.525e3	2.541e3	0.45	
1,2,3,4,7,8,9-HpCDF-13C	37:41	6.08e6	1.38e7	2.09e6	4.67e6	1.525e3	2.541e3	0.44	
1,2,3,4,6,7,8-HpCDF	36:18	(M)4.66e5	(M)4.22e5	1.77e5	1.59e5	8.387e2	1.164e3	1.10	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-3	Injected By	CVS
Lab ID	10654728003	Instrument ID	10MSHR15 (L)
Filename	L230610A_20	GC Column ID	US3225411H
Analyzed	06/11/2023 01:24	ICAL ID	L230610

1,2,3,4,7,8,9-HpCDF		37:42	(M)2.61e4	(M)2.63e4	8.08e3	6.86e3	8.387e2	1.337e3	0.99	
Other HpCDF	1	36:43	5.95e5	5.66e5					1.05	
Ethers	1	36:52	6.32e4	7.09e4					0.89	P

Hepta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C		37:12	1.40e7	1.34e7	5.12e6	4.83e6	2.046e4	1.587e4	1.04	
1,2,3,4,6,7,8-HpCDD		37:13	4.33e6	4.36e6	1.65e6	1.59e6	6.704e2	2.569e3	0.99	
Other HpCDD	1	36:33	1.28e7	1.26e7					1.01	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:06	3.20e5	(M)3.59e5	9.37e4	1.05e5	2.461e2	4.016e2	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:54	1.39e7	1.67e7	4.32e6	5.34e6	4.974e2	9.937e2	0.83	
OCDD	39:55	1.45e8	1.73e8	4.52e7	5.28e7	6.246e2	8.601e2	0.84	

REPORT OF LABORATORY ANALYSIS

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Appendix E

Calibration Raw Data

REPORT OF LABORATORY ANALYSIS

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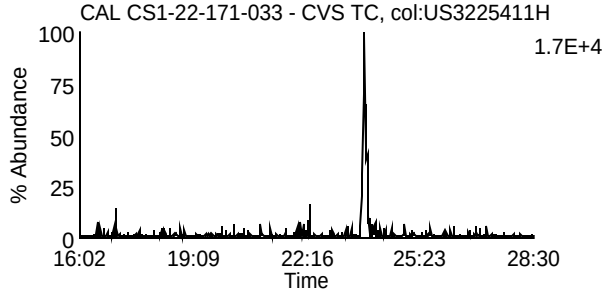
Homologue Group: Tetras

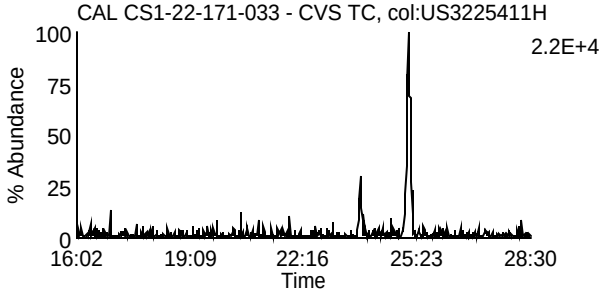
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

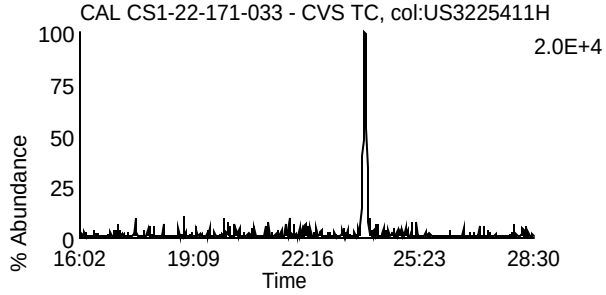
Data File: L230610A_02 G1 C1 - 303.9016
CAL CS1-22-171-033 - CVS TC, col:US3225411H



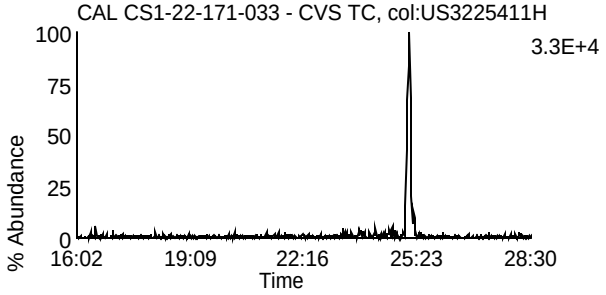
Data File: L230610A_02 G1 C7 - 319.8965
CAL CS1-22-171-033 - CVS TC, col:US3225411H



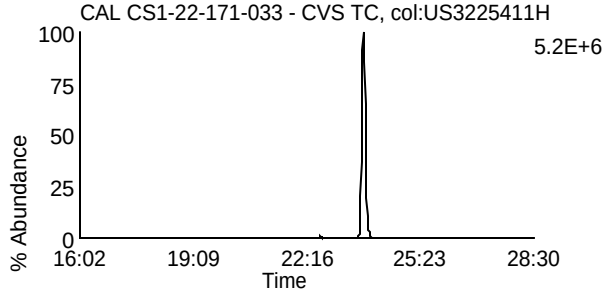
Data File: L230610A_02 G1 C2 - 305.8987
CAL CS1-22-171-033 - CVS TC, col:US3225411H



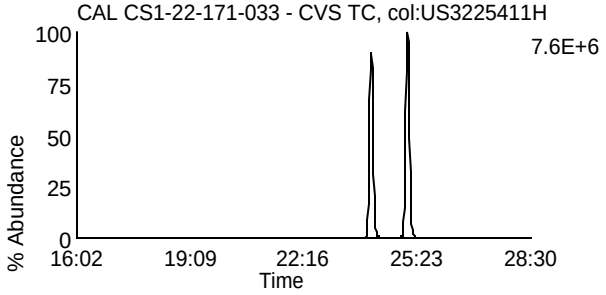
Data File: L230610A_02 G1 C8 - 321.8936
CAL CS1-22-171-033 - CVS TC, col:US3225411H



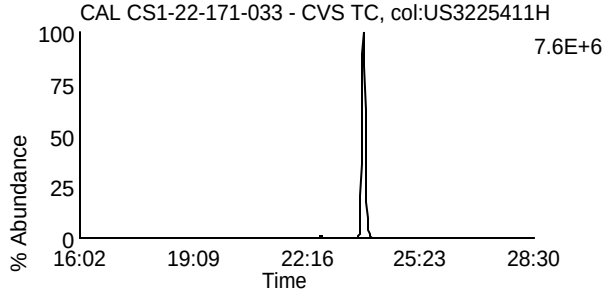
Data File: L230610A_02 G1 C3 - 315.9418
CAL CS1-22-171-033 - CVS TC, col:US3225411H



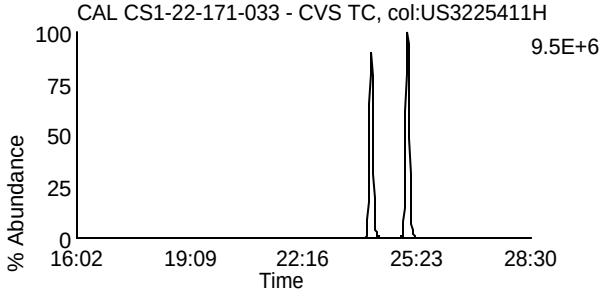
Data File: L230610A_02 G1 C10 - 331.9367
CAL CS1-22-171-033 - CVS TC, col:US3225411H



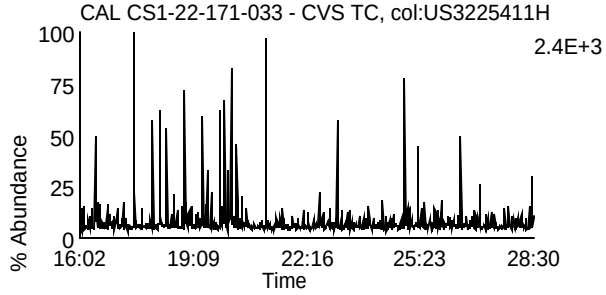
Data File: L230610A_02 G1 C4 - 317.9389
CAL CS1-22-171-033 - CVS TC, col:US3225411H



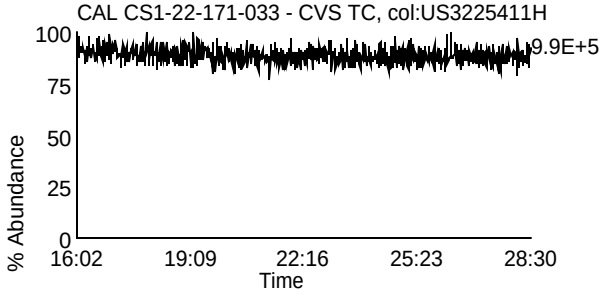
Data File: L230610A_02 G1 C11 - 333.9338
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G1 C14 - 375.8364
CAL CS1-22-171-033 - CVS TC, col:US3225411H



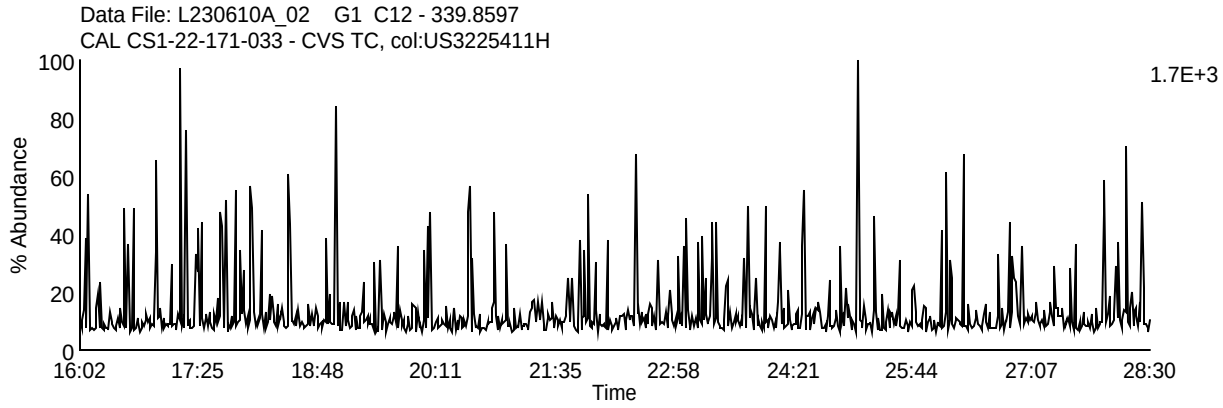
Data File: L230610A_02 G1 C5 - 318.9792
CAL CS1-22-171-033 - CVS TC, col:US3225411H

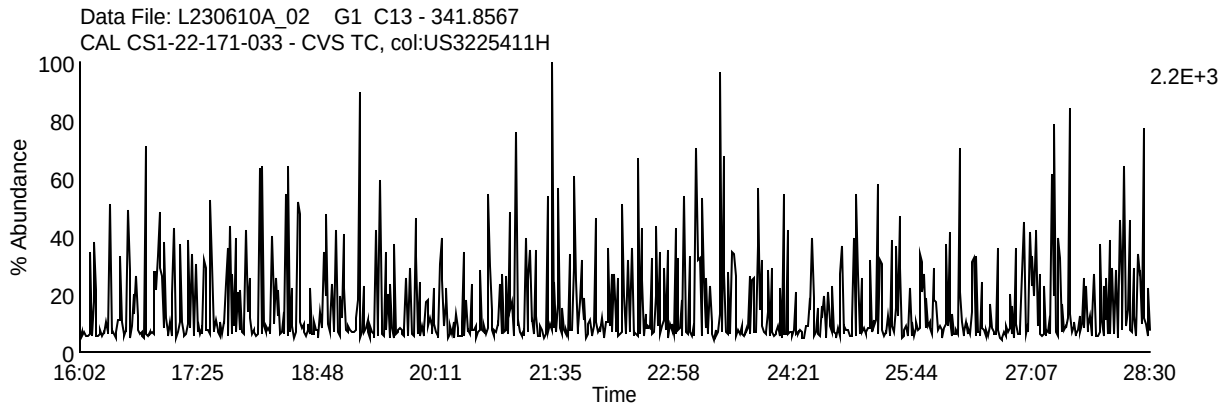


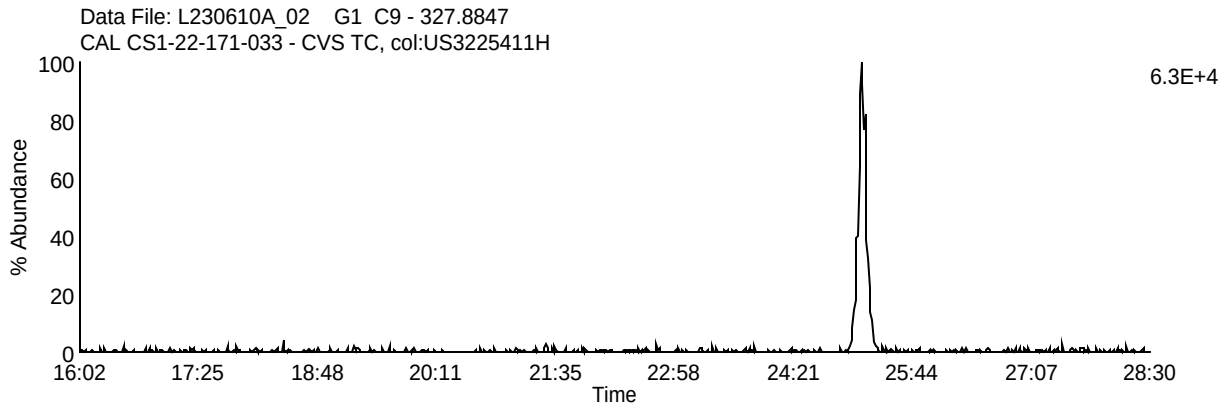
Homologue Group: Penta & Cleanup

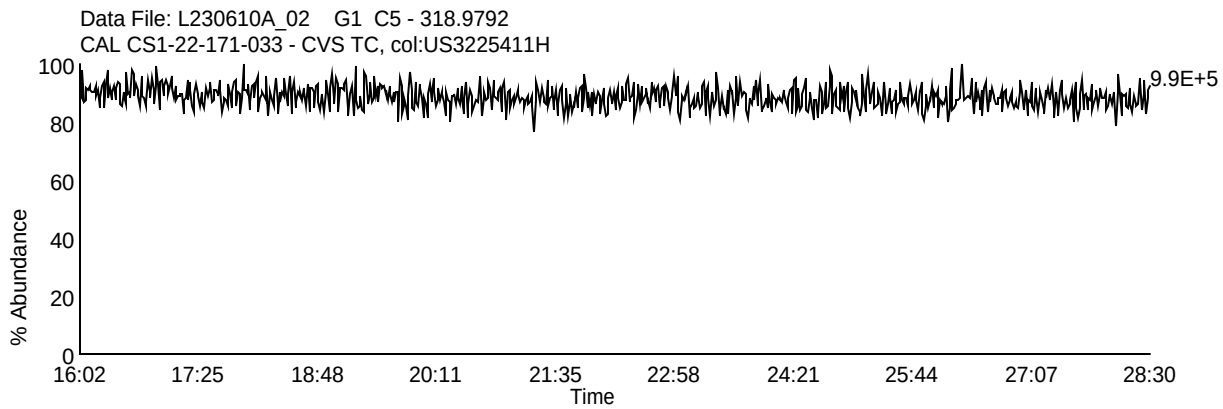
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)







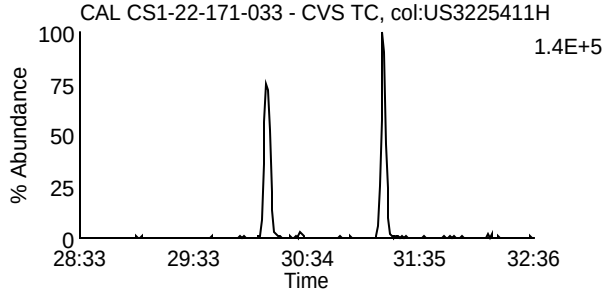


Homologue Group: Pentas

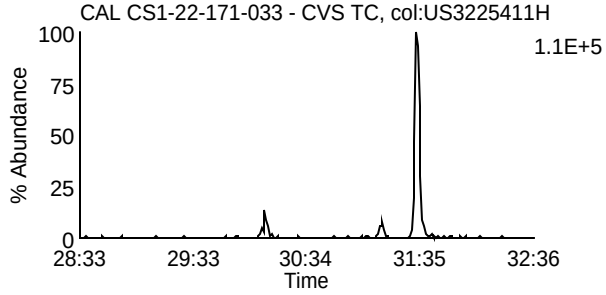
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

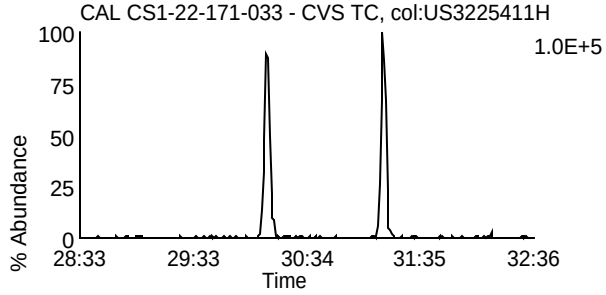
Data File: L230610A_02 G2 C1 - 339.8597
CAL CS1-22-171-033 - CVS TC, col:US3225411H



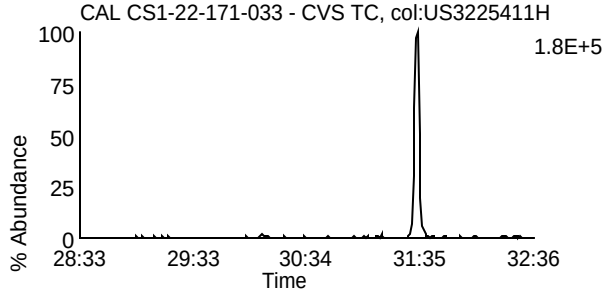
Data File: L230610A_02 G2 C4 - 353.8576
CAL CS1-22-171-033 - CVS TC, col:US3225411H



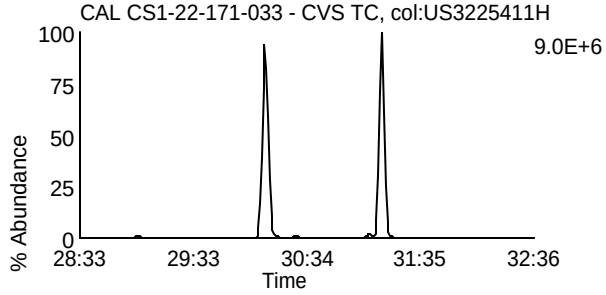
Data File: L230610A_02 G2 C2 - 341.8567
CAL CS1-22-171-033 - CVS TC, col:US3225411H



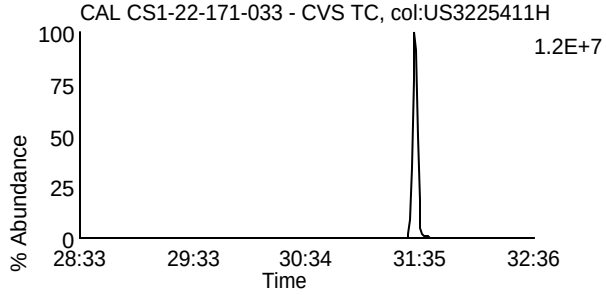
Data File: L230610A_02 G2 C8 - 355.8546
CAL CS1-22-171-033 - CVS TC, col:US3225411H



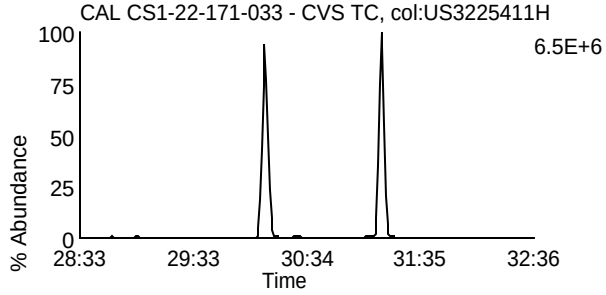
Data File: L230610A_02 G2 C3 - 351.8999
CAL CS1-22-171-033 - CVS TC, col:US3225411H



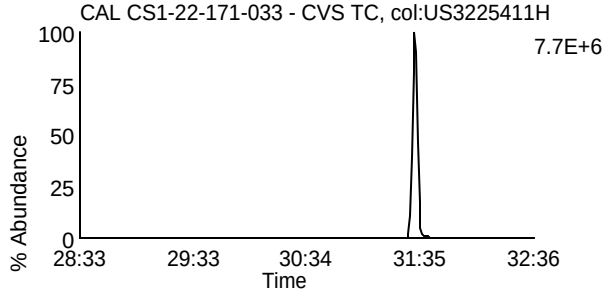
Data File: L230610A_02 G2 C10 - 367.8948
CAL CS1-22-171-033 - CVS TC, col:US3225411H



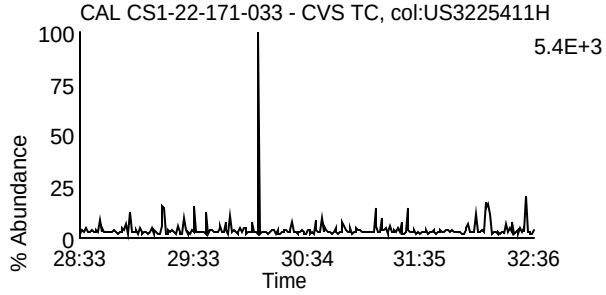
Data File: L230610A_02 G2 C5 - 353.8969
CAL CS1-22-171-033 - CVS TC, col:US3225411H



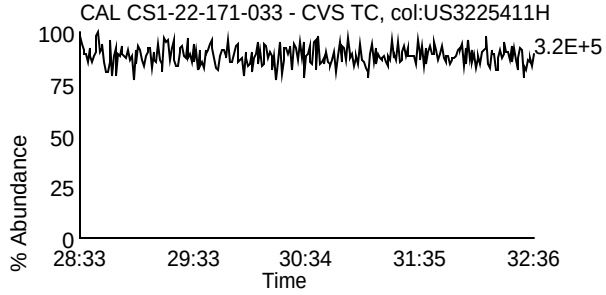
Data File: L230610A_02 G2 C11 - 369.8918
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G2 C12 - 409.7974
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G2 C6 - 354.9792
CAL CS1-22-171-033 - CVS TC, col:US3225411H

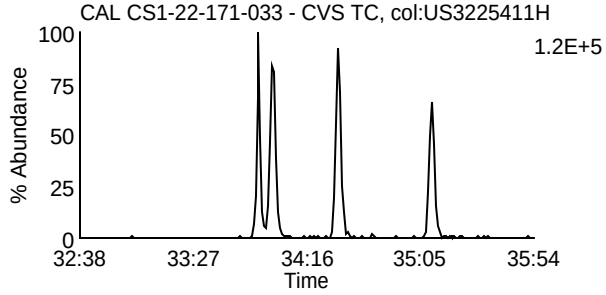


Homologue Group: Hexas

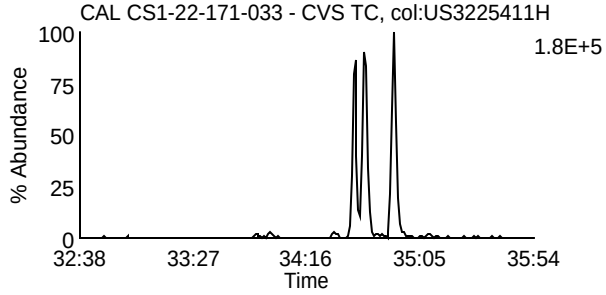
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

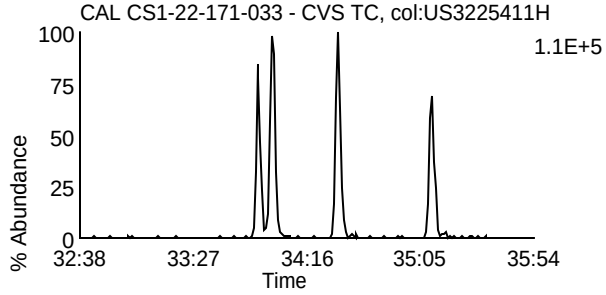
Data File: L230610A_02 G3 C1 - 373.8207
CAL CS1-22-171-033 - CVS TC, col:US3225411H



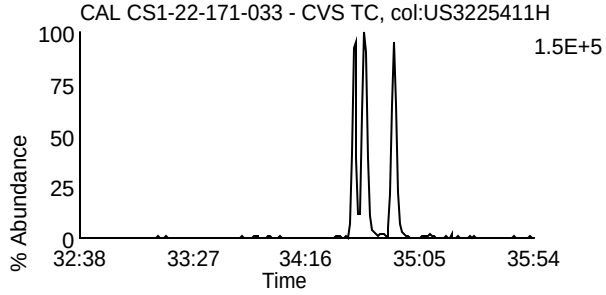
Data File: L230610A_02 G3 C7 - 389.8156
CAL CS1-22-171-033 - CVS TC, col:US3225411H



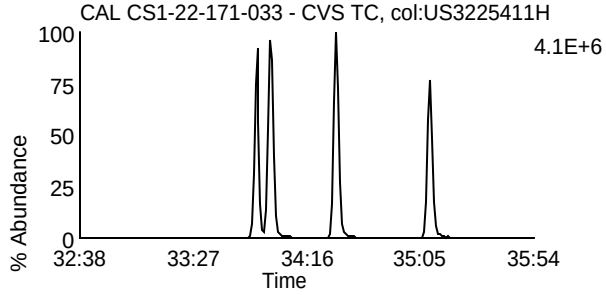
Data File: L230610A_02 G3 C2 - 375.8178
CAL CS1-22-171-033 - CVS TC, col:US3225411H



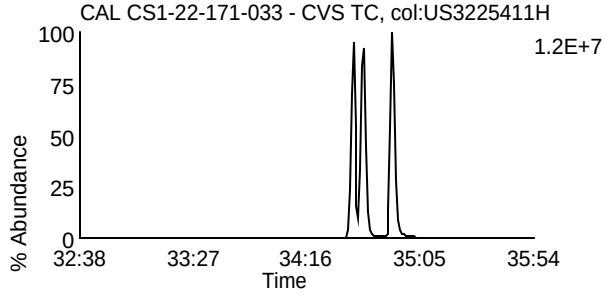
Data File: L230610A_02 G3 C8 - 391.8127
CAL CS1-22-171-033 - CVS TC, col:US3225411H



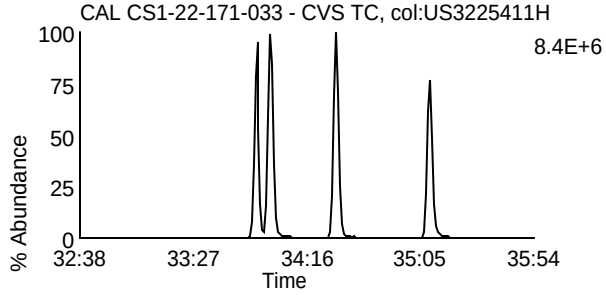
Data File: L230610A_02 G3 C5 - 383.8639
CAL CS1-22-171-033 - CVS TC, col:US3225411H



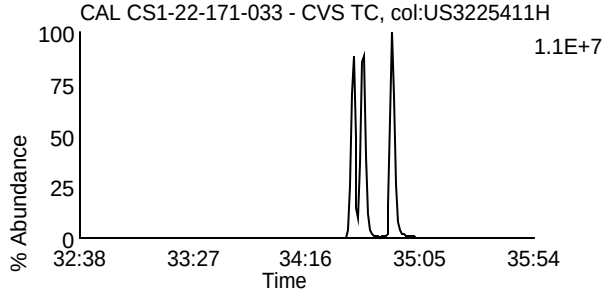
Data File: L230610A_02 G3 C9 - 401.8559
CAL CS1-22-171-033 - CVS TC, col:US3225411H



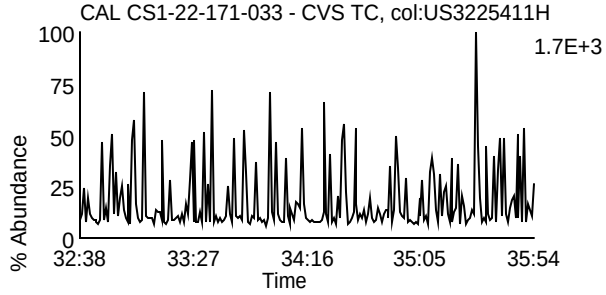
Data File: L230610A_02 G3 C6 - 385.861
CAL CS1-22-171-033 - CVS TC, col:US3225411H



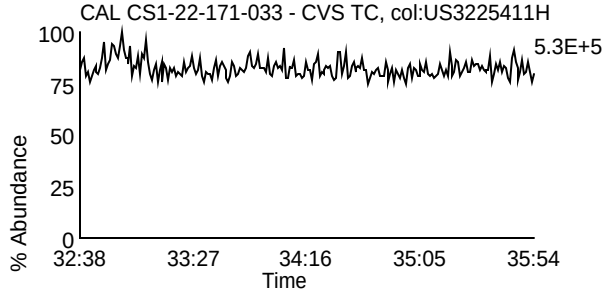
Data File: L230610A_02 G3 C10 - 403.8529
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G3 C11 - 445.7555
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G3 C3 - 380.976
CAL CS1-22-171-033 - CVS TC, col:US3225411H

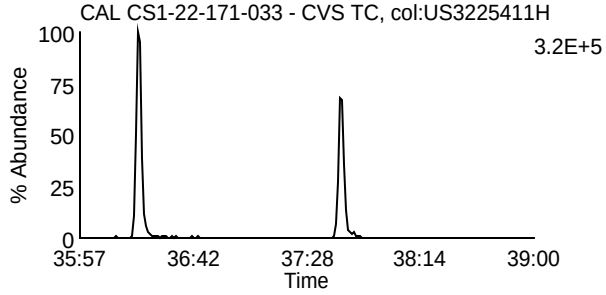


Homologue Group: Heptas

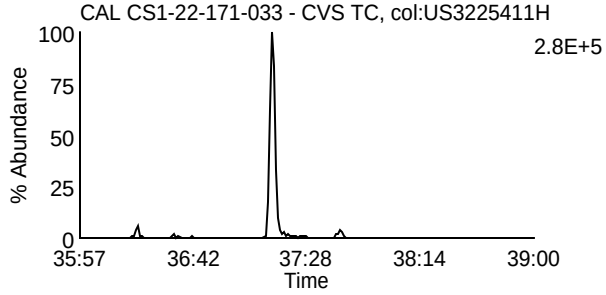
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

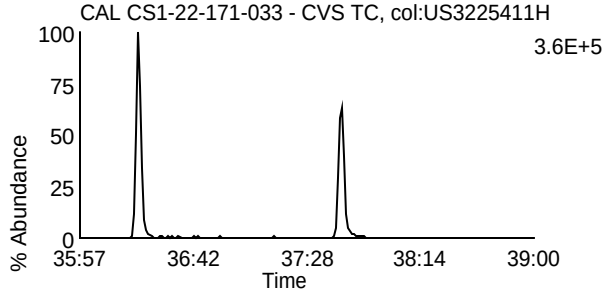
Data File: L230610A_02 G4 C3 - 407.7818
CAL CS1-22-171-033 - CVS TC, col:US3225411H



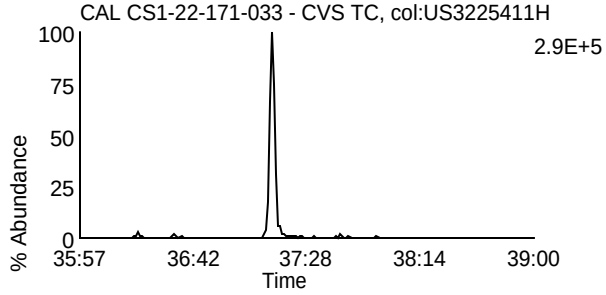
Data File: L230610A_02 G4 C8 - 423.7767
CAL CS1-22-171-033 - CVS TC, col:US3225411H



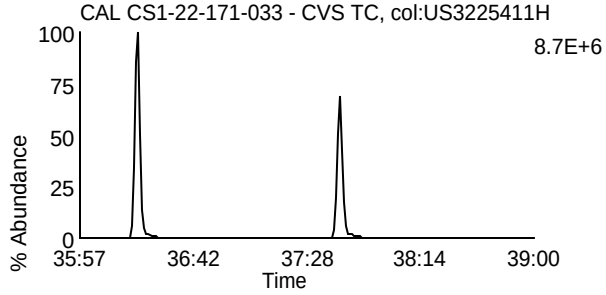
Data File: L230610A_02 G4 C4 - 409.7788
CAL CS1-22-171-033 - CVS TC, col:US3225411H



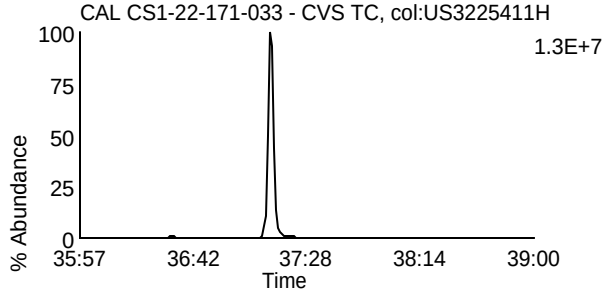
Data File: L230610A_02 G4 C9 - 425.7737
CAL CS1-22-171-033 - CVS TC, col:US3225411H



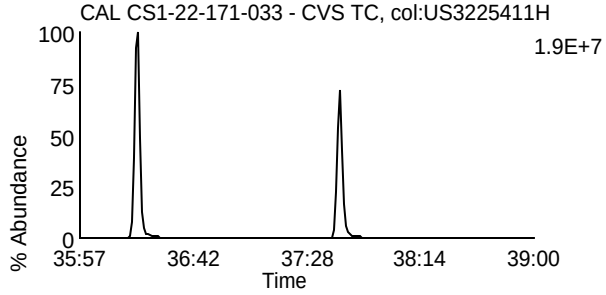
Data File: L230610A_02 G4 C6 - 417.825
CAL CS1-22-171-033 - CVS TC, col:US3225411H



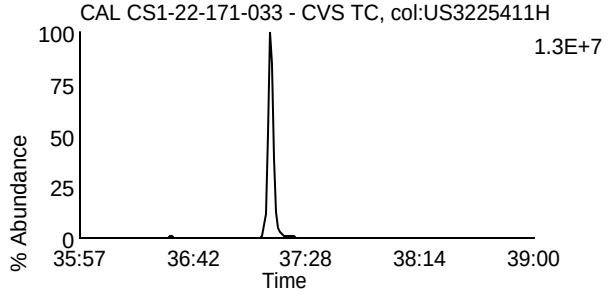
Data File: L230610A_02 G4 C11 - 435.8169
CAL CS1-22-171-033 - CVS TC, col:US3225411H



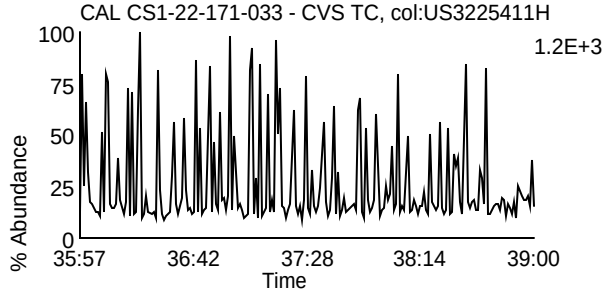
Data File: L230610A_02 G4 C7 - 419.822
CAL CS1-22-171-033 - CVS TC, col:US3225411H



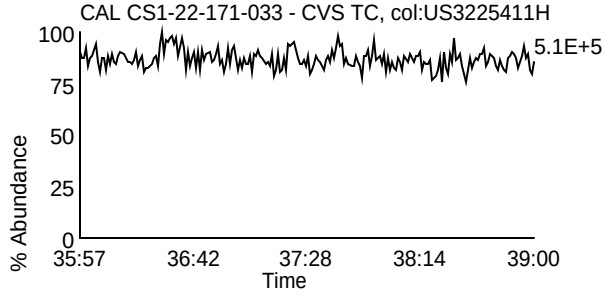
Data File: L230610A_02 G4 C12 - 437.814
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G4 C13 - 479.7165
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G4 C1 - 380.976
CAL CS1-22-171-033 - CVS TC, col:US3225411H

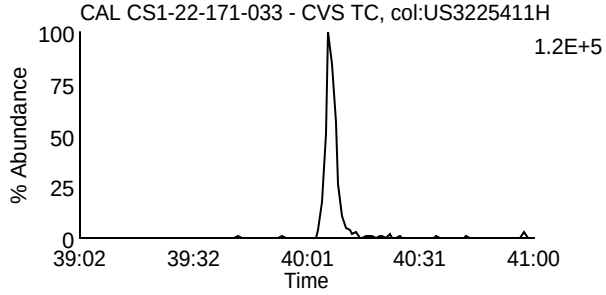


Homologue Group: Octas

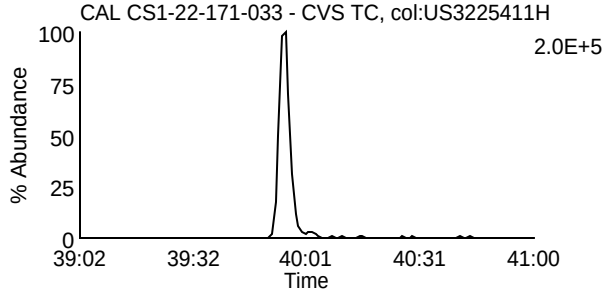
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

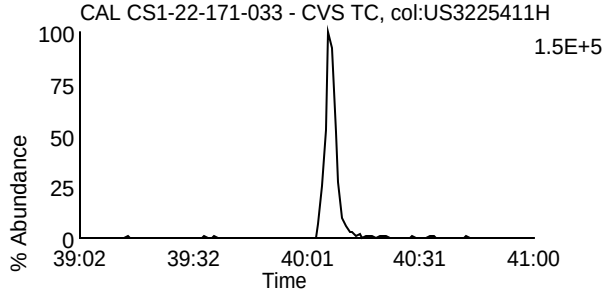
Data File: L230610A_02 G5 C4 - 441.7428
CAL CS1-22-171-033 - CVS TC, col:US3225411H



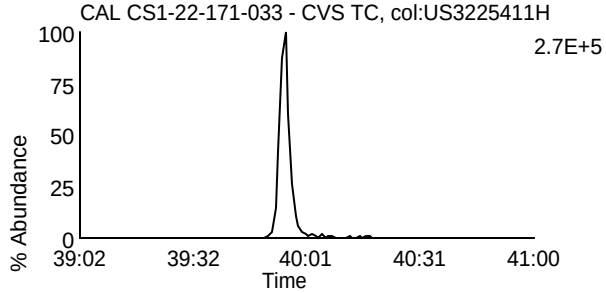
Data File: L230610A_02 G5 C8 - 457.7377
CAL CS1-22-171-033 - CVS TC, col:US3225411H



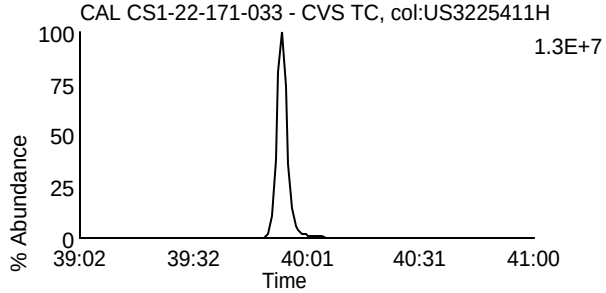
Data File: L230610A_02 G5 C5 - 443.7398
CAL CS1-22-171-033 - CVS TC, col:US3225411H



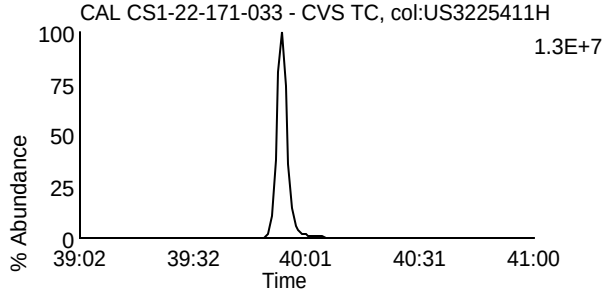
Data File: L230610A_02 G5 C9 - 459.7347
CAL CS1-22-171-033 - CVS TC, col:US3225411H



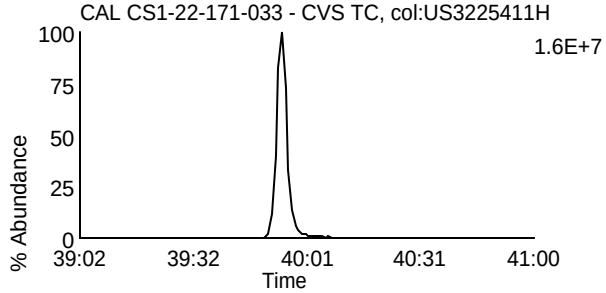
Data File: L230610A_02 G5 C11 - 469.7779
CAL CS1-22-171-033 - CVS TC, col:US3225411H



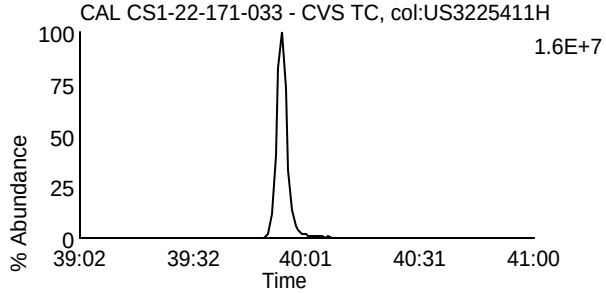
Data File: L230610A_02 G5 C11 - 469.7779
CAL CS1-22-171-033 - CVS TC, col:US3225411H



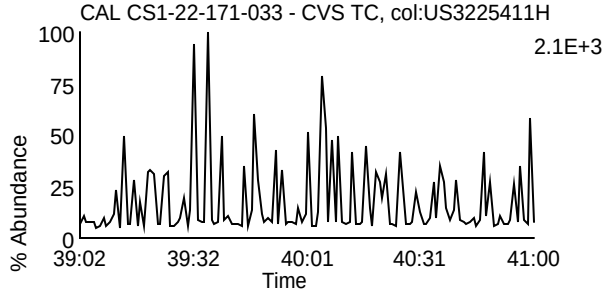
Data File: L230610A_02 G5 C12 - 471.7749
CAL CS1-22-171-033 - CVS TC, col:US3225411H



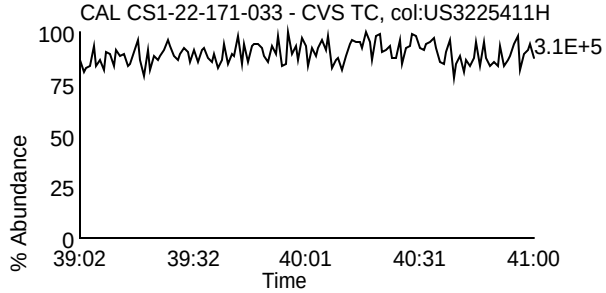
Data File: L230610A_02 G5 C12 - 471.7749
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G5 C13 - 513.6775
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G5 C2 - 430.9728
CAL CS1-22-171-033 - CVS TC, col:US3225411H

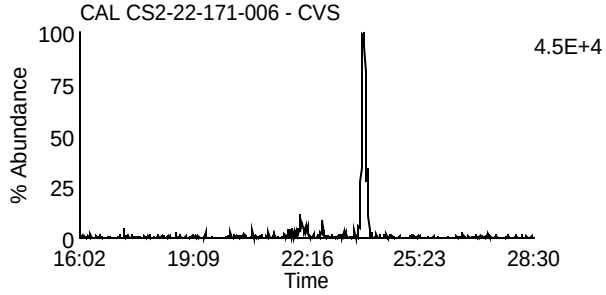


Homologue Group: Tetras

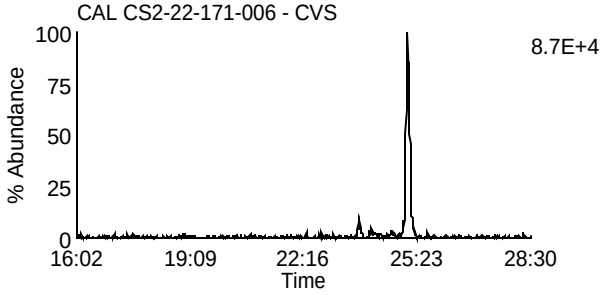
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

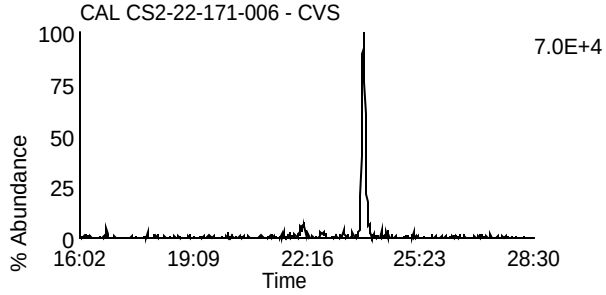
Data File: L230610A_03 G1 C1 - 303.9016
CAL CS2-22-171-006 - CVS



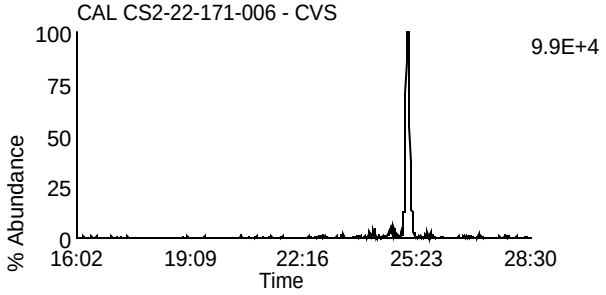
Data File: L230610A_03 G1 C7 - 319.8965
CAL CS2-22-171-006 - CVS



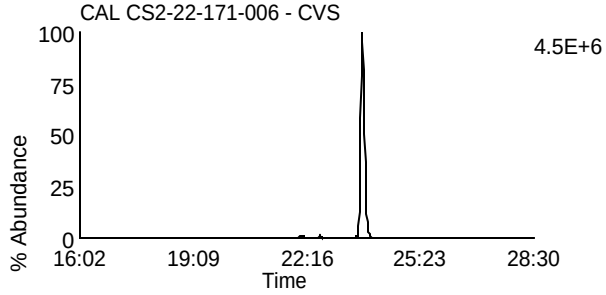
Data File: L230610A_03 G1 C2 - 305.8987
CAL CS2-22-171-006 - CVS



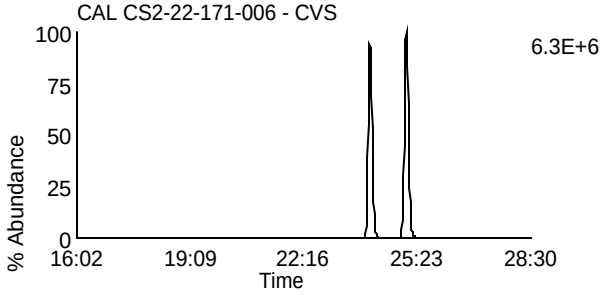
Data File: L230610A_03 G1 C8 - 321.8936
CAL CS2-22-171-006 - CVS



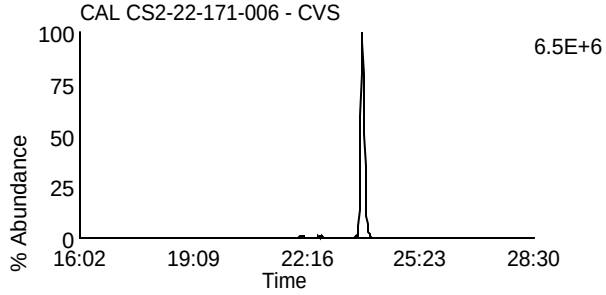
Data File: L230610A_03 G1 C3 - 315.9418
CAL CS2-22-171-006 - CVS



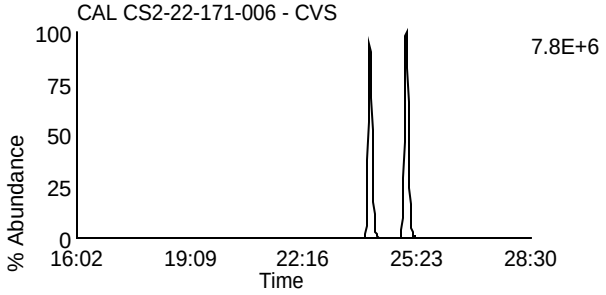
Data File: L230610A_03 G1 C10 - 331.9367
CAL CS2-22-171-006 - CVS



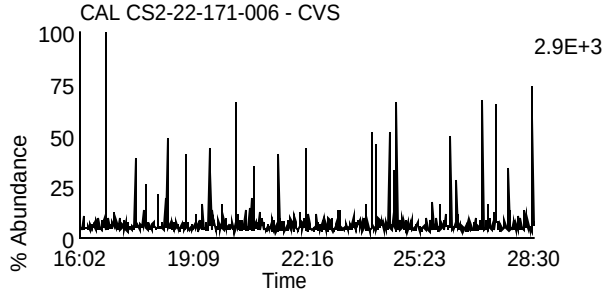
Data File: L230610A_03 G1 C4 - 317.9389
CAL CS2-22-171-006 - CVS



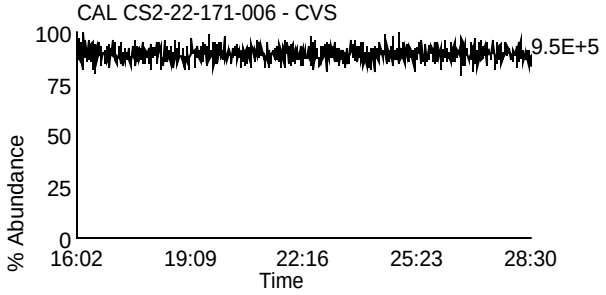
Data File: L230610A_03 G1 C11 - 333.9338
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C14 - 375.8364
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - CVS

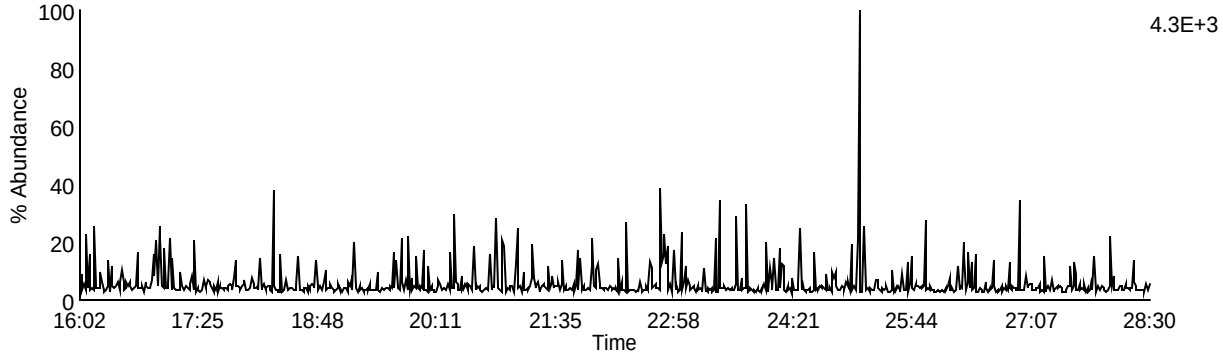


Homologue Group: Penta & Cleanup

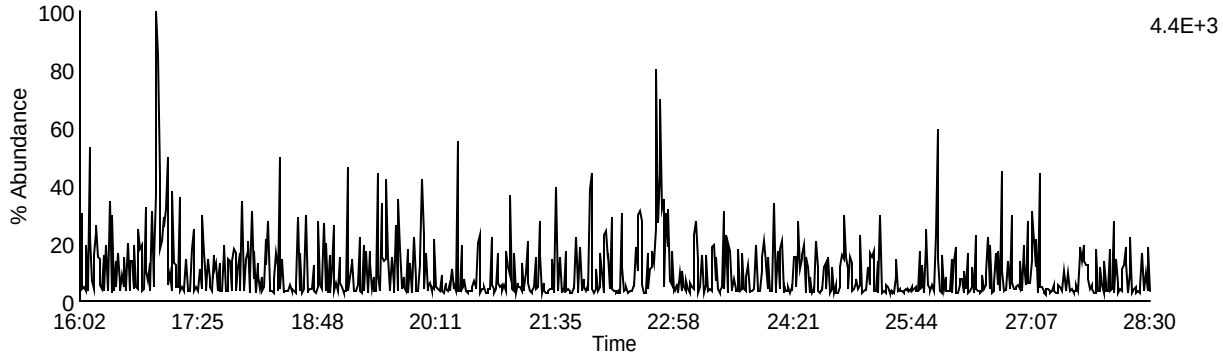
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

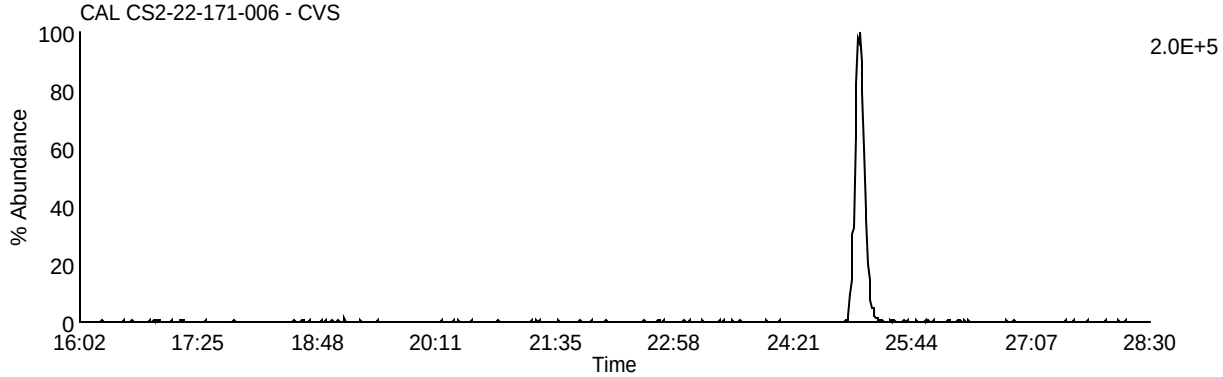
Data File: L230610A_03 G1 C12 - 339.8597
CAL CS2-22-171-006 - CVS



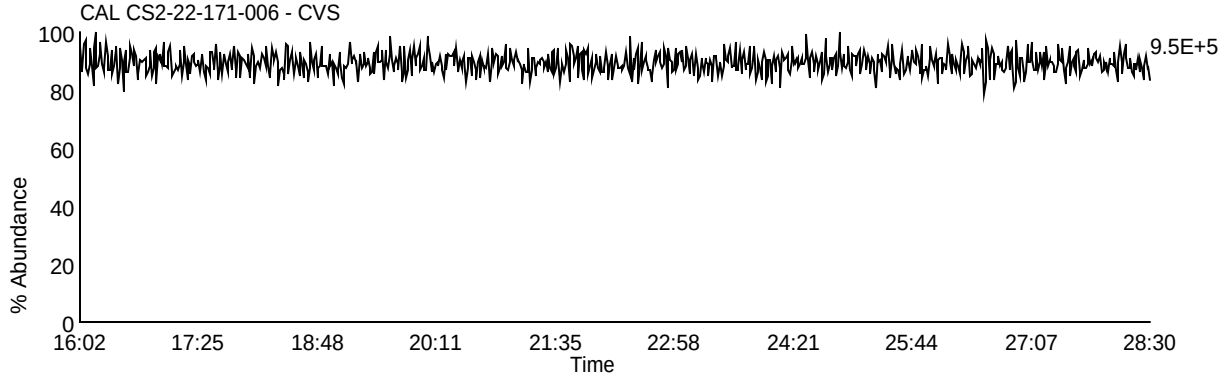
Data File: L230610A_03 G1 C13 - 341.8567
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C9 - 327.8847
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - CVS

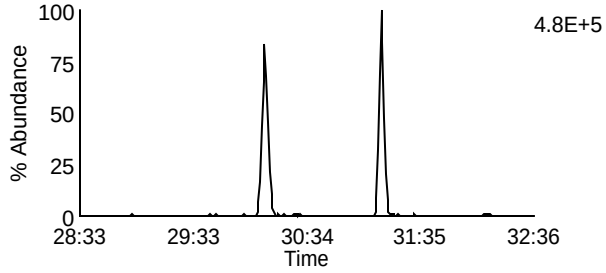


Homologue Group: Pentas

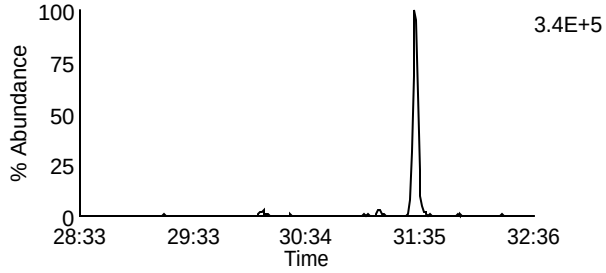
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

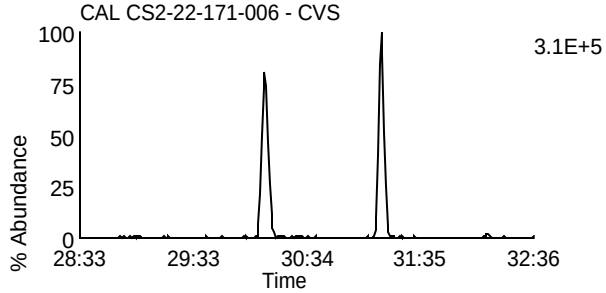
Data File: L230610A_03 G2 C1 - 339.8597
CAL CS2-22-171-006 - CVS



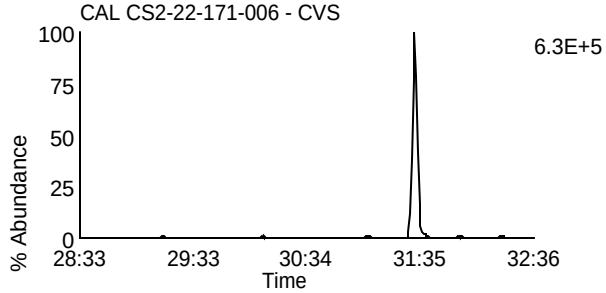
Data File: L230610A_03 G2 C4 - 353.8576
CAL CS2-22-171-006 - CVS



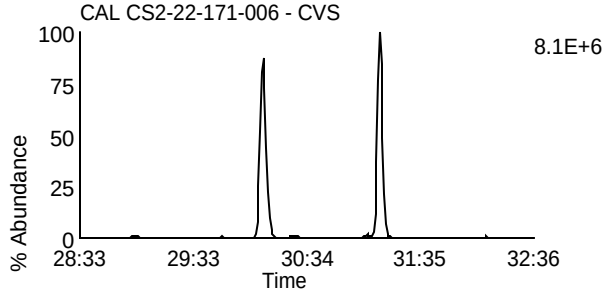
Data File: L230610A_03 G2 C2 - 341.8567
CAL CS2-22-171-006 - CVS



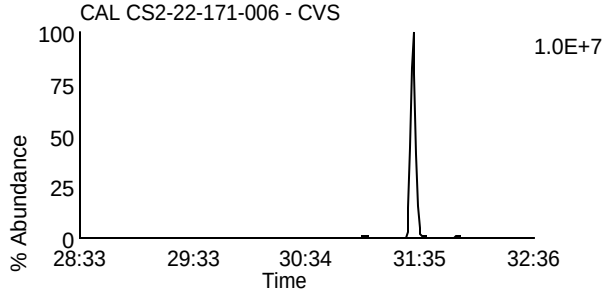
Data File: L230610A_03 G2 C8 - 355.8546
CAL CS2-22-171-006 - CVS



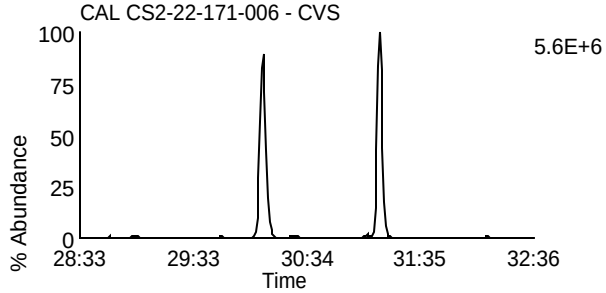
Data File: L230610A_03 G2 C3 - 351.8999
CAL CS2-22-171-006 - CVS



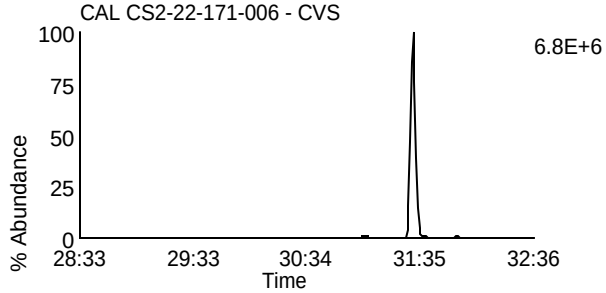
Data File: L230610A_03 G2 C10 - 367.8948
CAL CS2-22-171-006 - CVS



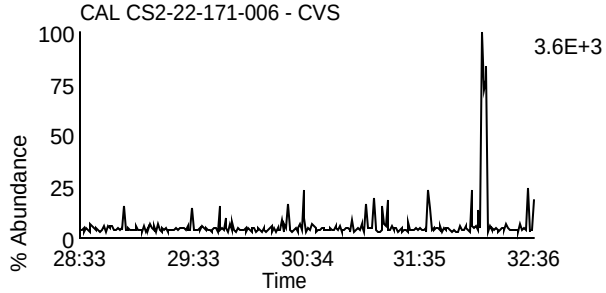
Data File: L230610A_03 G2 C5 - 353.8969
CAL CS2-22-171-006 - CVS



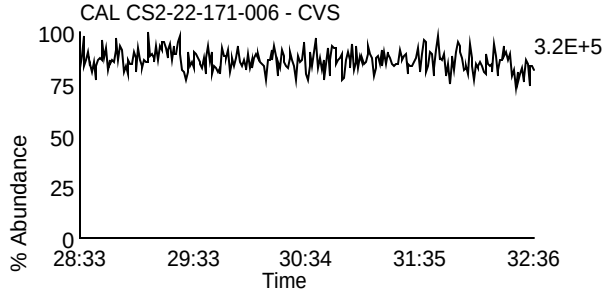
Data File: L230610A_03 G2 C11 - 369.8918
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G2 C12 - 409.7974
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G2 C6 - 354.9792
CAL CS2-22-171-006 - CVS

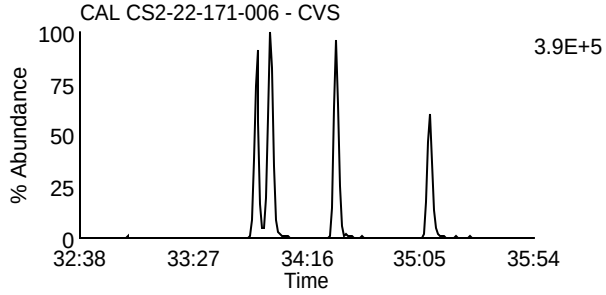


Homologue Group: Hexas

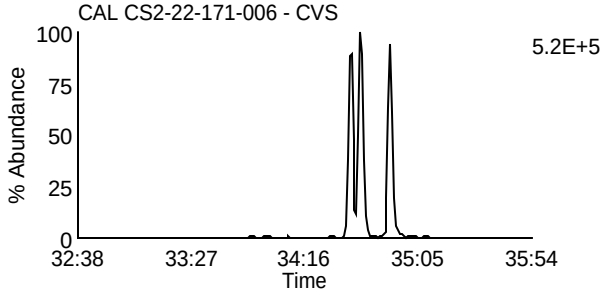
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

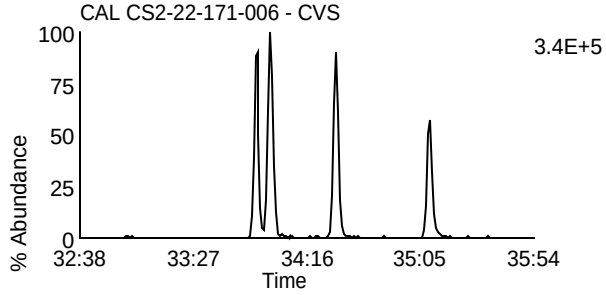
Data File: L230610A_03 G3 C1 - 373.8207
CAL CS2-22-171-006 - CVS



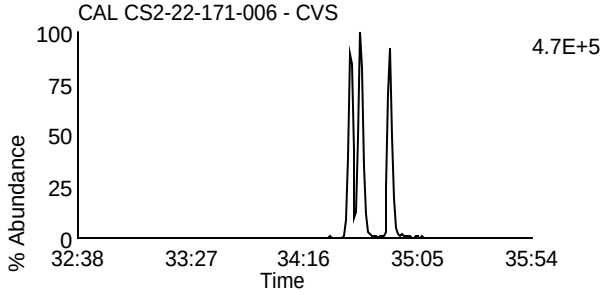
Data File: L230610A_03 G3 C7 - 389.8156
CAL CS2-22-171-006 - CVS



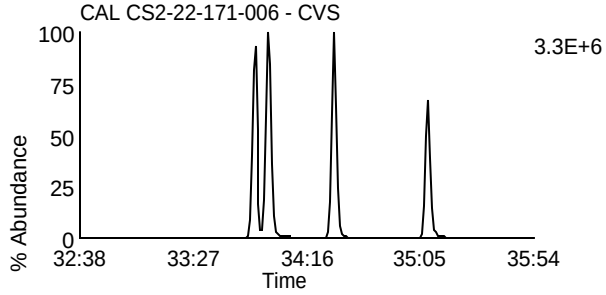
Data File: L230610A_03 G3 C2 - 375.8178
CAL CS2-22-171-006 - CVS



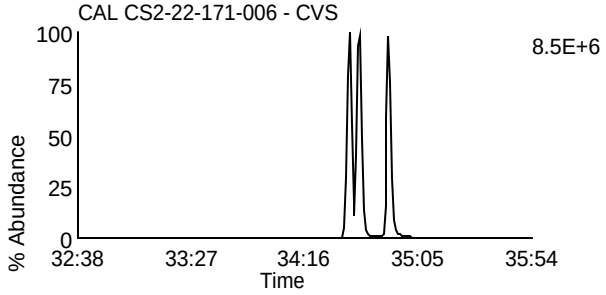
Data File: L230610A_03 G3 C8 - 391.8127
CAL CS2-22-171-006 - CVS



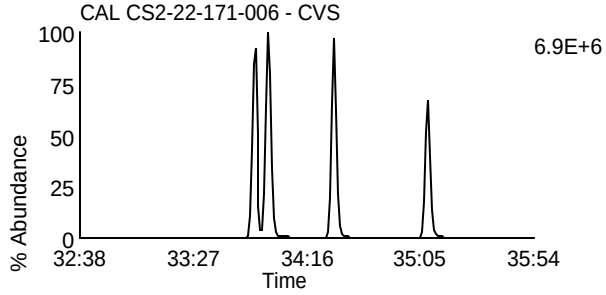
Data File: L230610A_03 G3 C5 - 383.8639
CAL CS2-22-171-006 - CVS



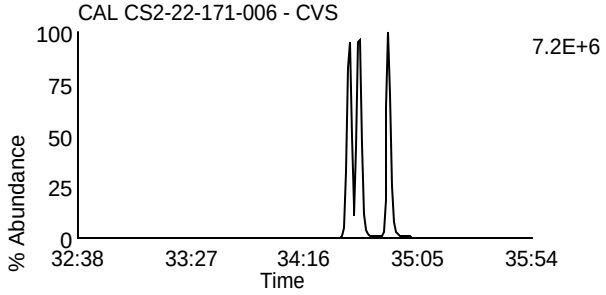
Data File: L230610A_03 G3 C9 - 401.8559
CAL CS2-22-171-006 - CVS



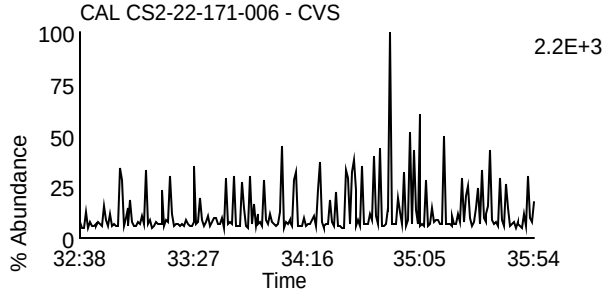
Data File: L230610A_03 G3 C6 - 385.861
CAL CS2-22-171-006 - CVS



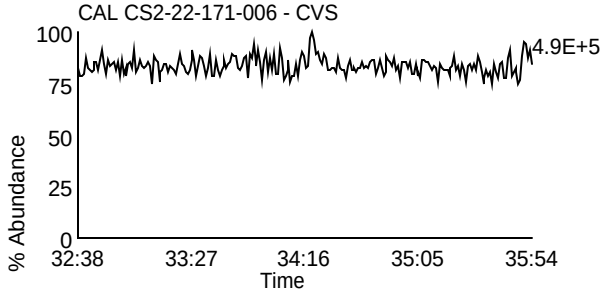
Data File: L230610A_03 G3 C10 - 403.8529
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G3 C11 - 445.7555
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G3 C3 - 380.976
CAL CS2-22-171-006 - CVS

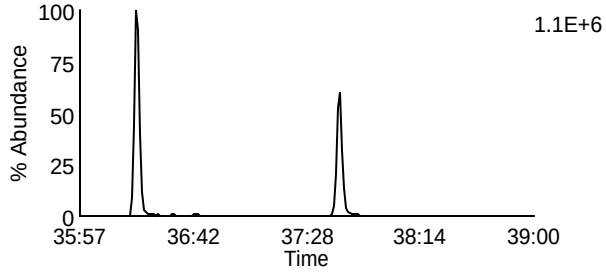


Homologue Group: Heptas

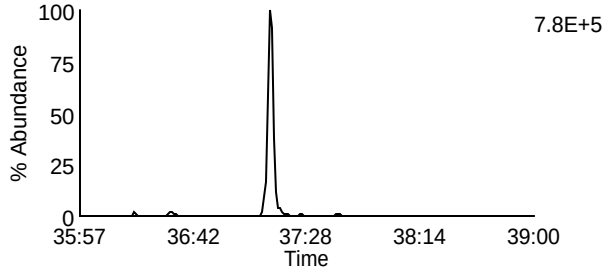
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

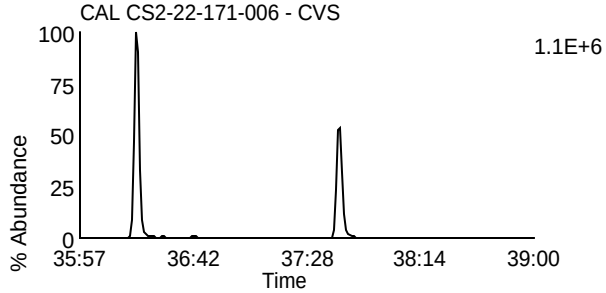
Data File: L230610A_03 G4 C3 - 407.7818
CAL CS2-22-171-006 - CVS



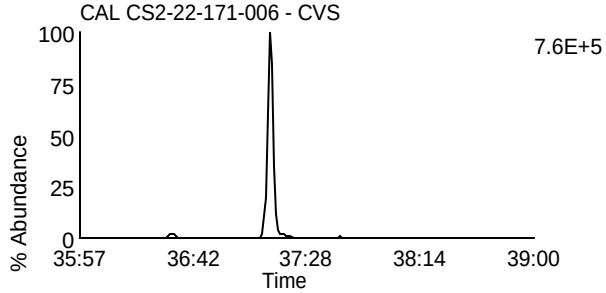
Data File: L230610A_03 G4 C8 - 423.7767
CAL CS2-22-171-006 - CVS



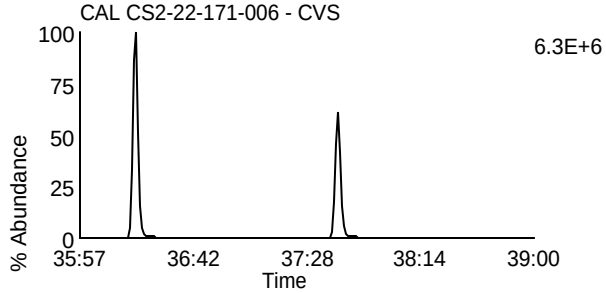
Data File: L230610A_03 G4 C4 - 409.7788
CAL CS2-22-171-006 - CVS



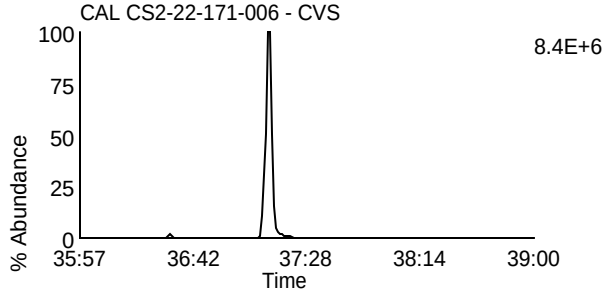
Data File: L230610A_03 G4 C9 - 425.7737
CAL CS2-22-171-006 - CVS



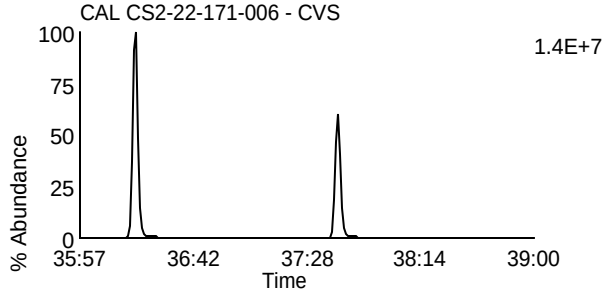
Data File: L230610A_03 G4 C6 - 417.825
CAL CS2-22-171-006 - CVS



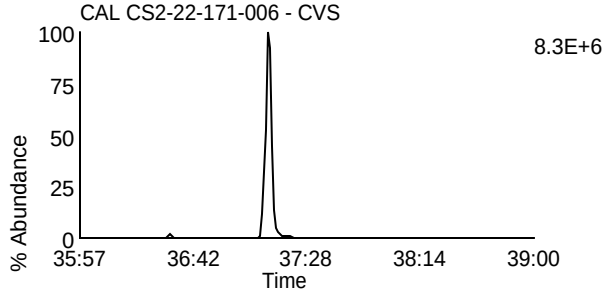
Data File: L230610A_03 G4 C11 - 435.8169
CAL CS2-22-171-006 - CVS



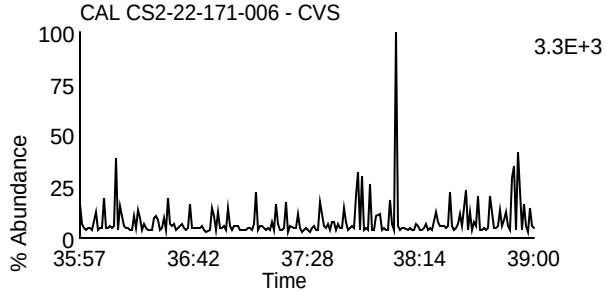
Data File: L230610A_03 G4 C7 - 419.822
CAL CS2-22-171-006 - CVS



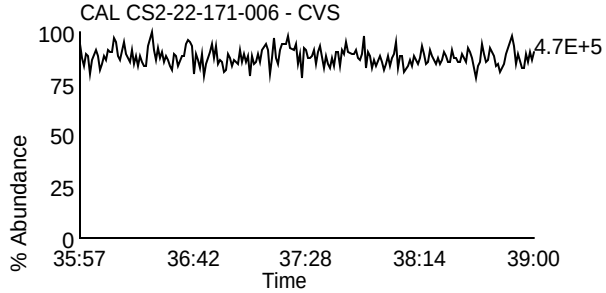
Data File: L230610A_03 G4 C12 - 437.814
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G4 C13 - 479.7165
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G4 C1 - 380.976
CAL CS2-22-171-006 - CVS

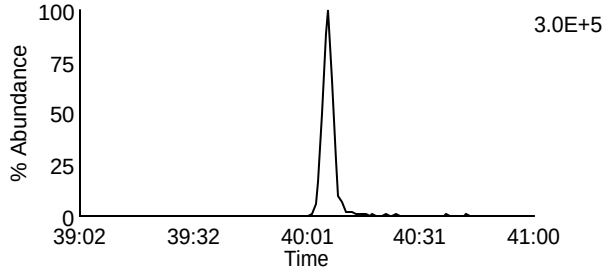


Homologue Group: Octas

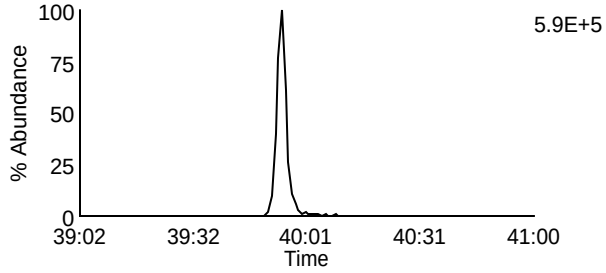
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

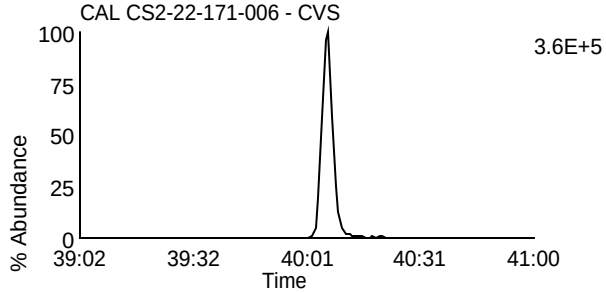
Data File: L230610A_03 G5 C4 - 441.7428
CAL CS2-22-171-006 - CVS



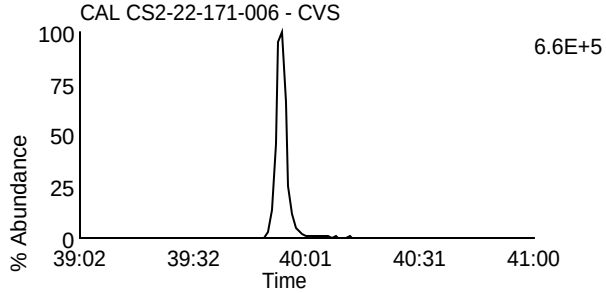
Data File: L230610A_03 G5 C8 - 457.7377
CAL CS2-22-171-006 - CVS



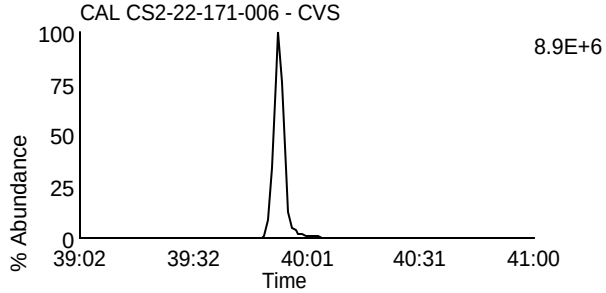
Data File: L230610A_03 G5 C5 - 443.7398
CAL CS2-22-171-006 - CVS



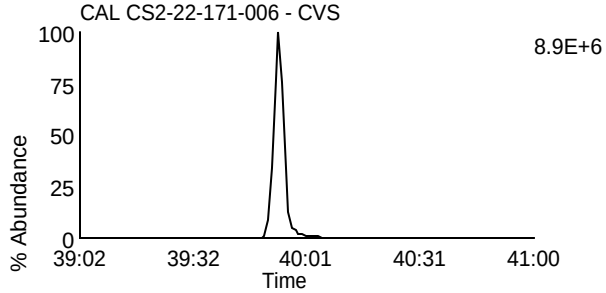
Data File: L230610A_03 G5 C9 - 459.7347
CAL CS2-22-171-006 - CVS



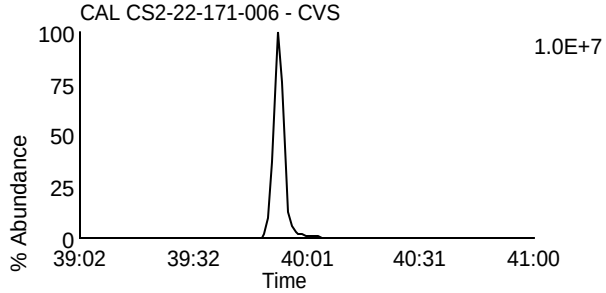
Data File: L230610A_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - CVS



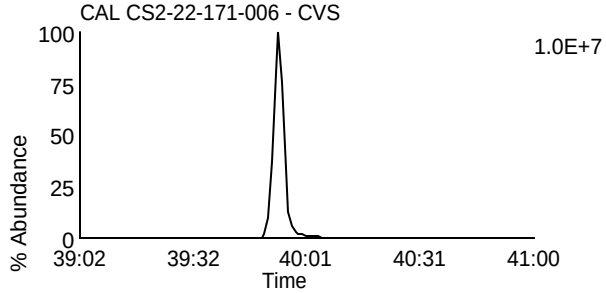
Data File: L230610A_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - CVS



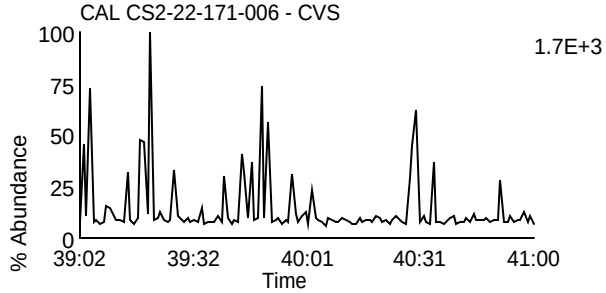
Data File: L230610A_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - CVS



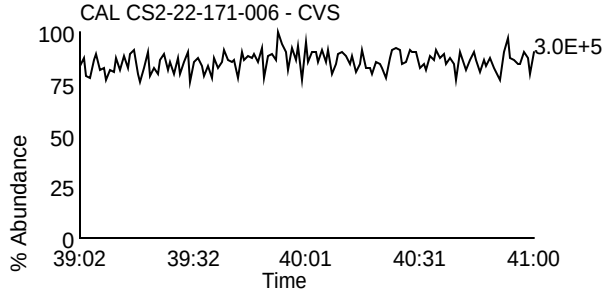
Data File: L230610A_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G5 C13 - 513.6775
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G5 C2 - 430.9728
CAL CS2-22-171-006 - CVS

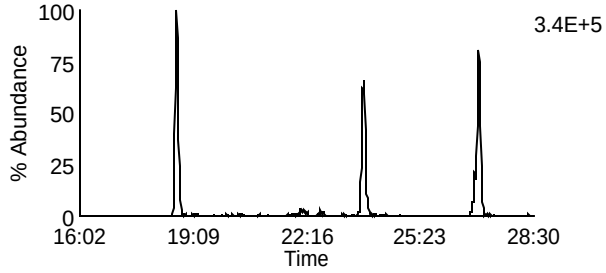


Homologue Group: Tetras

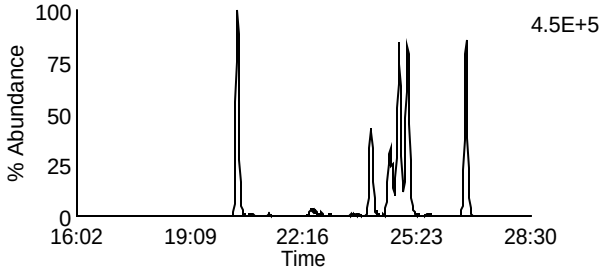
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

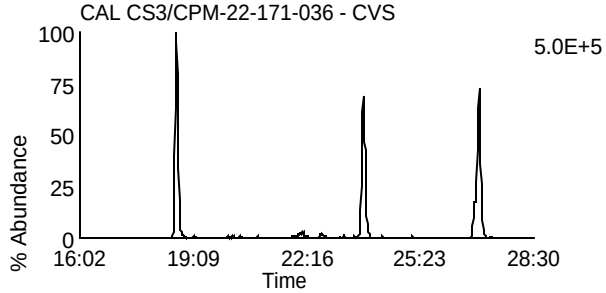
Data File: L230610A_06 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - CVS



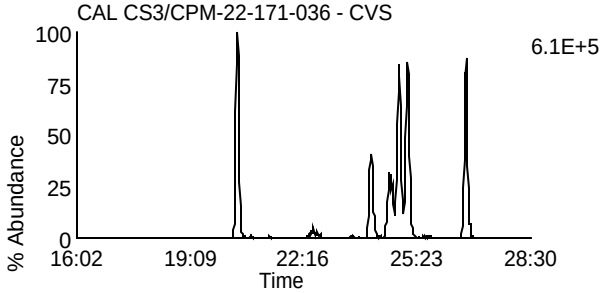
Data File: L230610A_06 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - CVS



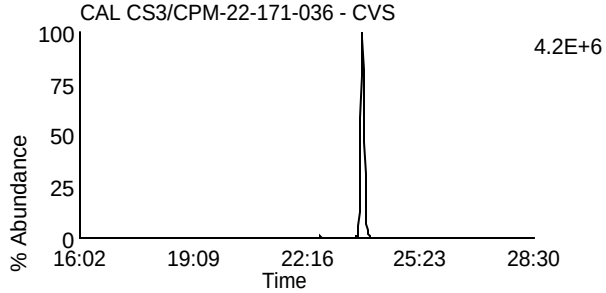
Data File: L230610A_06 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - CVS



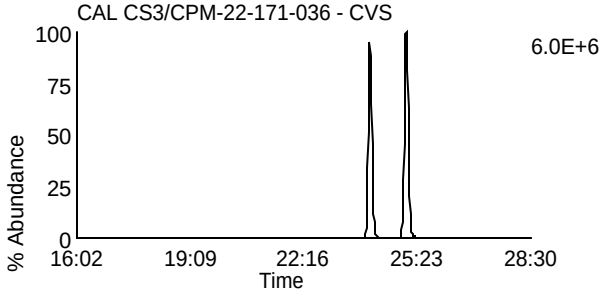
Data File: L230610A_06 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - CVS



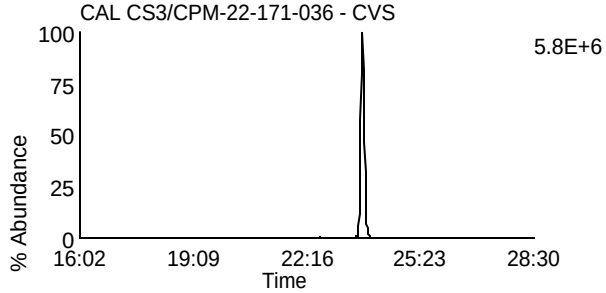
Data File: L230610A_06 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - CVS



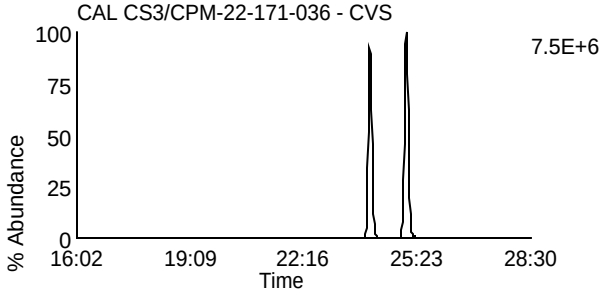
Data File: L230610A_06 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - CVS



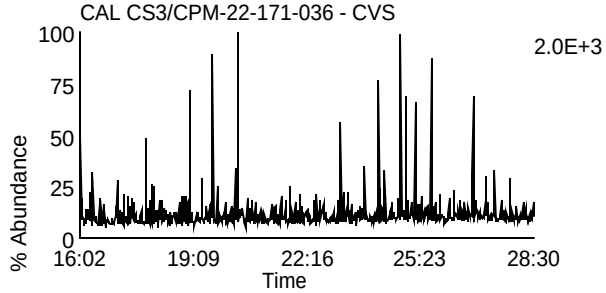
Data File: L230610A_06 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - CVS



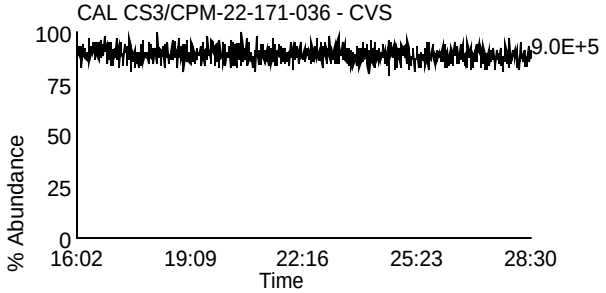
Data File: L230610A_06 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - CVS



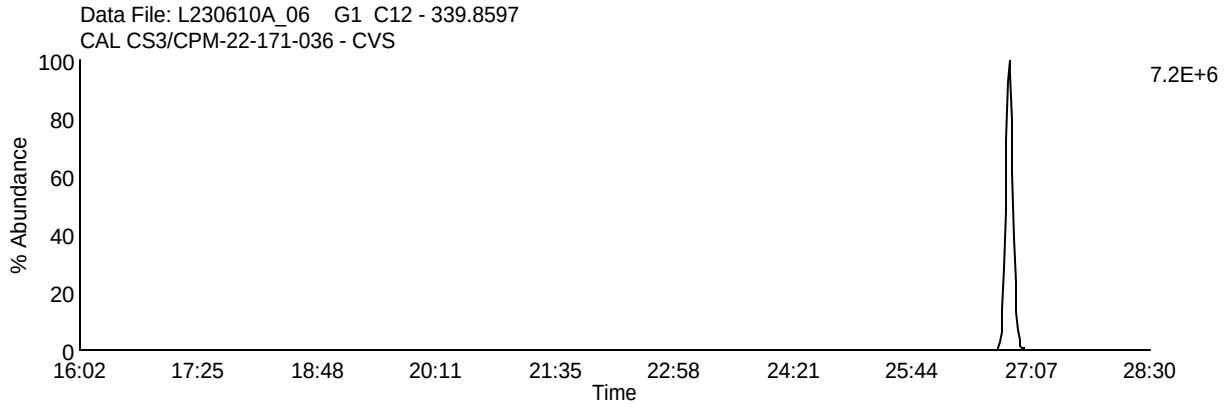
Data File: L230610A_06 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - CVS

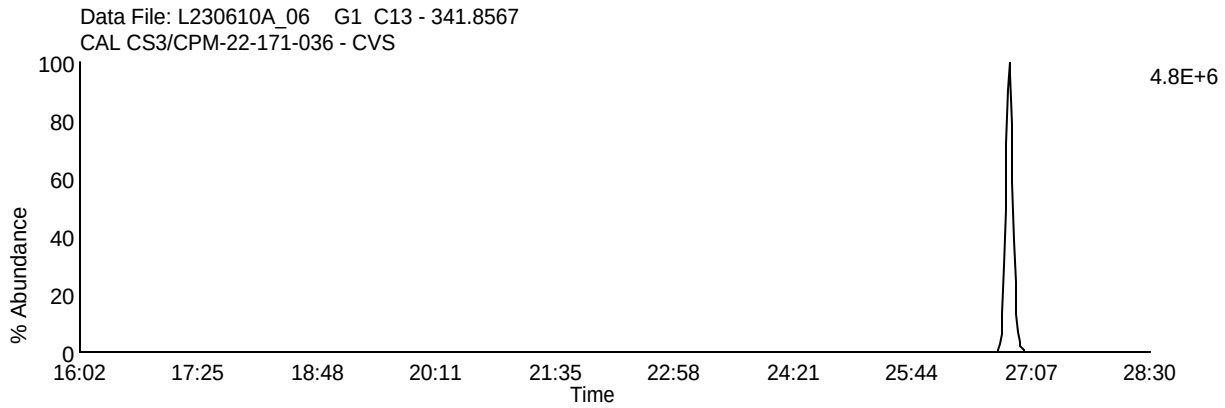


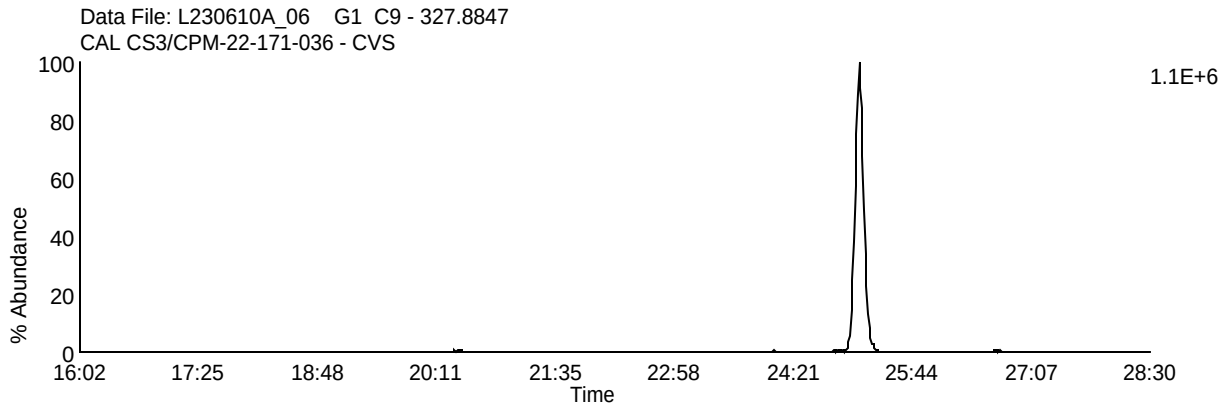
Homologue Group: Penta & Cleanup

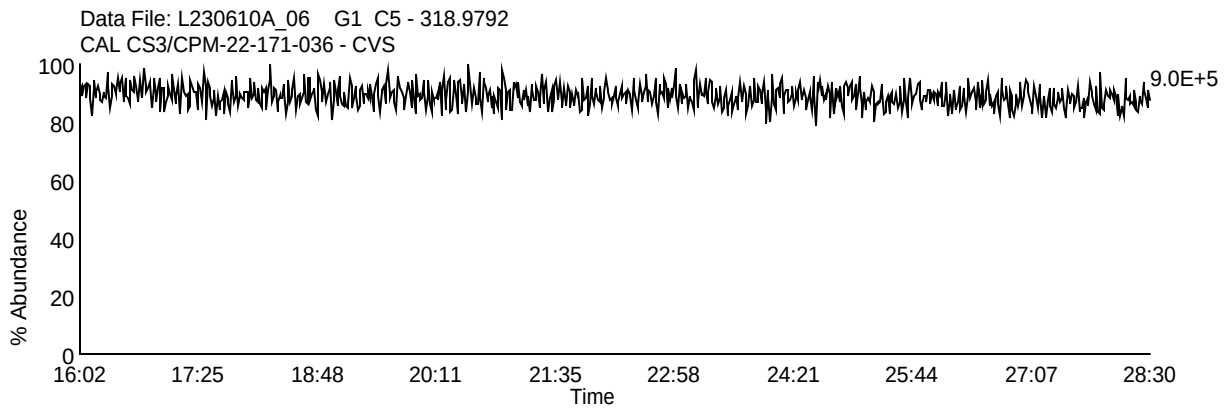
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)







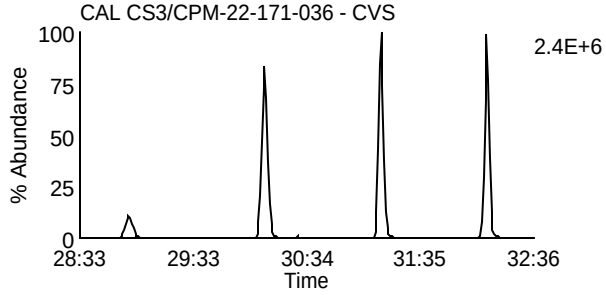


Homologue Group: Pentas

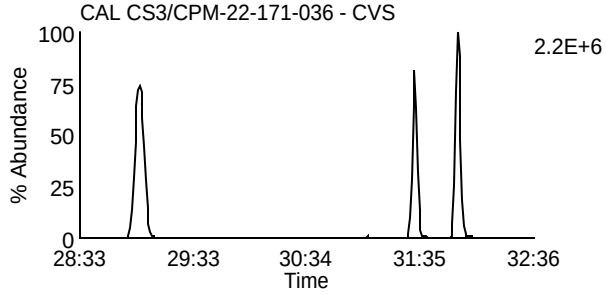
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

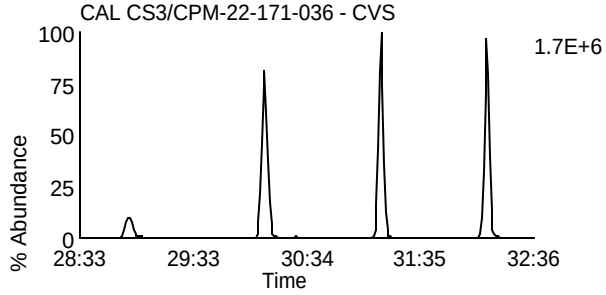
Data File: L230610A_06 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - CVS



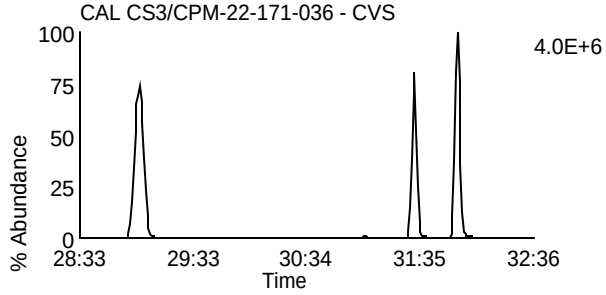
Data File: L230610A_06 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - CVS



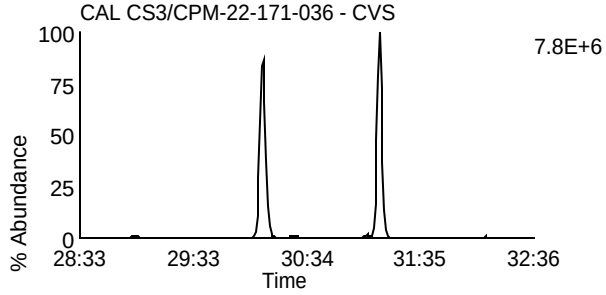
Data File: L230610A_06 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - CVS



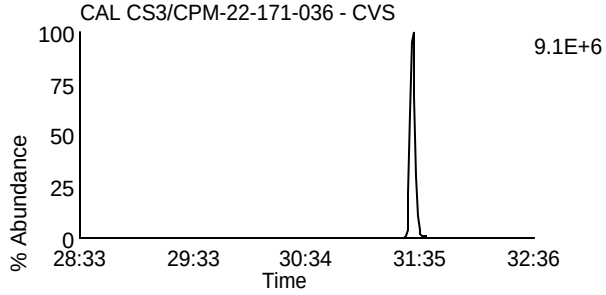
Data File: L230610A_06 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - CVS



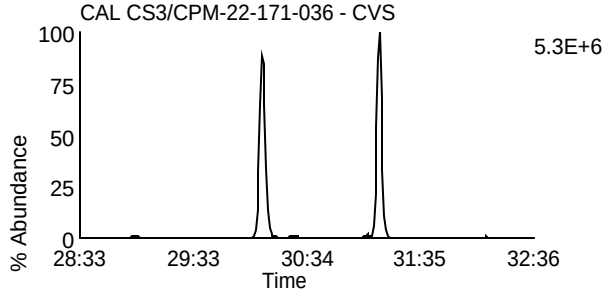
Data File: L230610A_06 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - CVS



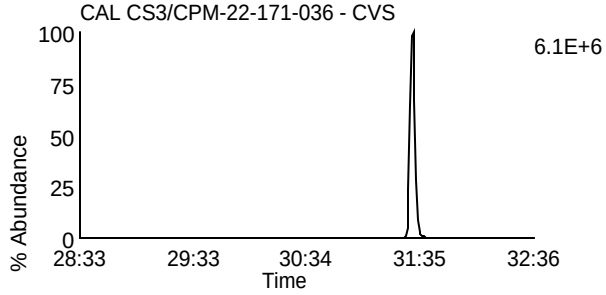
Data File: L230610A_06 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - CVS



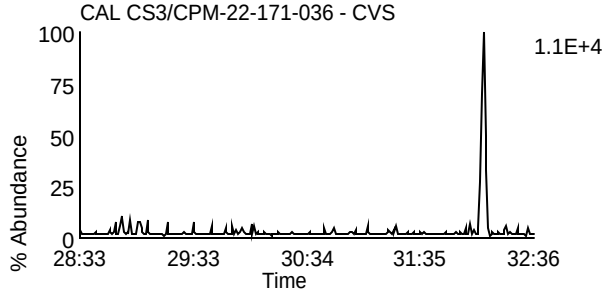
Data File: L230610A_06 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - CVS



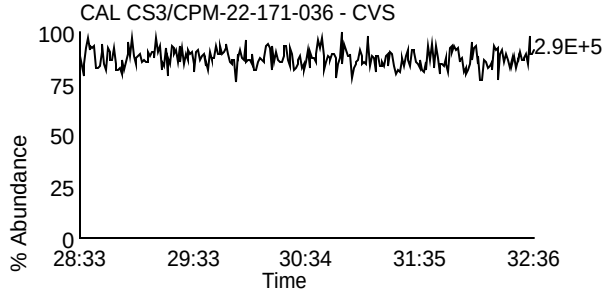
Data File: L230610A_06 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - CVS

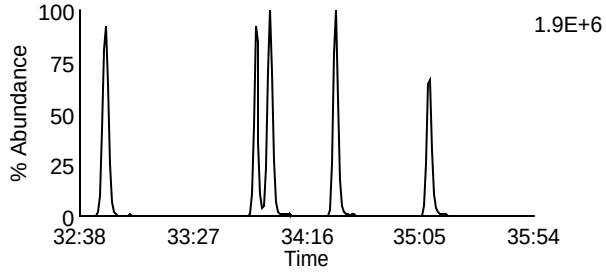


Homologue Group: Hexas

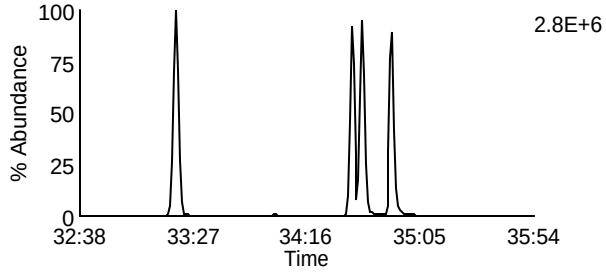
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

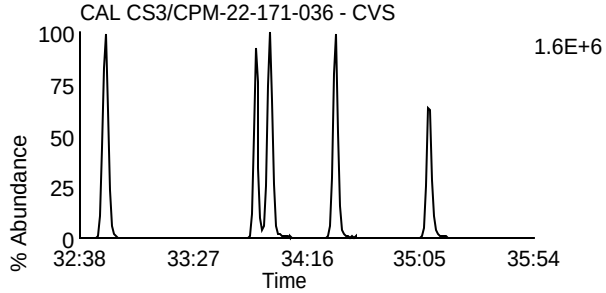
Data File: L230610A_06 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - CVS



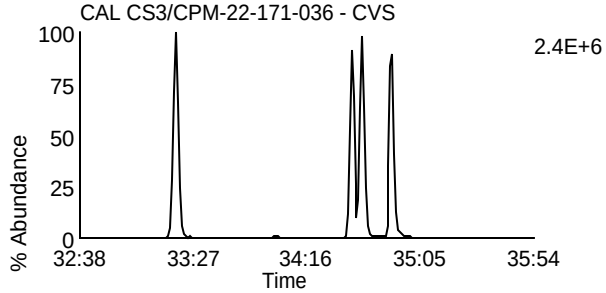
Data File: L230610A_06 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - CVS



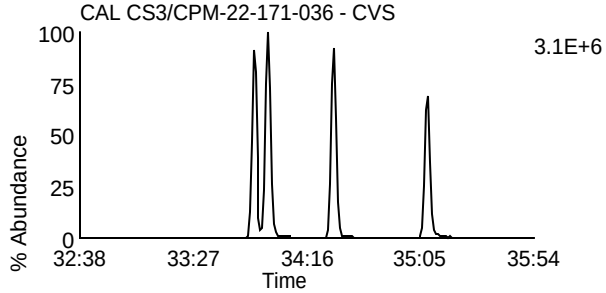
Data File: L230610A_06 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - CVS



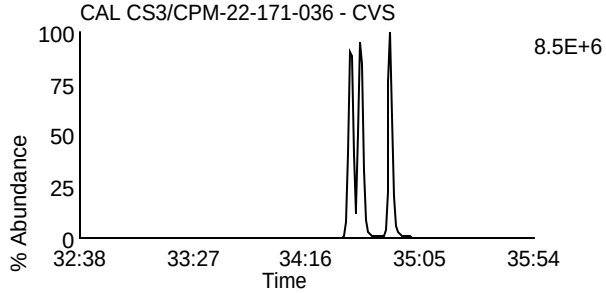
Data File: L230610A_06 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - CVS



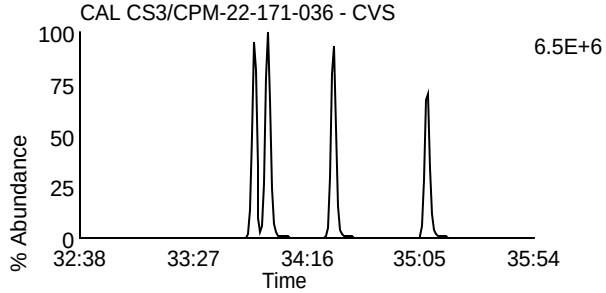
Data File: L230610A_06 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - CVS



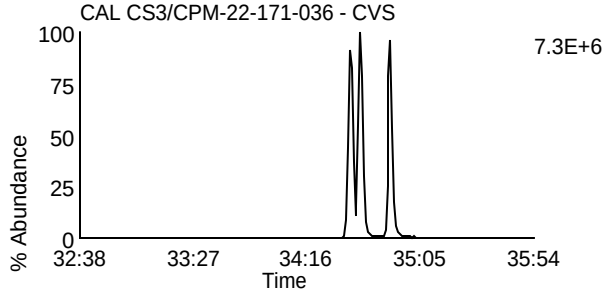
Data File: L230610A_06 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - CVS



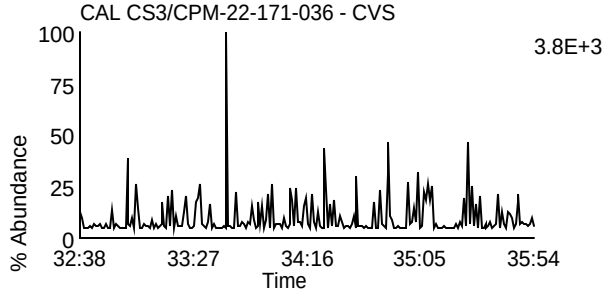
Data File: L230610A_06 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - CVS



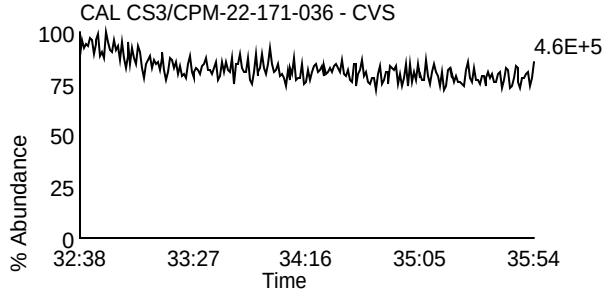
Data File: L230610A_06 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - CVS

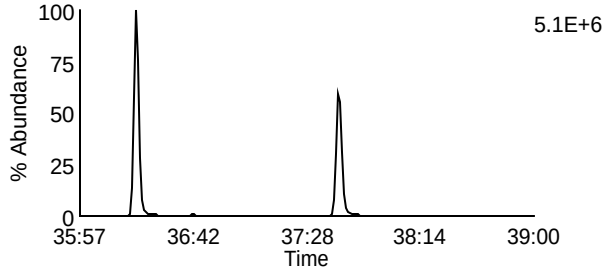


Homologue Group: Heptas

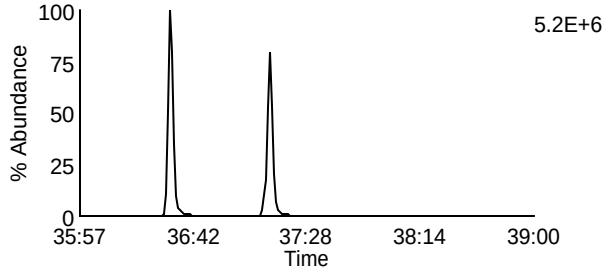
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

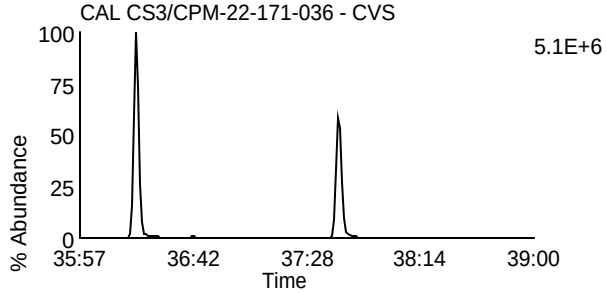
Data File: L230610A_06 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - CVS



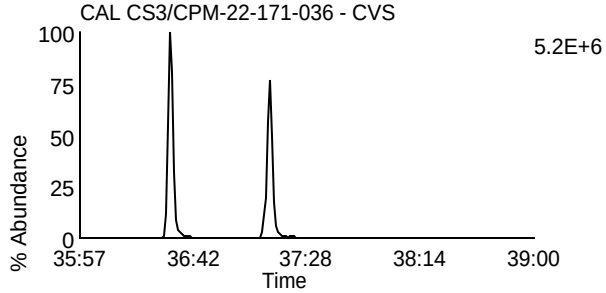
Data File: L230610A_06 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - CVS



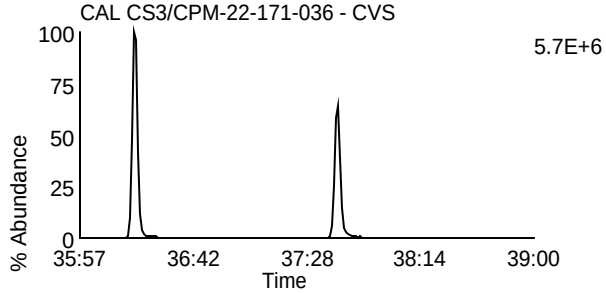
Data File: L230610A_06 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - CVS



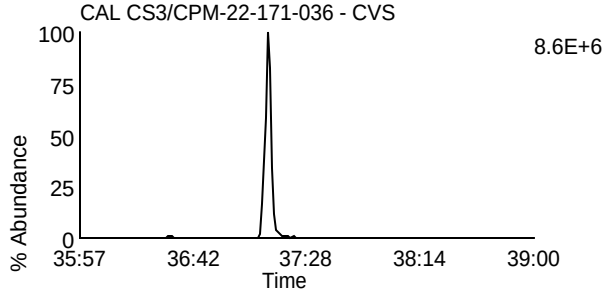
Data File: L230610A_06 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - CVS



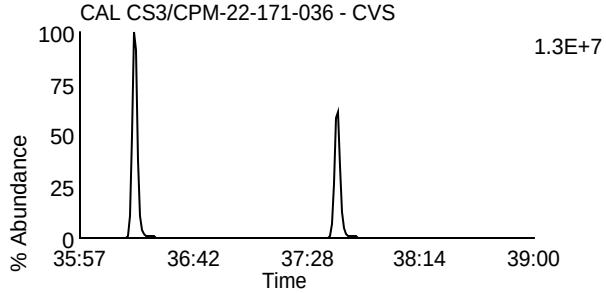
Data File: L230610A_06 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - CVS



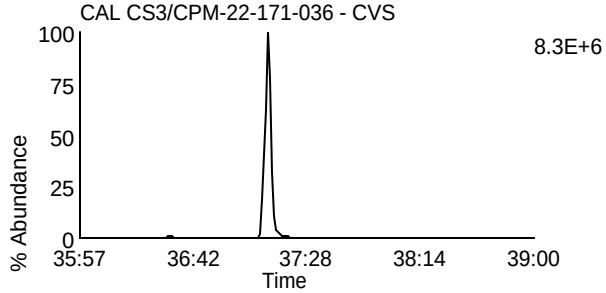
Data File: L230610A_06 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - CVS



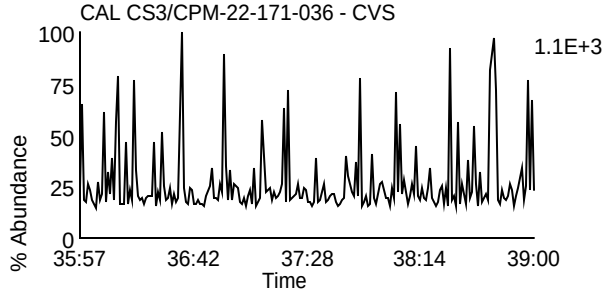
Data File: L230610A_06 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - CVS



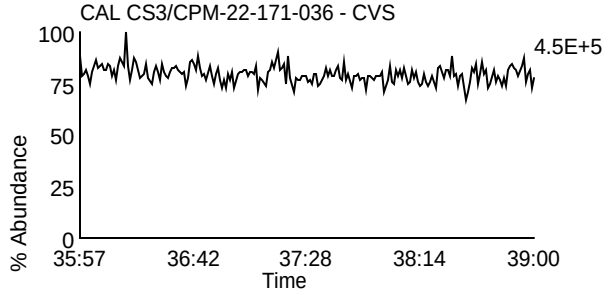
Data File: L230610A_06 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - CVS

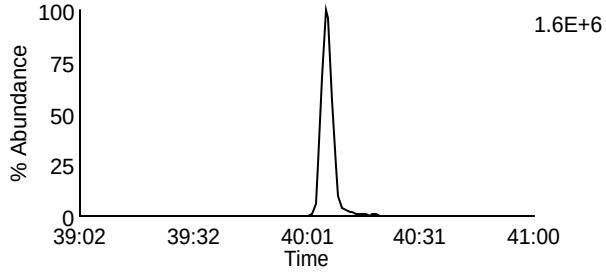


Homologue Group: Octas

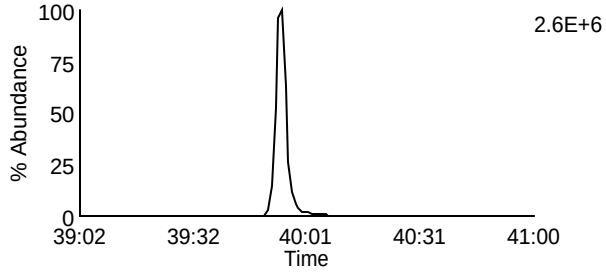
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

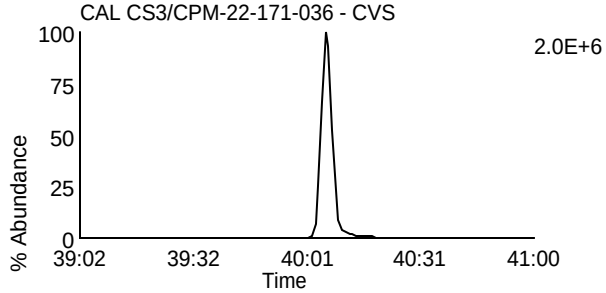
Data File: L230610A_06 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - CVS



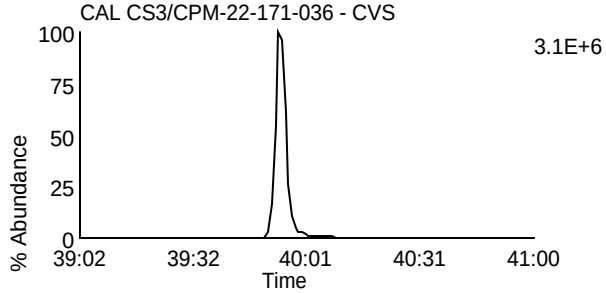
Data File: L230610A_06 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - CVS



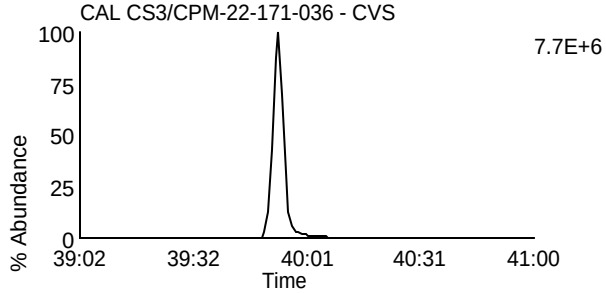
Data File: L230610A_06 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - CVS



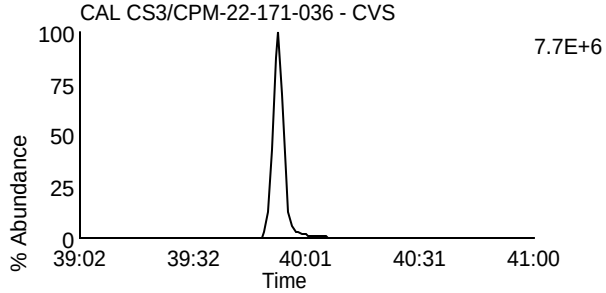
Data File: L230610A_06 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - CVS



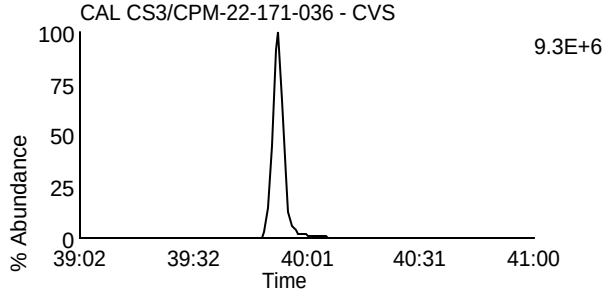
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



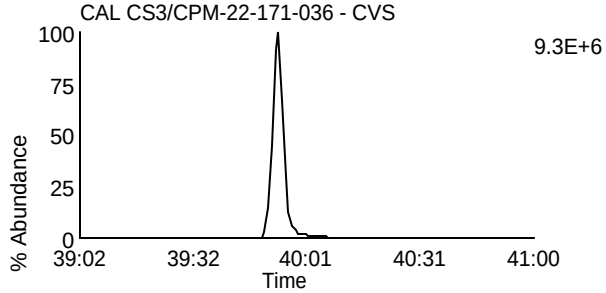
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



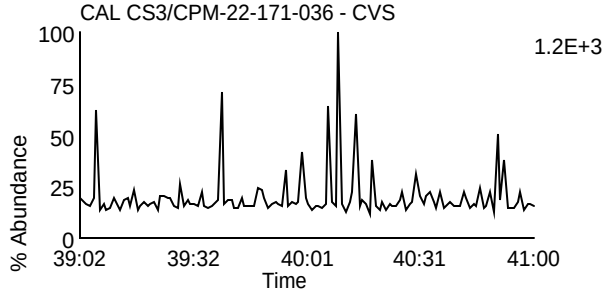
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



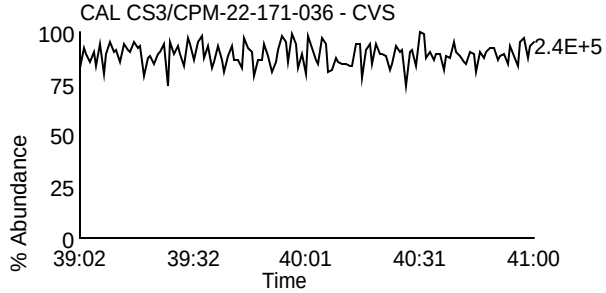
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - CVS

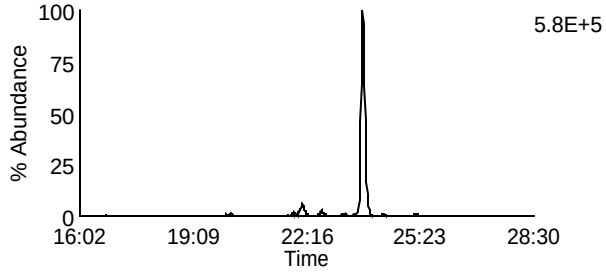


Homologue Group: Tetras

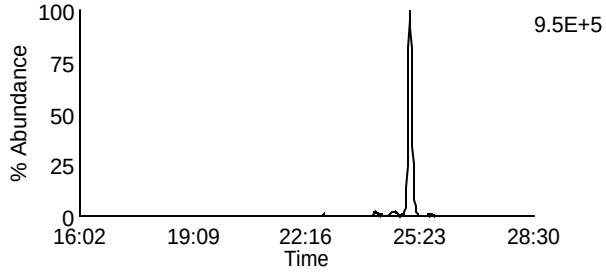
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

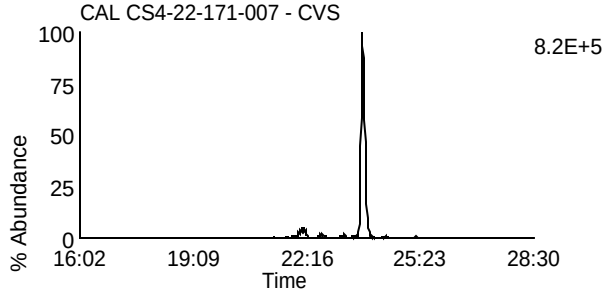
Data File: L230610A_05 G1 C1 - 303.9016
CAL CS4-22-171-007 - CVS



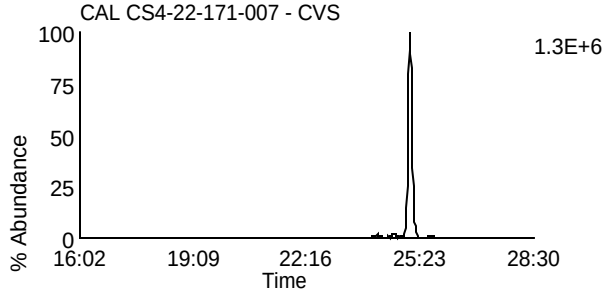
Data File: L230610A_05 G1 C7 - 319.8965
CAL CS4-22-171-007 - CVS



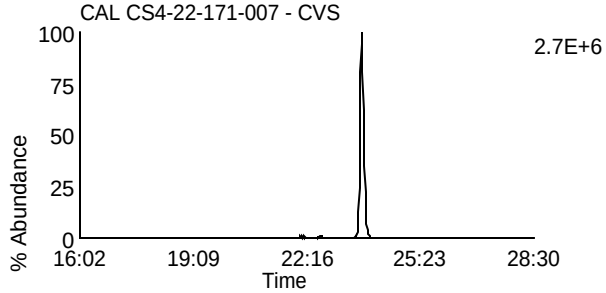
Data File: L230610A_05 G1 C2 - 305.8987
CAL CS4-22-171-007 - CVS



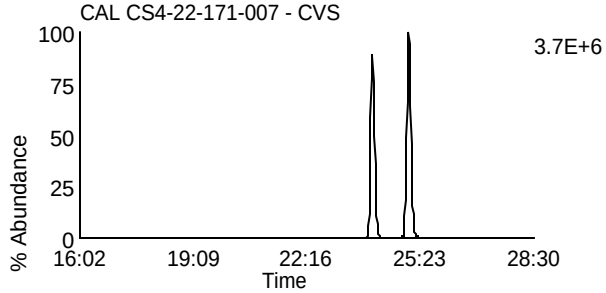
Data File: L230610A_05 G1 C8 - 321.8936
CAL CS4-22-171-007 - CVS



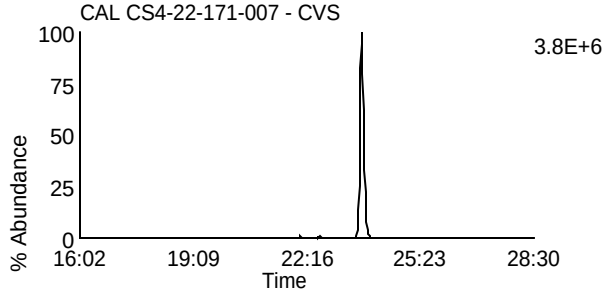
Data File: L230610A_05 G1 C3 - 315.9418
CAL CS4-22-171-007 - CVS



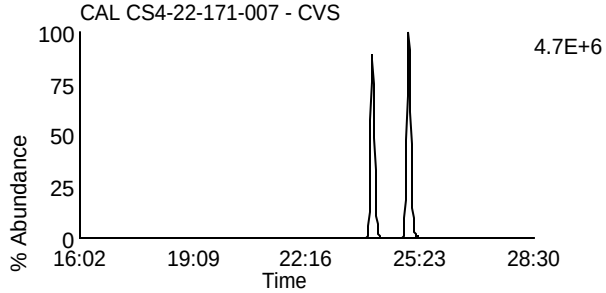
Data File: L230610A_05 G1 C10 - 331.9367
CAL CS4-22-171-007 - CVS



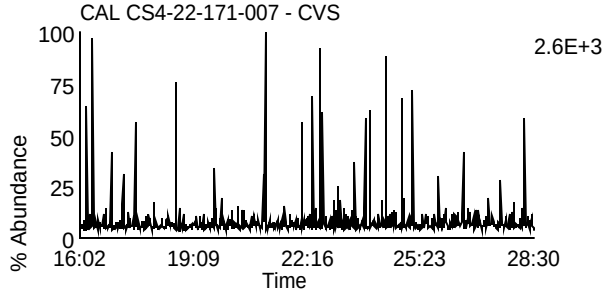
Data File: L230610A_05 G1 C4 - 317.9389
CAL CS4-22-171-007 - CVS



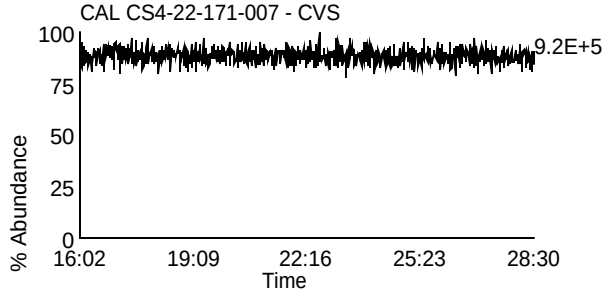
Data File: L230610A_05 G1 C11 - 333.9338
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C14 - 375.8364
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C5 - 318.9792
CAL CS4-22-171-007 - CVS

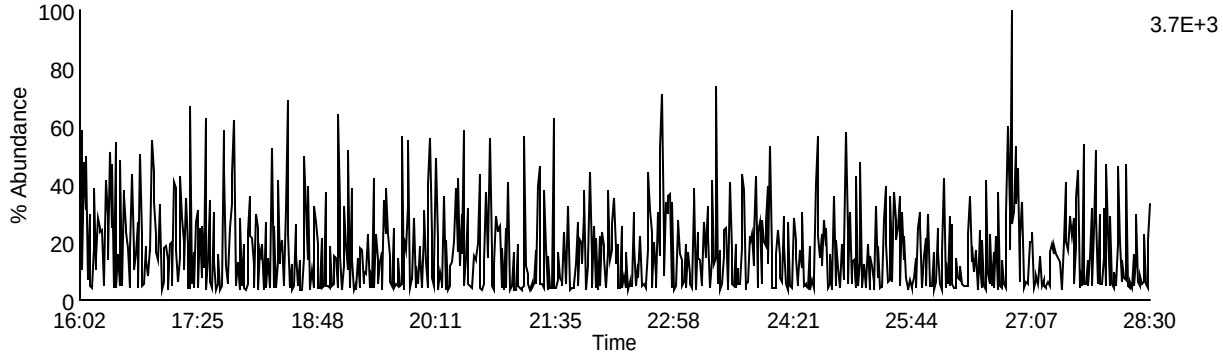


Homologue Group: Penta & Cleanup

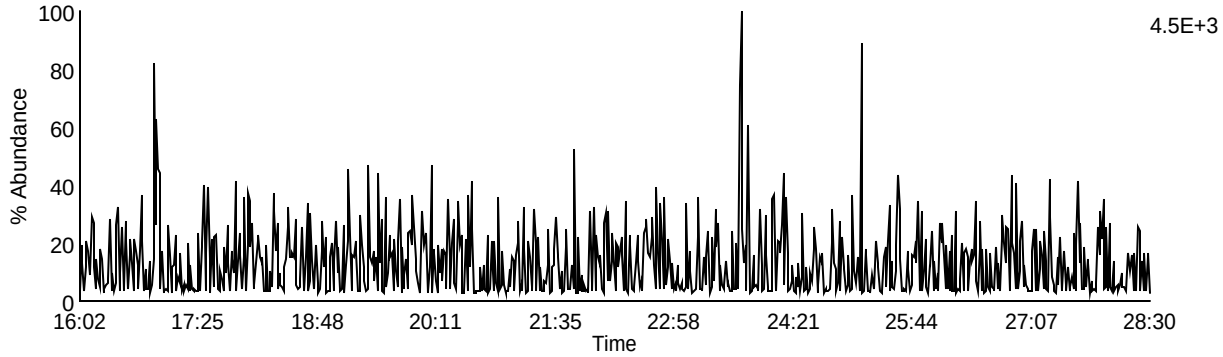
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

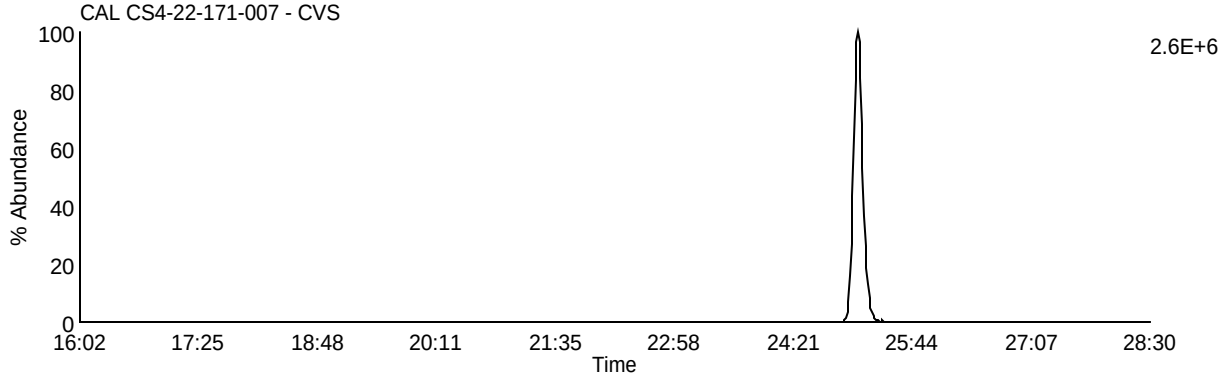
Data File: L230610A_05 G1 C12 - 339.8597
CAL CS4-22-171-007 - CVS



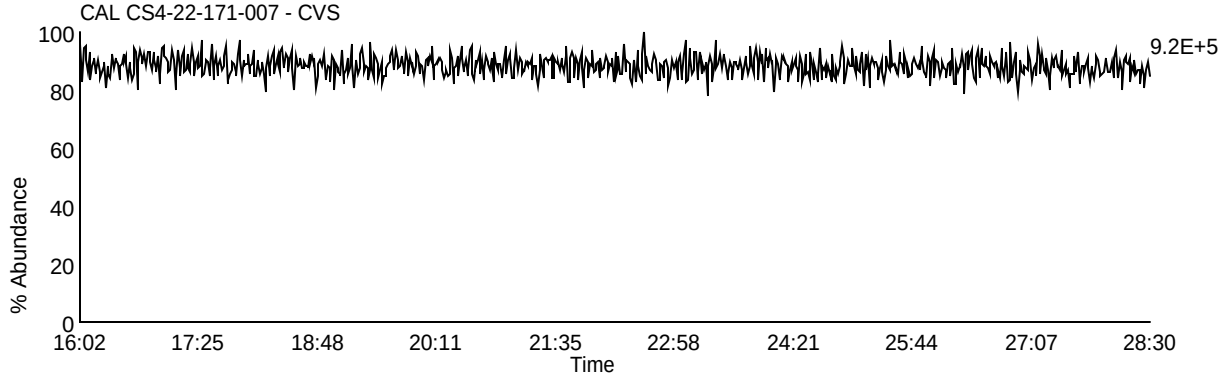
Data File: L230610A_05 G1 C13 - 341.8567
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C9 - 327.8847
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C5 - 318.9792
CAL CS4-22-171-007 - CVS

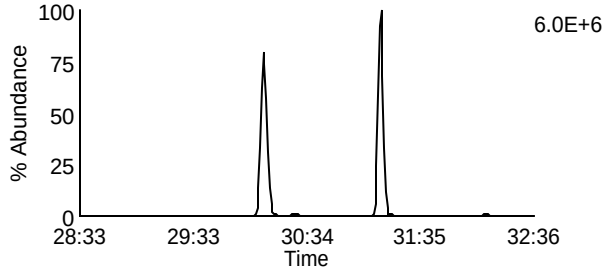


Homologue Group: Pentas

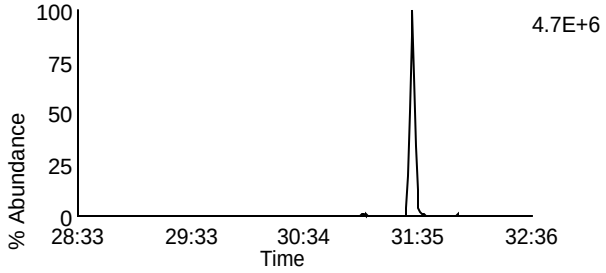
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

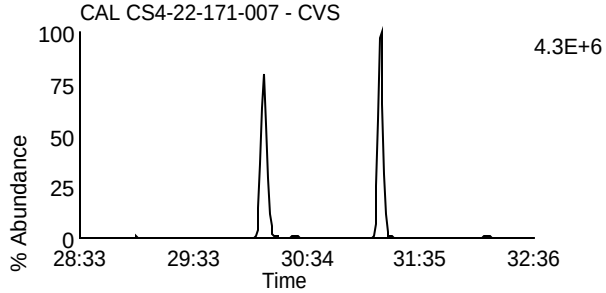
Data File: L230610A_05 G2 C1 - 339.8597
CAL CS4-22-171-007 - CVS



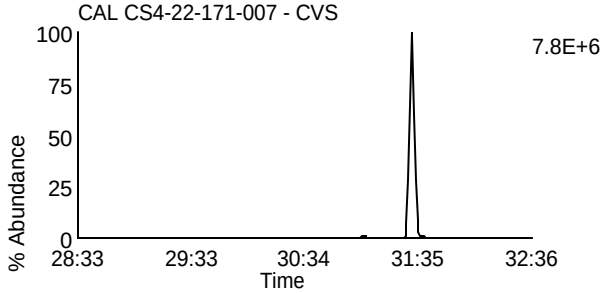
Data File: L230610A_05 G2 C4 - 353.8576
CAL CS4-22-171-007 - CVS



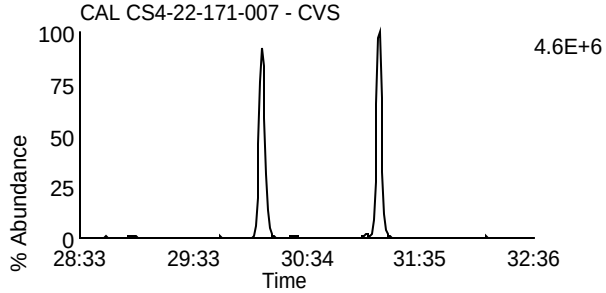
Data File: L230610A_05 G2 C2 - 341.8567
CAL CS4-22-171-007 - CVS



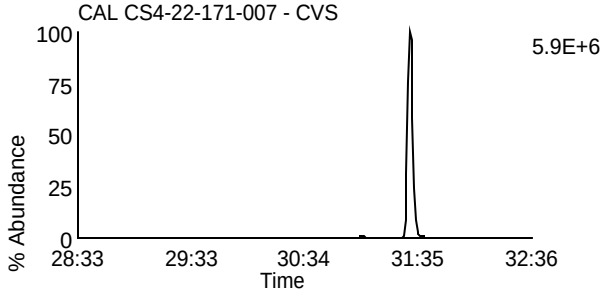
Data File: L230610A_05 G2 C8 - 355.8546
CAL CS4-22-171-007 - CVS



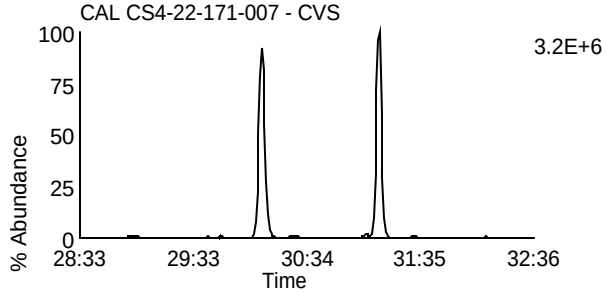
Data File: L230610A_05 G2 C3 - 351.8999
CAL CS4-22-171-007 - CVS



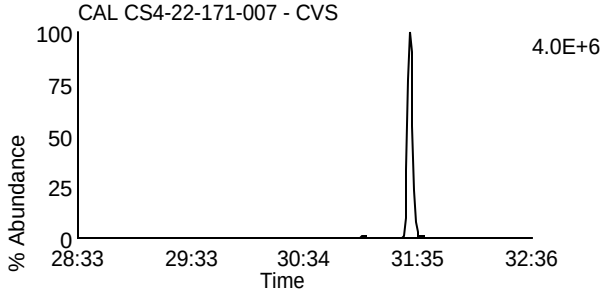
Data File: L230610A_05 G2 C10 - 367.8948
CAL CS4-22-171-007 - CVS



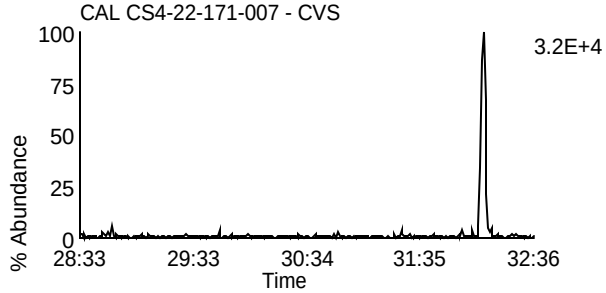
Data File: L230610A_05 G2 C5 - 353.8969
CAL CS4-22-171-007 - CVS



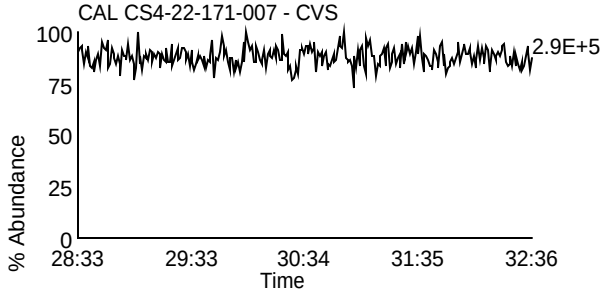
Data File: L230610A_05 G2 C11 - 369.8918
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G2 C12 - 409.7974
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G2 C6 - 354.9792
CAL CS4-22-171-007 - CVS

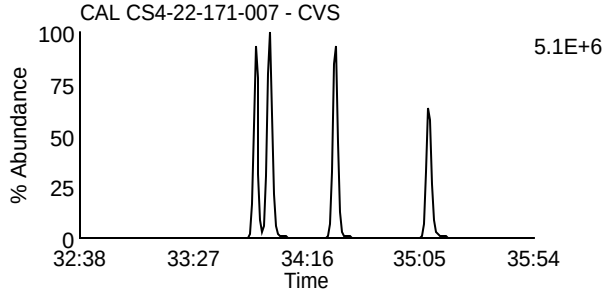


Homologue Group: Hexas

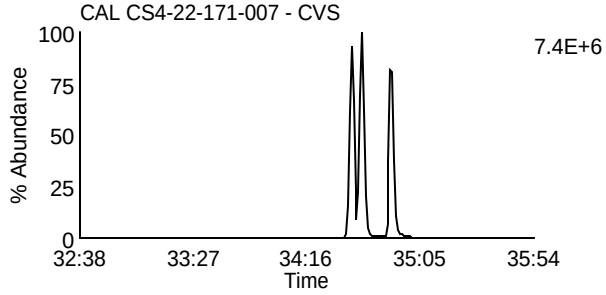
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

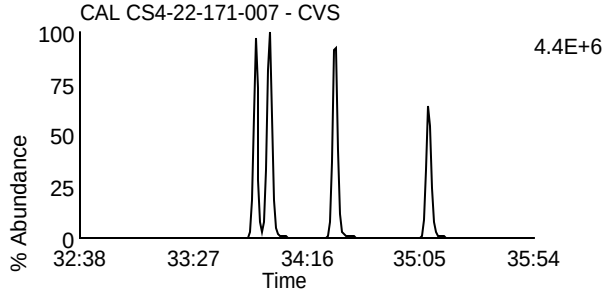
Data File: L230610A_05 G3 C1 - 373.8207
CAL CS4-22-171-007 - CVS



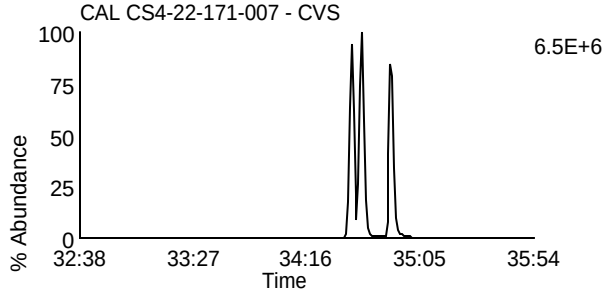
Data File: L230610A_05 G3 C7 - 389.8156
CAL CS4-22-171-007 - CVS



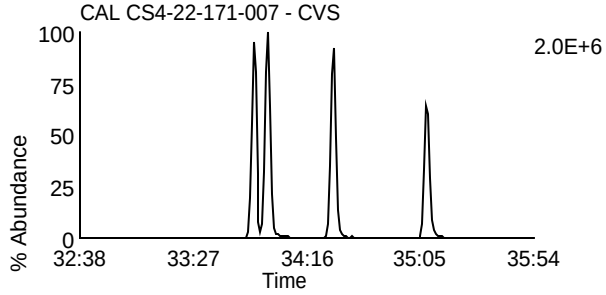
Data File: L230610A_05 G3 C2 - 375.8178
CAL CS4-22-171-007 - CVS



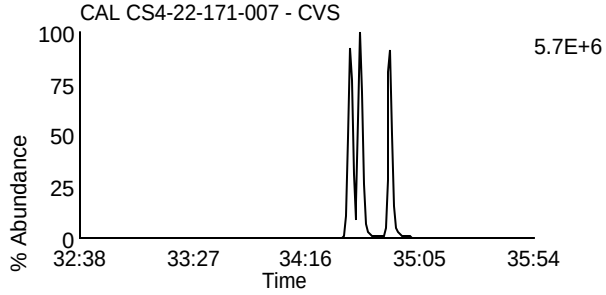
Data File: L230610A_05 G3 C8 - 391.8127
CAL CS4-22-171-007 - CVS



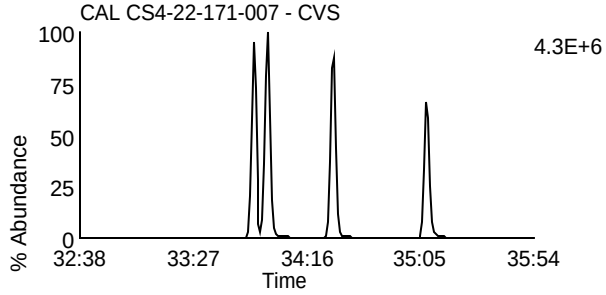
Data File: L230610A_05 G3 C5 - 383.8639
CAL CS4-22-171-007 - CVS



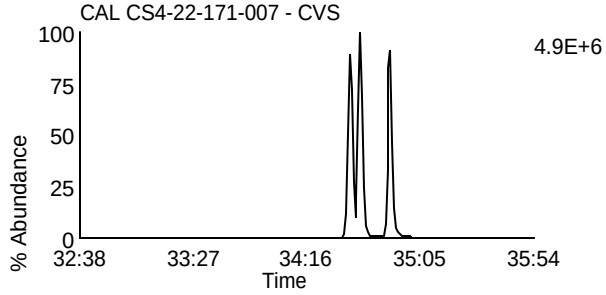
Data File: L230610A_05 G3 C9 - 401.8559
CAL CS4-22-171-007 - CVS



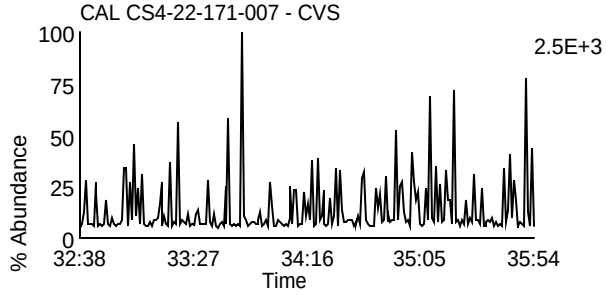
Data File: L230610A_05 G3 C6 - 385.861
CAL CS4-22-171-007 - CVS



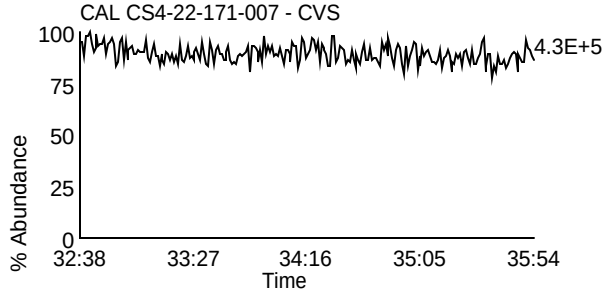
Data File: L230610A_05 G3 C10 - 403.8529
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G3 C11 - 445.7555
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G3 C3 - 380.976
CAL CS4-22-171-007 - CVS

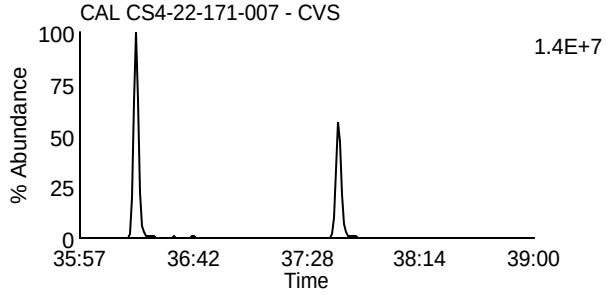


Homologue Group: Heptas

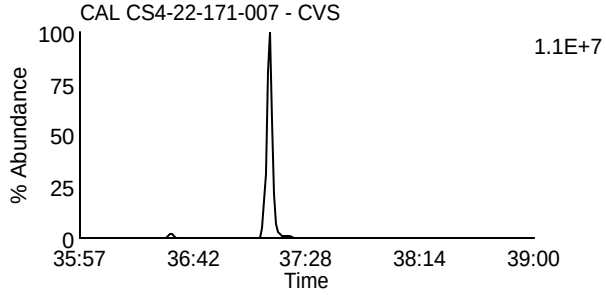
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

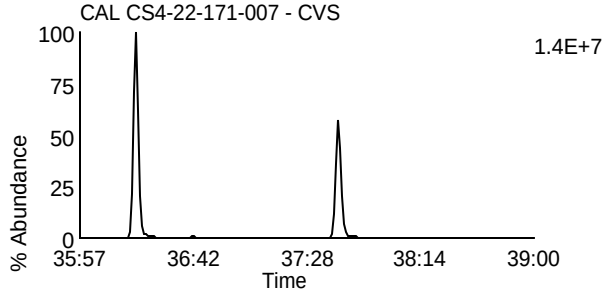
Data File: L230610A_05 G4 C3 - 407.7818
CAL CS4-22-171-007 - CVS



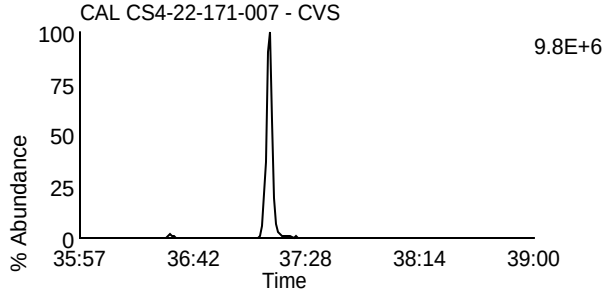
Data File: L230610A_05 G4 C8 - 423.7767
CAL CS4-22-171-007 - CVS



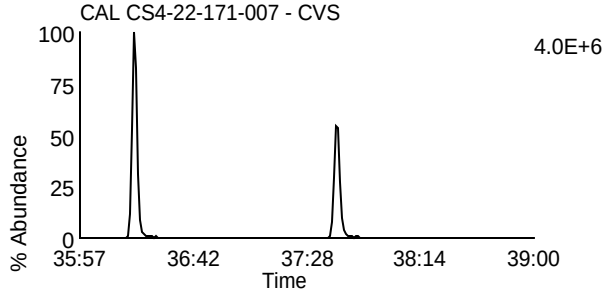
Data File: L230610A_05 G4 C4 - 409.7788
CAL CS4-22-171-007 - CVS



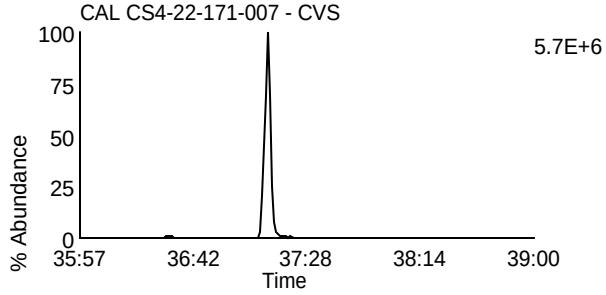
Data File: L230610A_05 G4 C9 - 425.7737
CAL CS4-22-171-007 - CVS



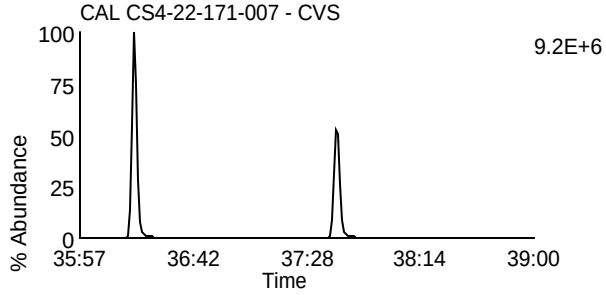
Data File: L230610A_05 G4 C6 - 417.825
CAL CS4-22-171-007 - CVS



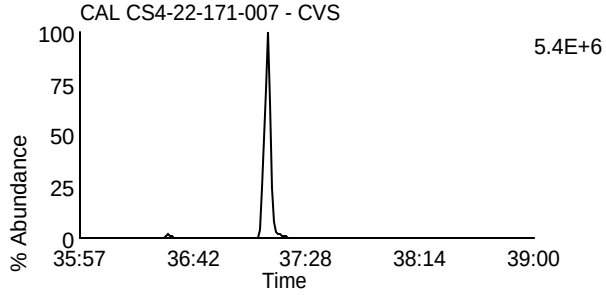
Data File: L230610A_05 G4 C11 - 435.8169
CAL CS4-22-171-007 - CVS



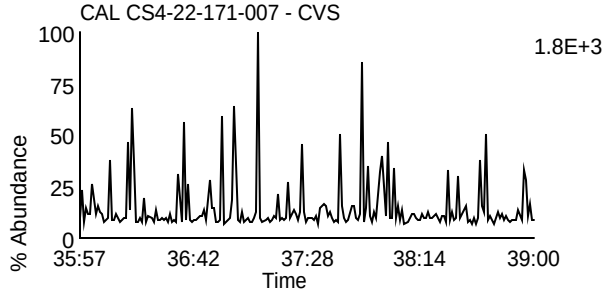
Data File: L230610A_05 G4 C7 - 419.822
CAL CS4-22-171-007 - CVS



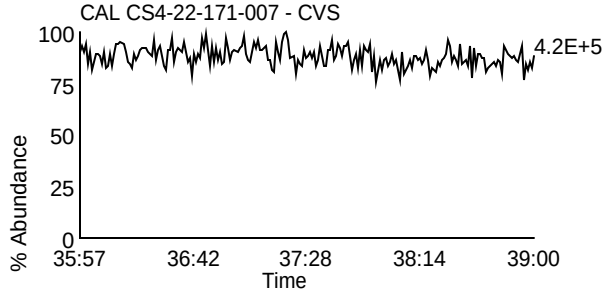
Data File: L230610A_05 G4 C12 - 437.814
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G4 C13 - 479.7165
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G4 C1 - 380.976
CAL CS4-22-171-007 - CVS

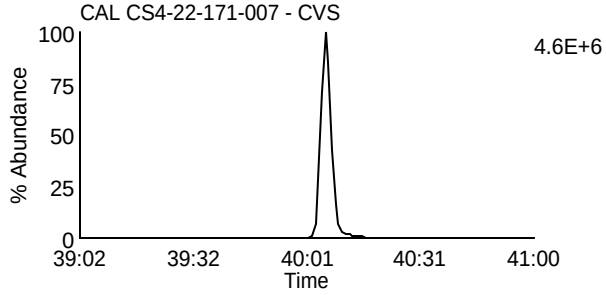


Homologue Group: Octas

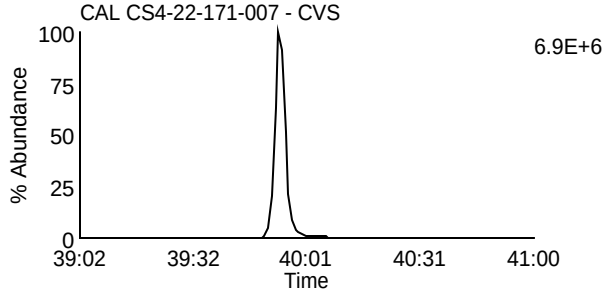
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

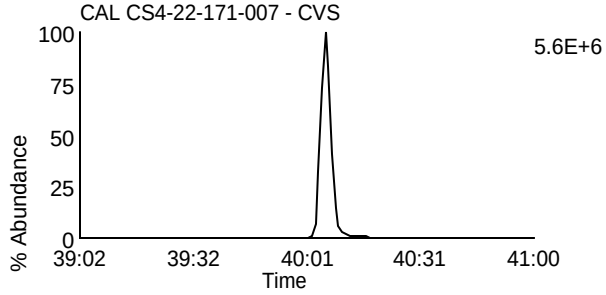
Data File: L230610A_05 G5 C4 - 441.7428
CAL CS4-22-171-007 - CVS



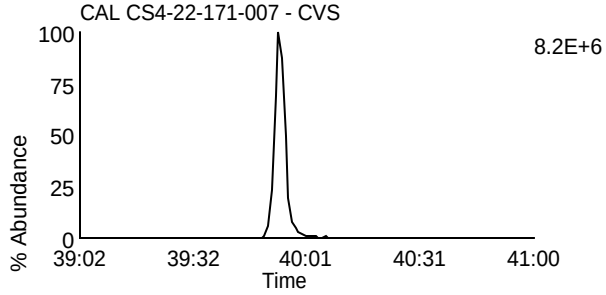
Data File: L230610A_05 G5 C8 - 457.7377
CAL CS4-22-171-007 - CVS



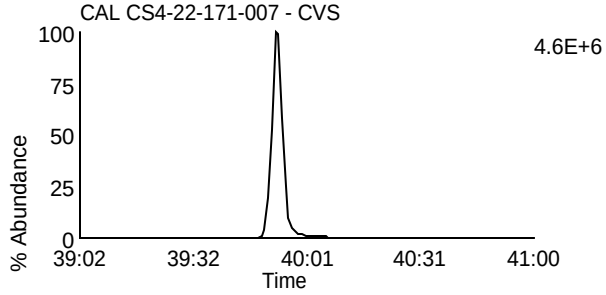
Data File: L230610A_05 G5 C5 - 443.7398
CAL CS4-22-171-007 - CVS



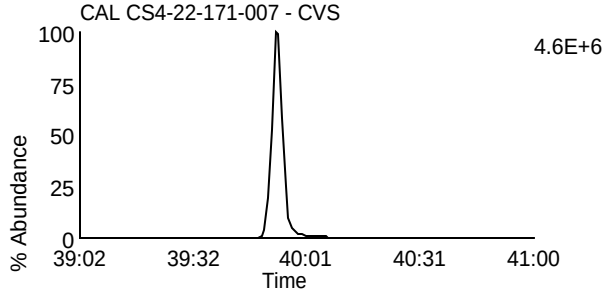
Data File: L230610A_05 G5 C9 - 459.7347
CAL CS4-22-171-007 - CVS



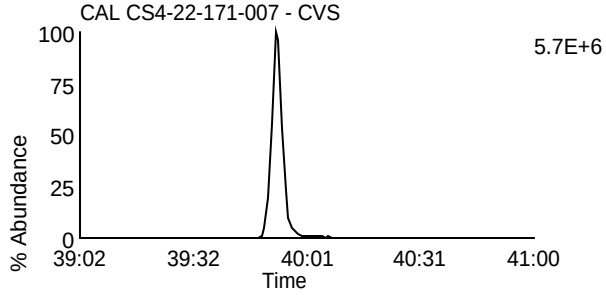
Data File: L230610A_05 G5 C11 - 469.7779
CAL CS4-22-171-007 - CVS



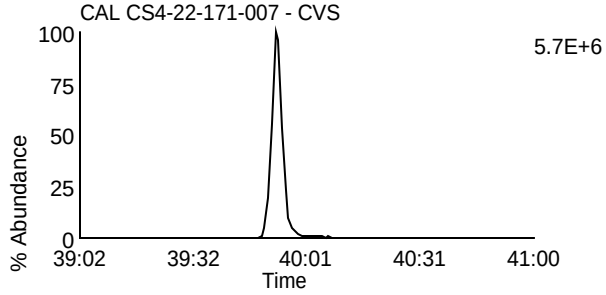
Data File: L230610A_05 G5 C11 - 469.7779
CAL CS4-22-171-007 - CVS



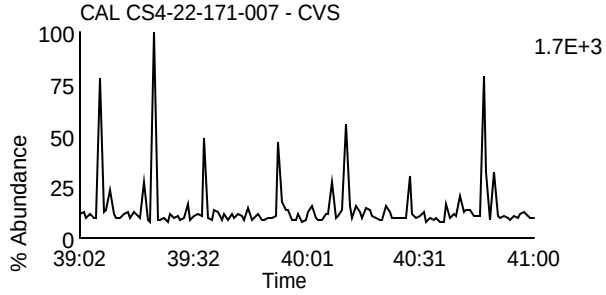
Data File: L230610A_05 G5 C12 - 471.7749
CAL CS4-22-171-007 - CVS



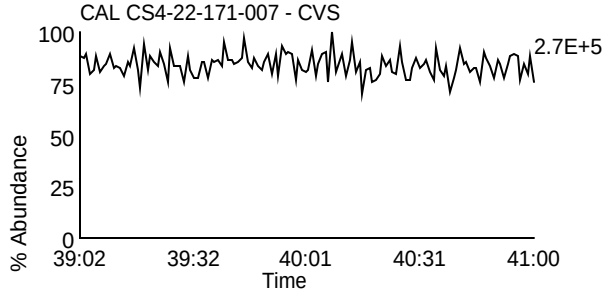
Data File: L230610A_05 G5 C12 - 471.7749
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G5 C13 - 513.6775
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G5 C2 - 430.9728
CAL CS4-22-171-007 - CVS

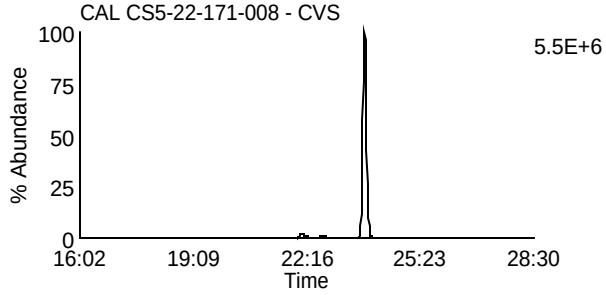


Homologue Group: Tetras

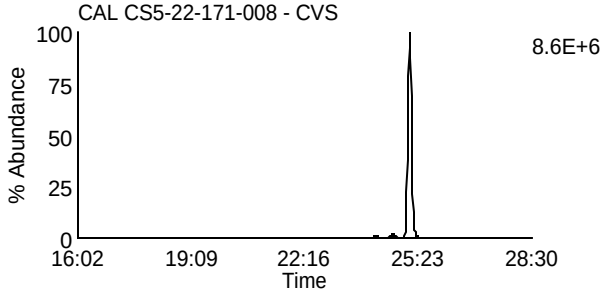
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

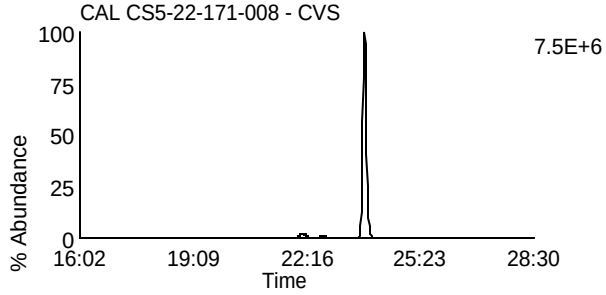
Data File: L230610A_04 G1 C1 - 303.9016
CAL CS5-22-171-008 - CVS



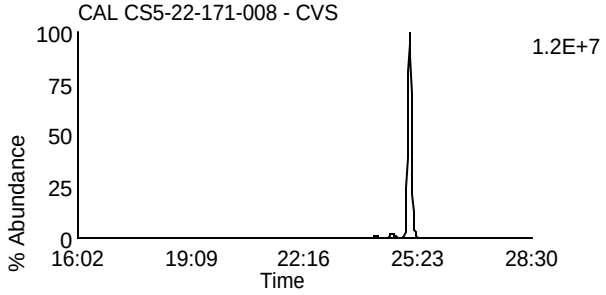
Data File: L230610A_04 G1 C7 - 319.8965
CAL CS5-22-171-008 - CVS



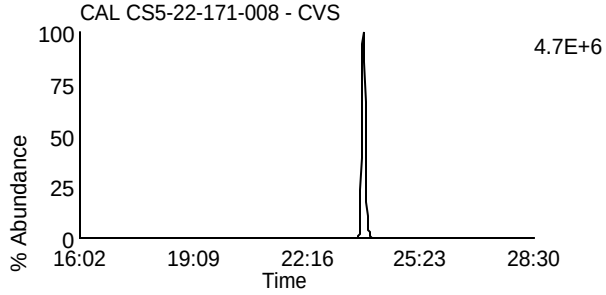
Data File: L230610A_04 G1 C2 - 305.8987
CAL CS5-22-171-008 - CVS



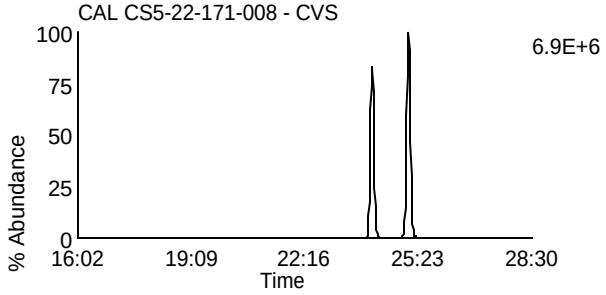
Data File: L230610A_04 G1 C8 - 321.8936
CAL CS5-22-171-008 - CVS



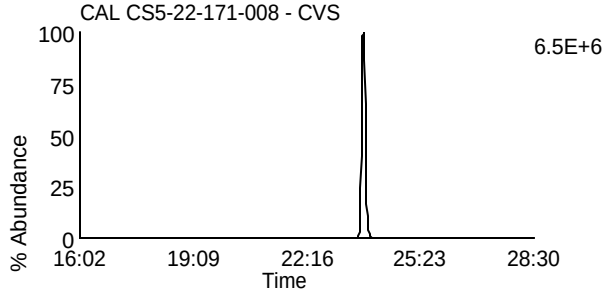
Data File: L230610A_04 G1 C3 - 315.9418
CAL CS5-22-171-008 - CVS



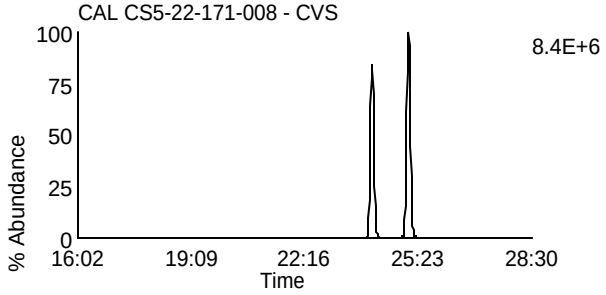
Data File: L230610A_04 G1 C10 - 331.9367
CAL CS5-22-171-008 - CVS



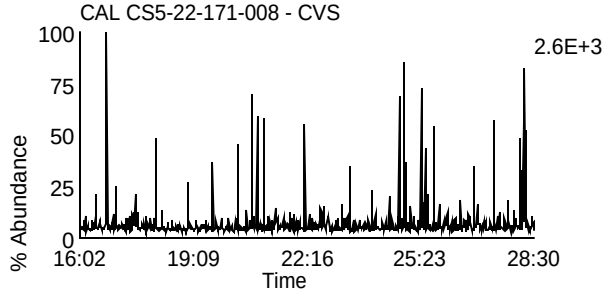
Data File: L230610A_04 G1 C4 - 317.9389
CAL CS5-22-171-008 - CVS



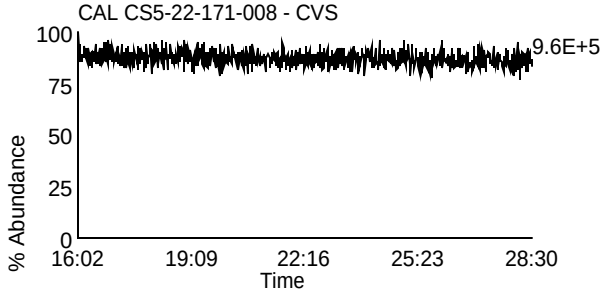
Data File: L230610A_04 G1 C11 - 333.9338
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C14 - 375.8364
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C5 - 318.9792
CAL CS5-22-171-008 - CVS

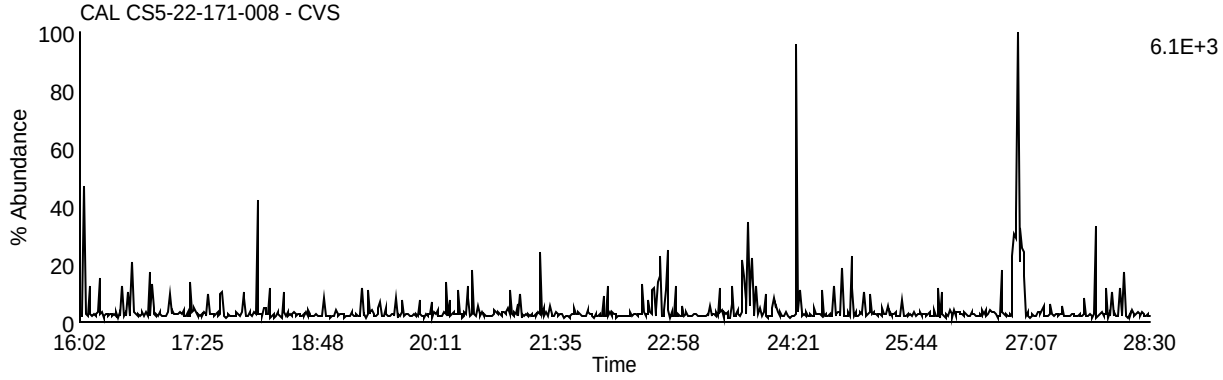


Homologue Group: Penta & Cleanup

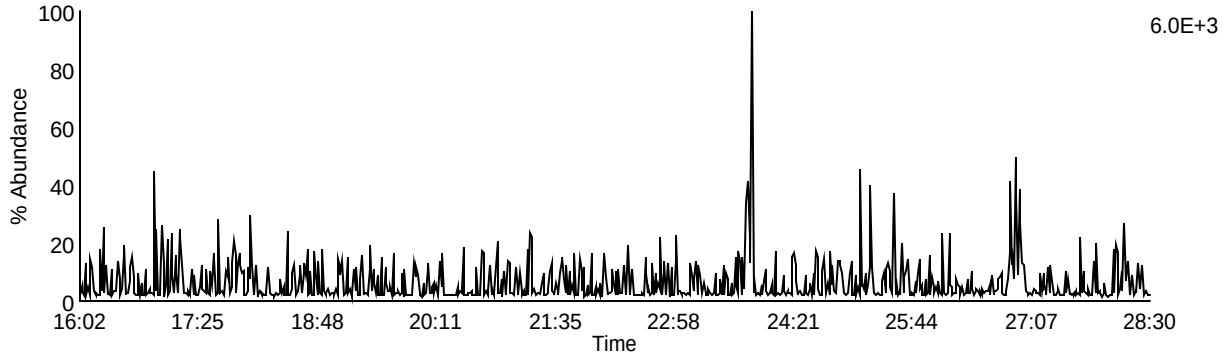
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

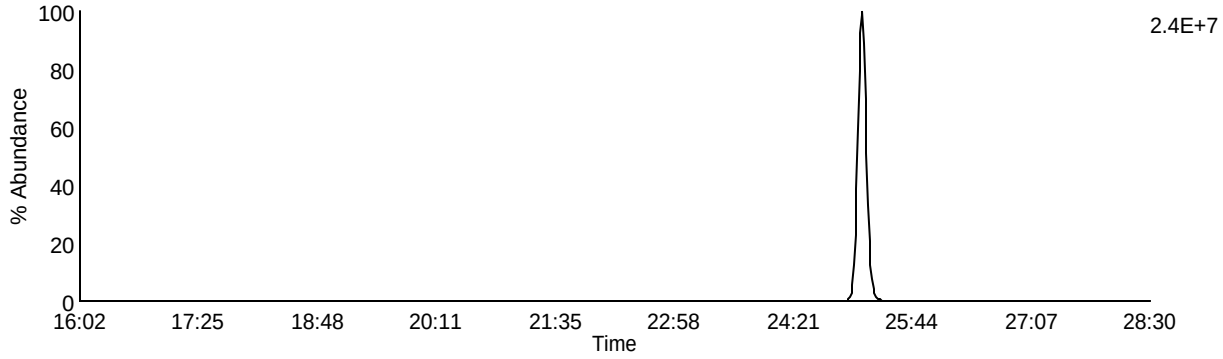
Data File: L230610A_04 G1 C12 - 339.8597
CAL CS5-22-171-008 - CVS



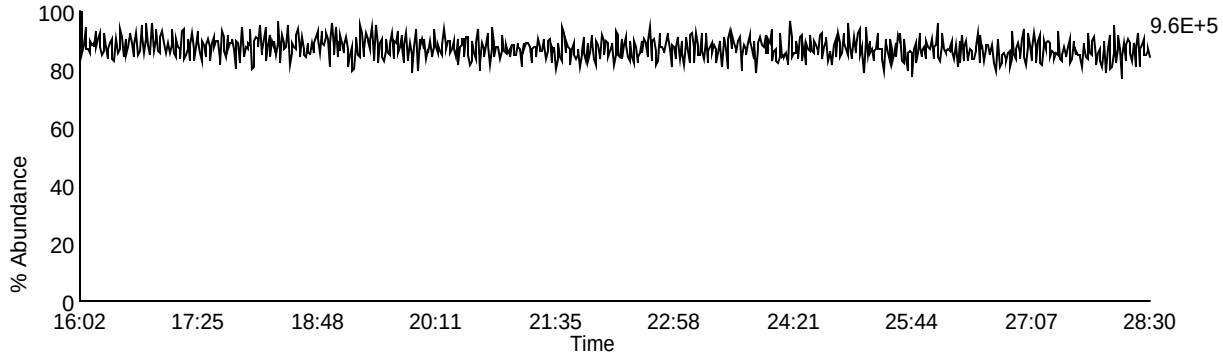
Data File: L230610A_04 G1 C13 - 341.8567
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C9 - 327.8847
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C5 - 318.9792
CAL CS5-22-171-008 - CVS

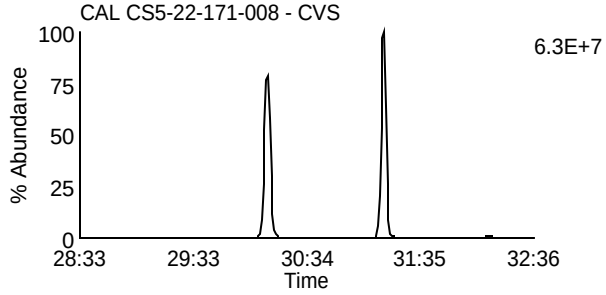


Homologue Group: Pentas

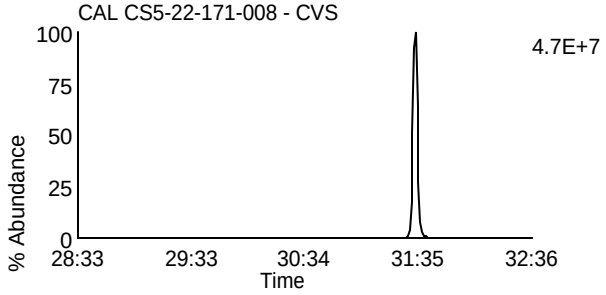
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

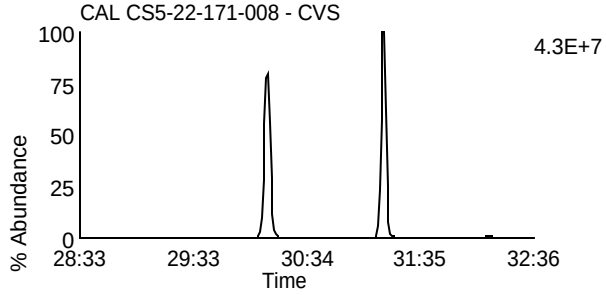
Data File: L230610A_04 G2 C1 - 339.8597
CAL CS5-22-171-008 - CVS



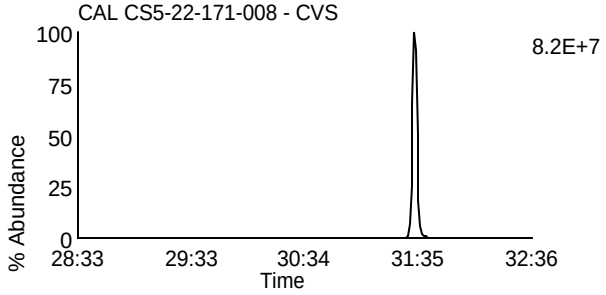
Data File: L230610A_04 G2 C4 - 353.8576
CAL CS5-22-171-008 - CVS



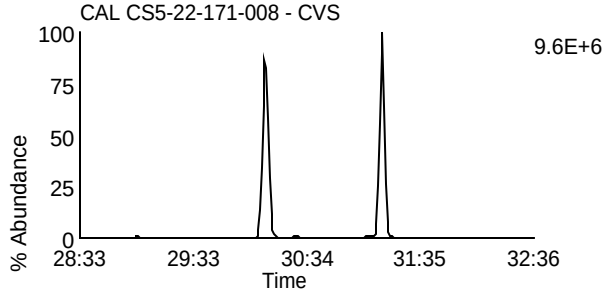
Data File: L230610A_04 G2 C2 - 341.8567
CAL CS5-22-171-008 - CVS



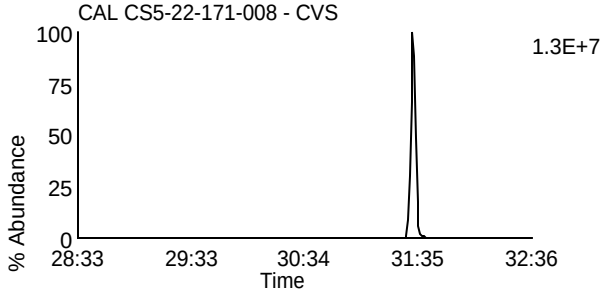
Data File: L230610A_04 G2 C8 - 355.8546
CAL CS5-22-171-008 - CVS



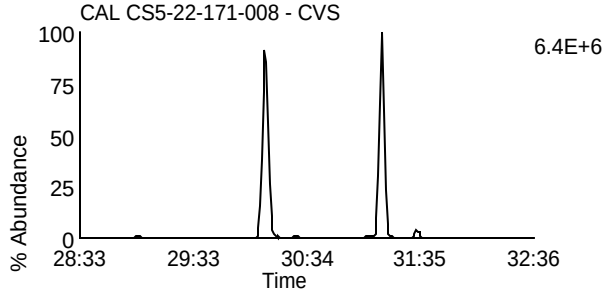
Data File: L230610A_04 G2 C3 - 351.8999
CAL CS5-22-171-008 - CVS



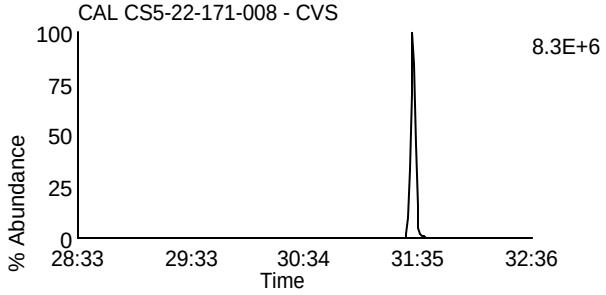
Data File: L230610A_04 G2 C10 - 367.8948
CAL CS5-22-171-008 - CVS



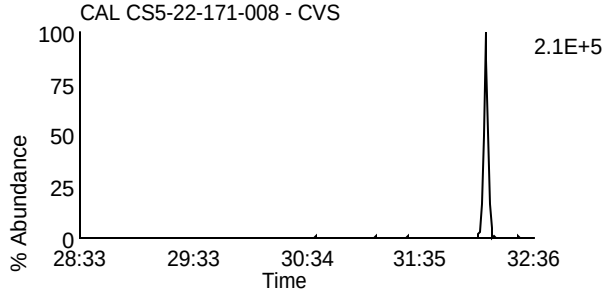
Data File: L230610A_04 G2 C5 - 353.8969
CAL CS5-22-171-008 - CVS



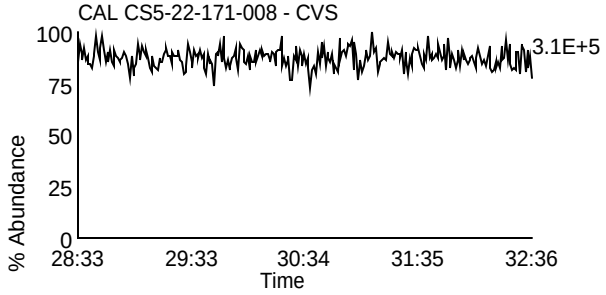
Data File: L230610A_04 G2 C11 - 369.8918
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G2 C12 - 409.7974
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G2 C6 - 354.9792
CAL CS5-22-171-008 - CVS

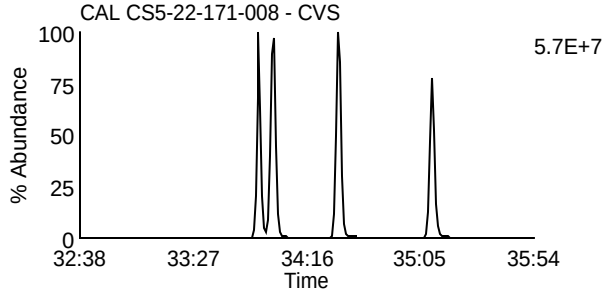


Homologue Group: Hexas

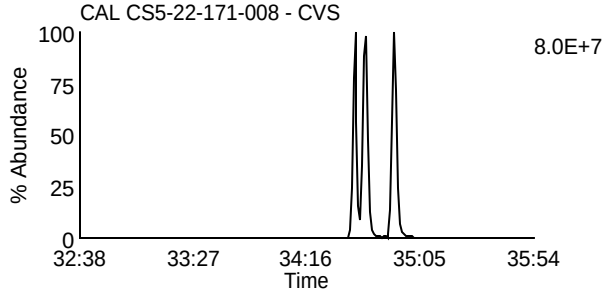
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

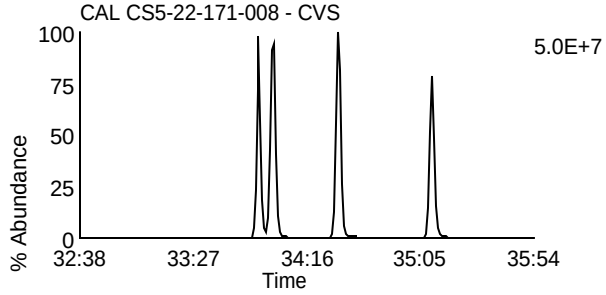
Data File: L230610A_04 G3 C1 - 373.8207
CAL CS5-22-171-008 - CVS



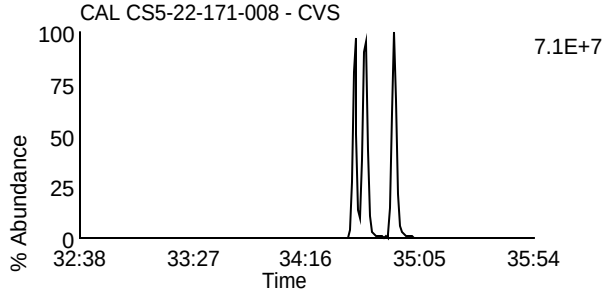
Data File: L230610A_04 G3 C7 - 389.8156
CAL CS5-22-171-008 - CVS



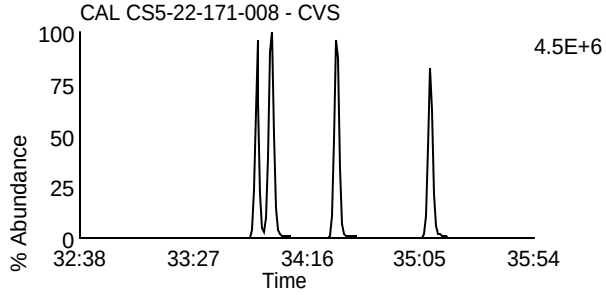
Data File: L230610A_04 G3 C2 - 375.8178
CAL CS5-22-171-008 - CVS



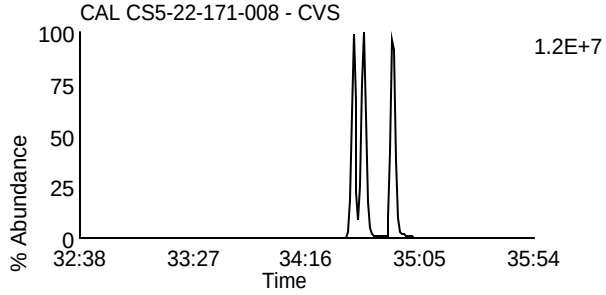
Data File: L230610A_04 G3 C8 - 391.8127
CAL CS5-22-171-008 - CVS



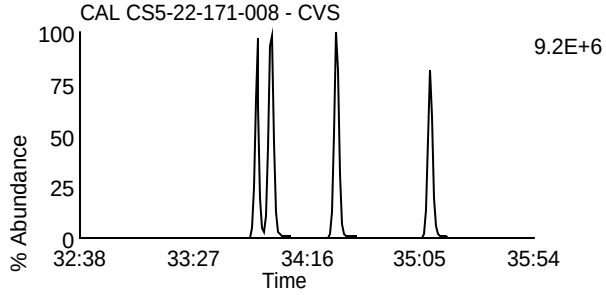
Data File: L230610A_04 G3 C5 - 383.8639
CAL CS5-22-171-008 - CVS



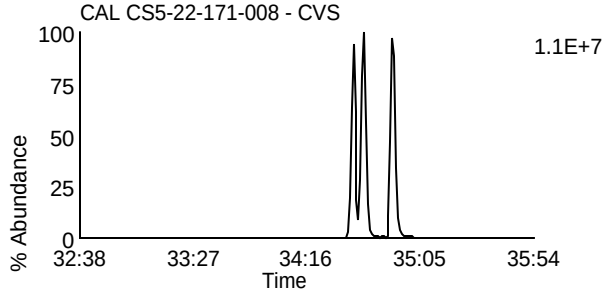
Data File: L230610A_04 G3 C9 - 401.8559
CAL CS5-22-171-008 - CVS



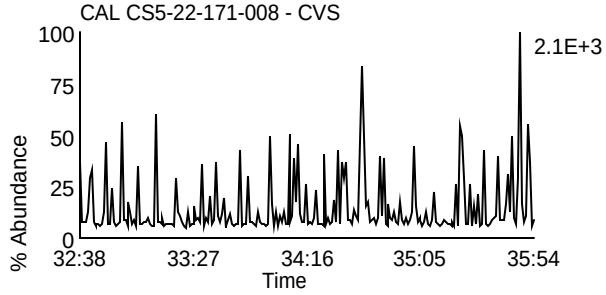
Data File: L230610A_04 G3 C6 - 385.861
CAL CS5-22-171-008 - CVS



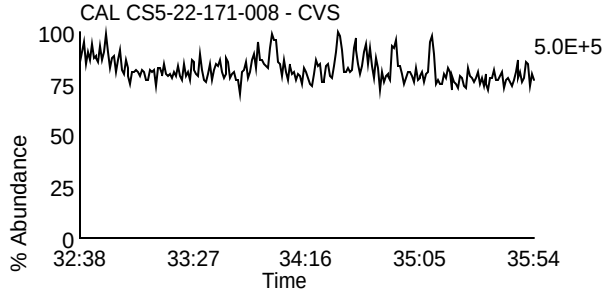
Data File: L230610A_04 G3 C10 - 403.8529
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G3 C11 - 445.7555
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G3 C3 - 380.976
CAL CS5-22-171-008 - CVS

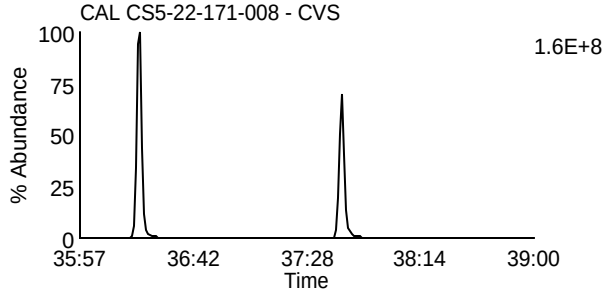


Homologue Group: Heptas

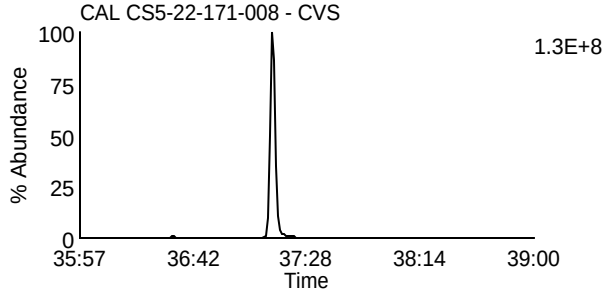
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

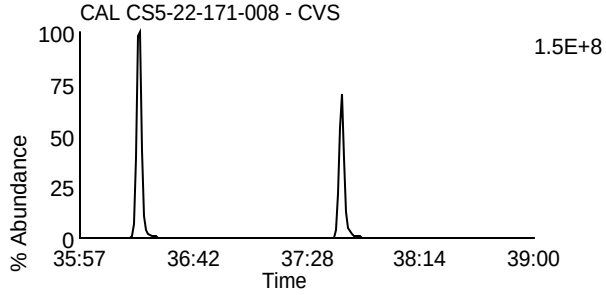
Data File: L230610A_04 G4 C3 - 407.7818
CAL CS5-22-171-008 - CVS



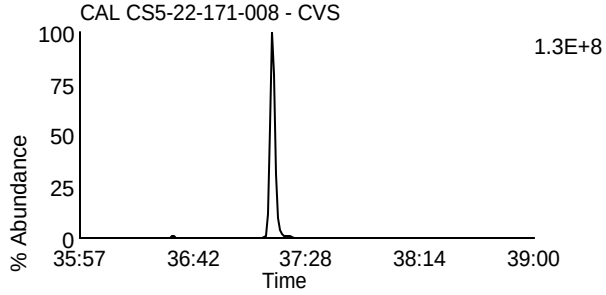
Data File: L230610A_04 G4 C8 - 423.7767
CAL CS5-22-171-008 - CVS



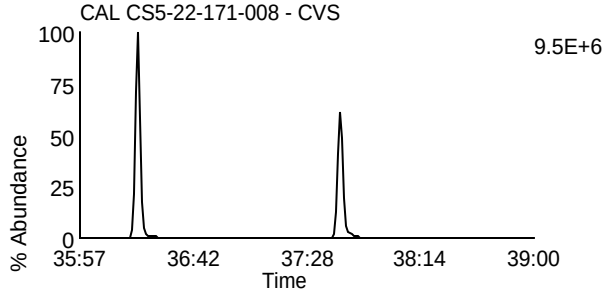
Data File: L230610A_04 G4 C4 - 409.7788
CAL CS5-22-171-008 - CVS



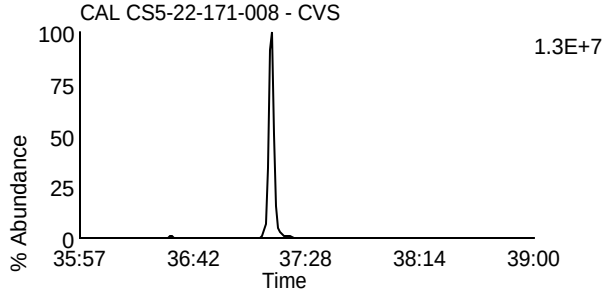
Data File: L230610A_04 G4 C9 - 425.7737
CAL CS5-22-171-008 - CVS



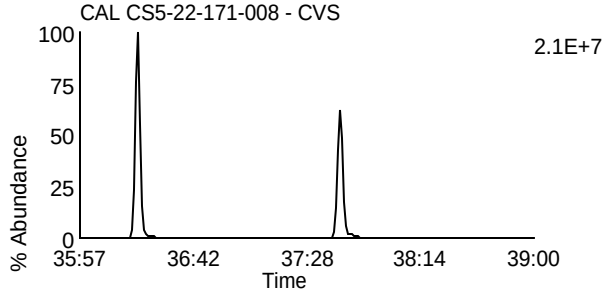
Data File: L230610A_04 G4 C6 - 417.825
CAL CS5-22-171-008 - CVS



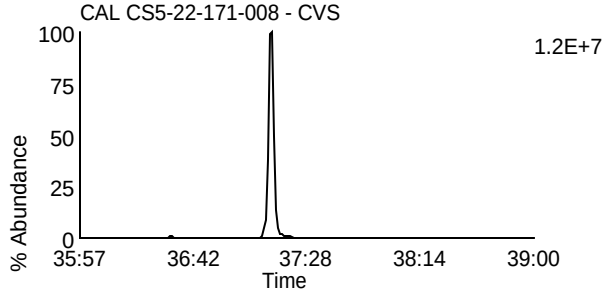
Data File: L230610A_04 G4 C11 - 435.8169
CAL CS5-22-171-008 - CVS



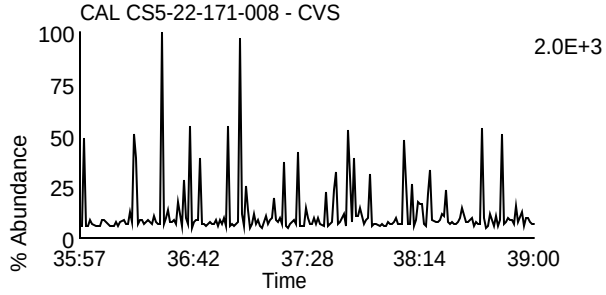
Data File: L230610A_04 G4 C7 - 419.822
CAL CS5-22-171-008 - CVS



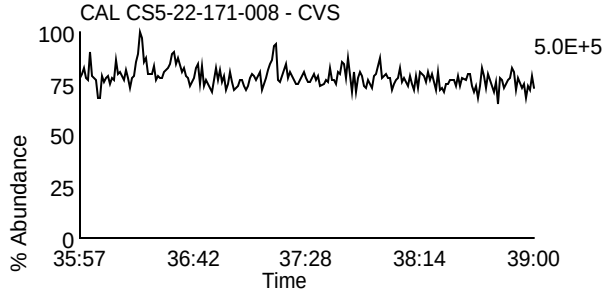
Data File: L230610A_04 G4 C12 - 437.814
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G4 C13 - 479.7165
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G4 C1 - 380.976
CAL CS5-22-171-008 - CVS

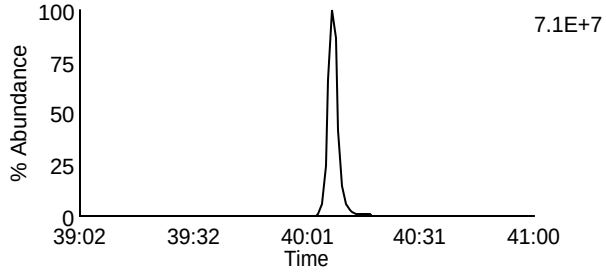


Homologue Group: Octas

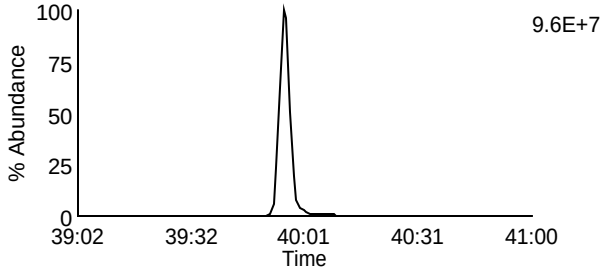
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

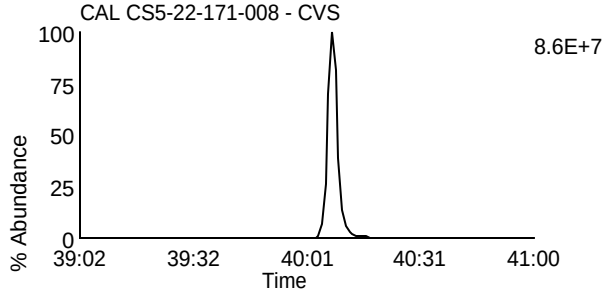
Data File: L230610A_04 G5 C4 - 441.7428
CAL CS5-22-171-008 - CVS



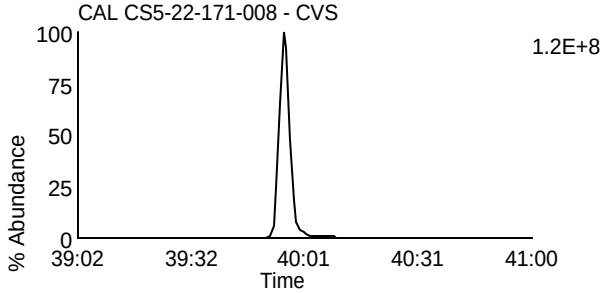
Data File: L230610A_04 G5 C8 - 457.7377
CAL CS5-22-171-008 - CVS



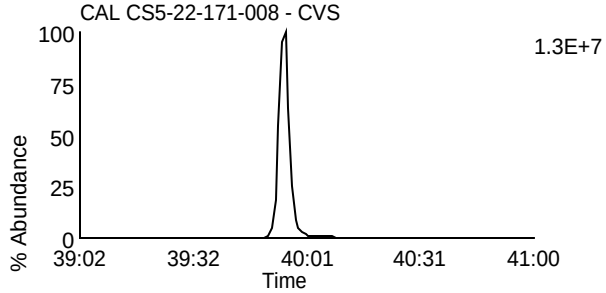
Data File: L230610A_04 G5 C5 - 443.7398
CAL CS5-22-171-008 - CVS



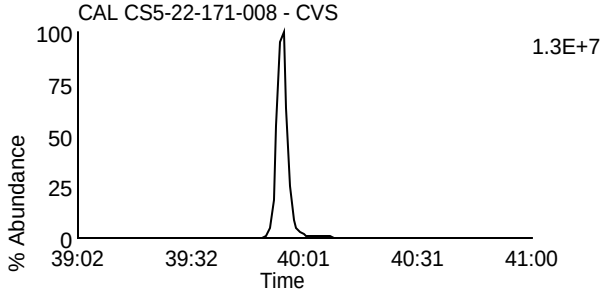
Data File: L230610A_04 G5 C9 - 459.7347
CAL CS5-22-171-008 - CVS



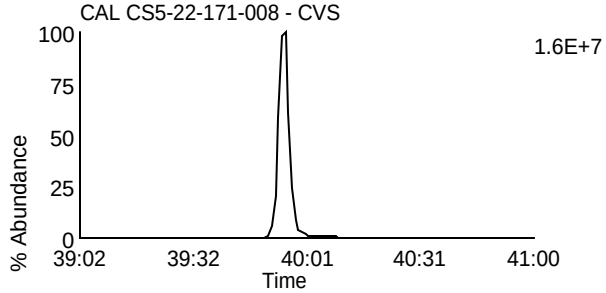
Data File: L230610A_04 G5 C11 - 469.7779
CAL CS5-22-171-008 - CVS



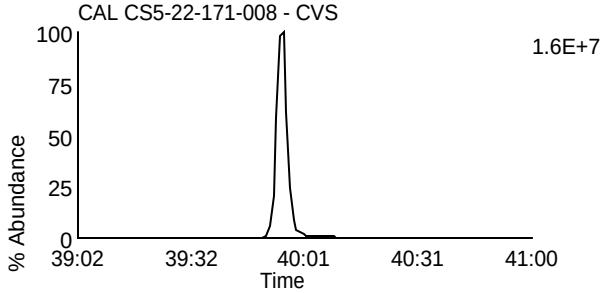
Data File: L230610A_04 G5 C11 - 469.7779
CAL CS5-22-171-008 - CVS



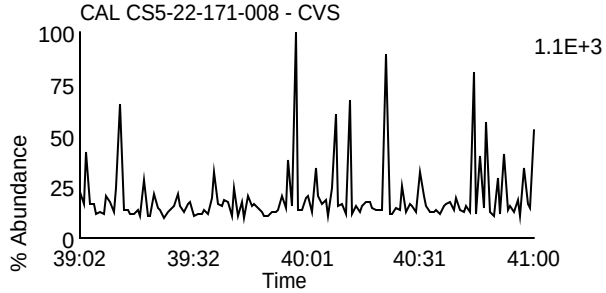
Data File: L230610A_04 G5 C12 - 471.7749
CAL CS5-22-171-008 - CVS



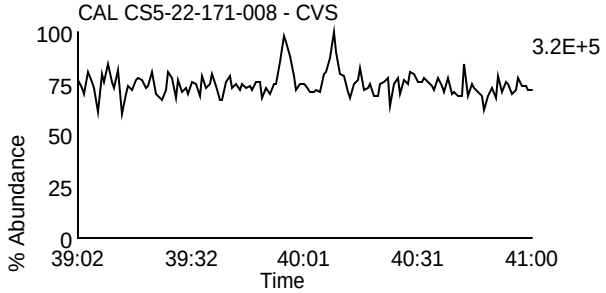
Data File: L230610A_04 G5 C12 - 471.7749
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G5 C13 - 513.6775
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G5 C2 - 430.9728
CAL CS5-22-171-008 - CVS

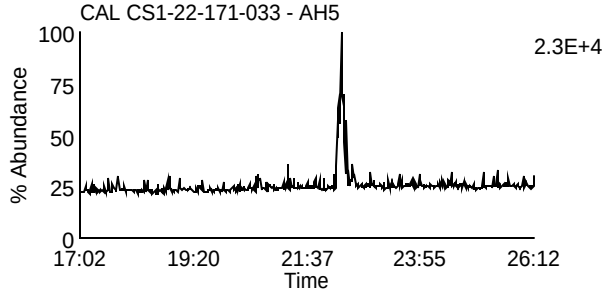


Homologue Group: Tetras

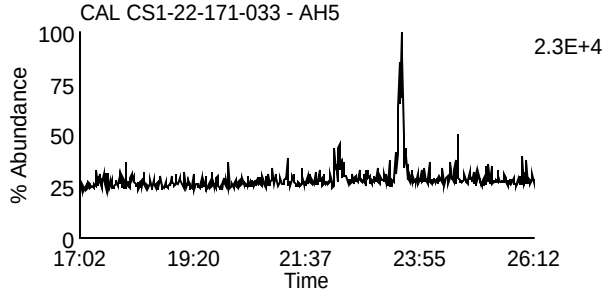
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

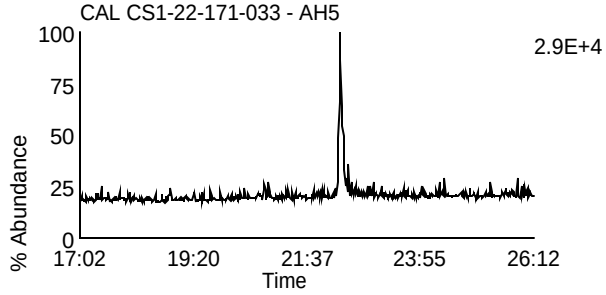
Data File: U230524B_04 G1 C1 - 303.9016
CAL CS1-22-171-033 - AH5



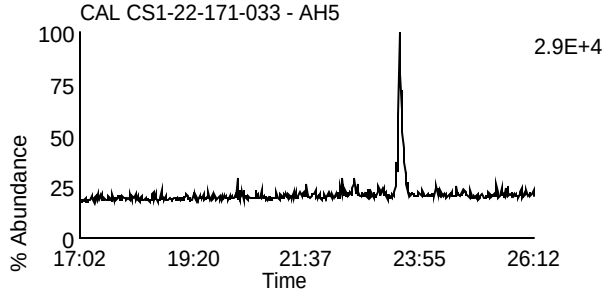
Data File: U230524B_04 G1 C7 - 319.8965
CAL CS1-22-171-033 - AH5



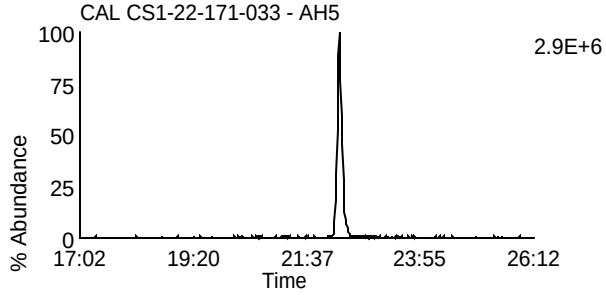
Data File: U230524B_04 G1 C2 - 305.8987
CAL CS1-22-171-033 - AH5



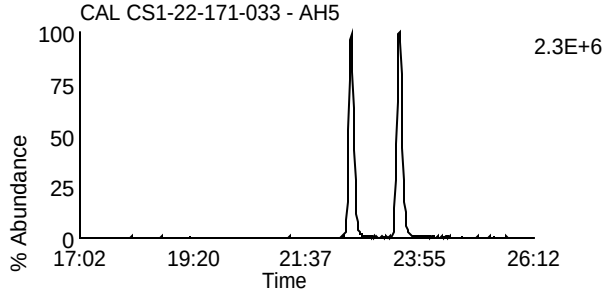
Data File: U230524B_04 G1 C8 - 321.8936
CAL CS1-22-171-033 - AH5



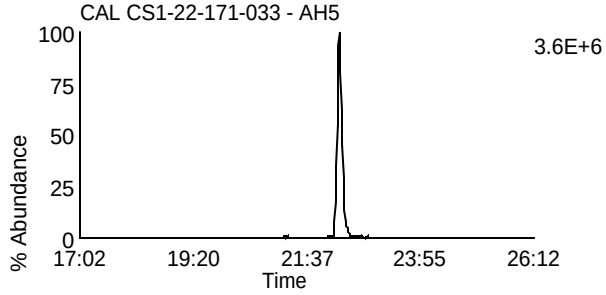
Data File: U230524B_04 G1 C3 - 315.9418
CAL CS1-22-171-033 - AH5



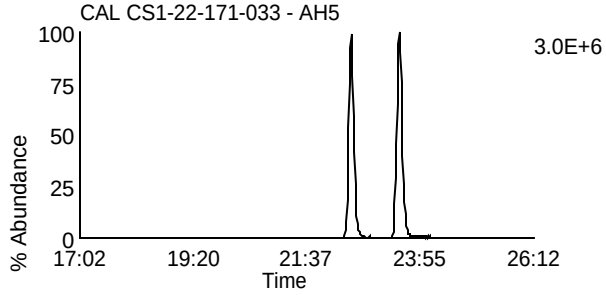
Data File: U230524B_04 G1 C10 - 331.9367
CAL CS1-22-171-033 - AH5



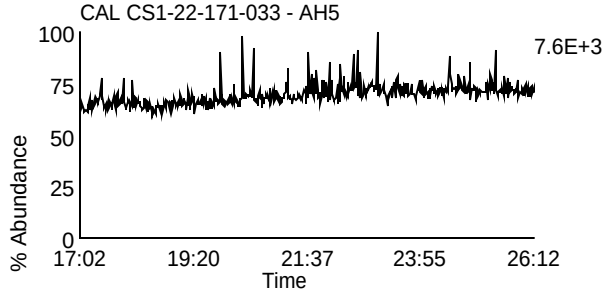
Data File: U230524B_04 G1 C4 - 317.9389
CAL CS1-22-171-033 - AH5



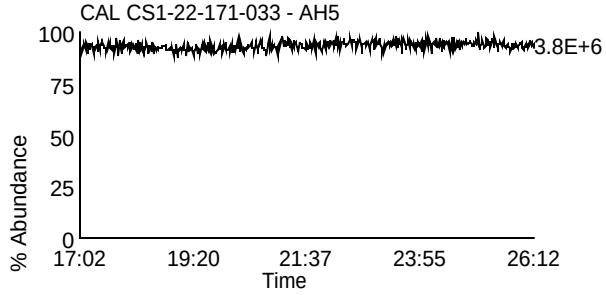
Data File: U230524B_04 G1 C11 - 333.9338
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C14 - 375.8364
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C5 - 318.9792
CAL CS1-22-171-033 - AH5

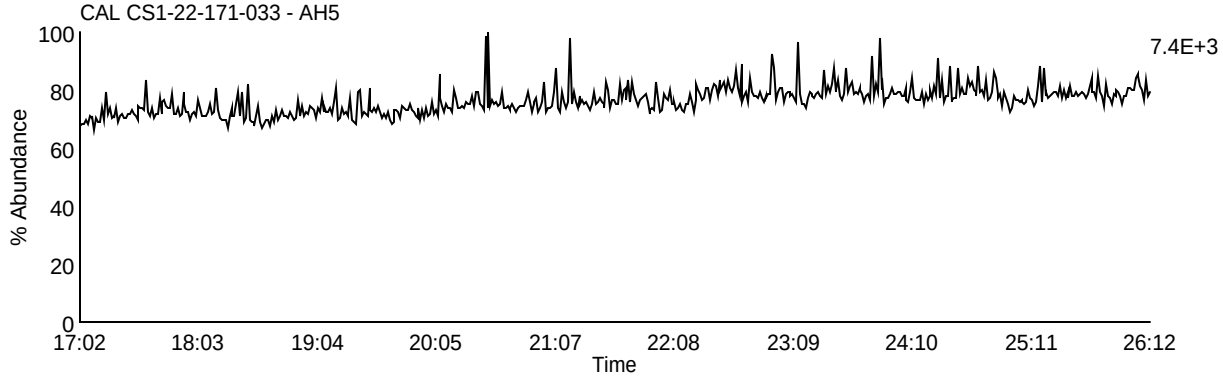


Homologue Group: Penta & Cleanup

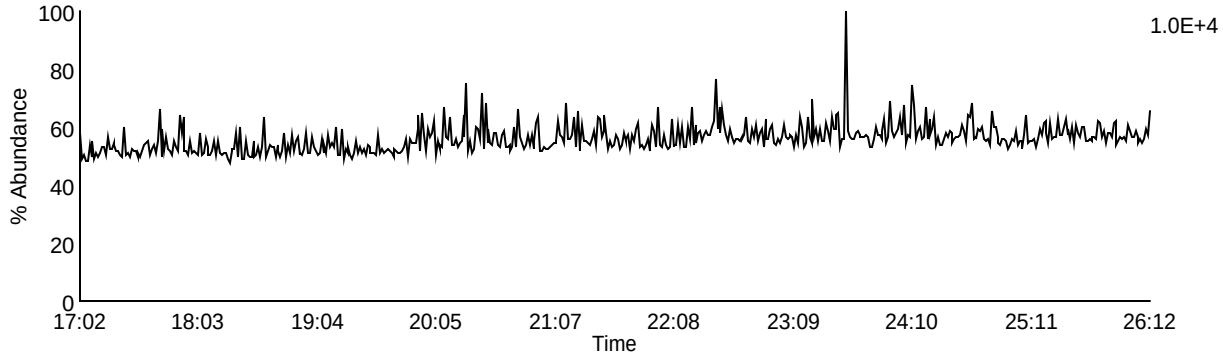
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

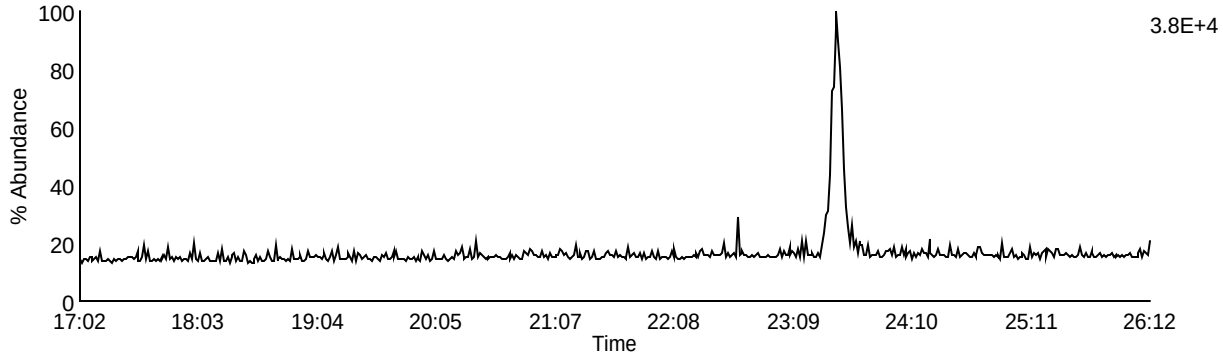
Data File: U230524B_04 G1 C12 - 339.8597
CAL CS1-22-171-033 - AH5



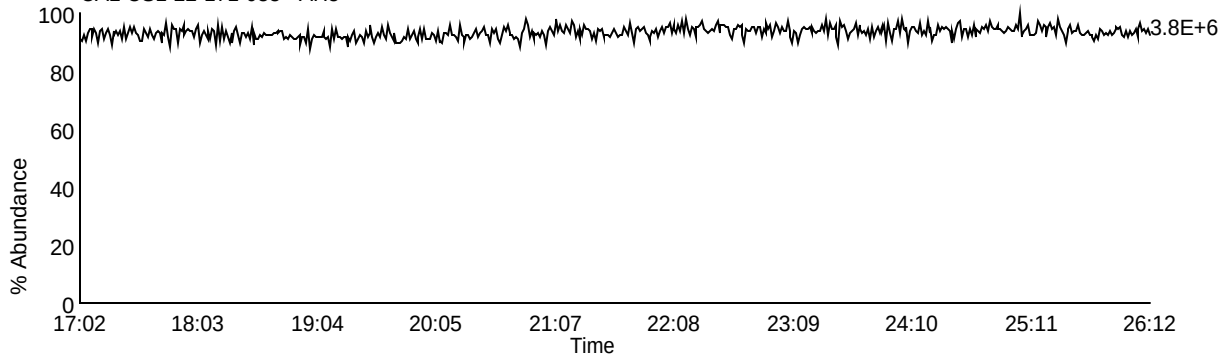
Data File: U230524B_04 G1 C13 - 341.8567
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C9 - 327.8847
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C5 - 318.9792
CAL CS1-22-171-033 - AH5

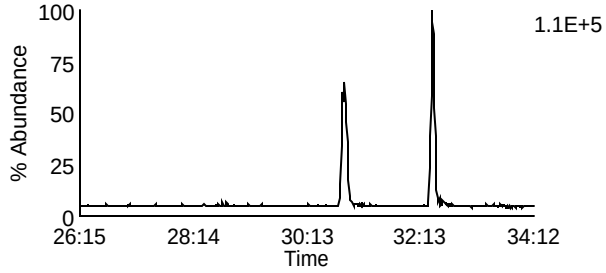


Homologue Group: Pentas

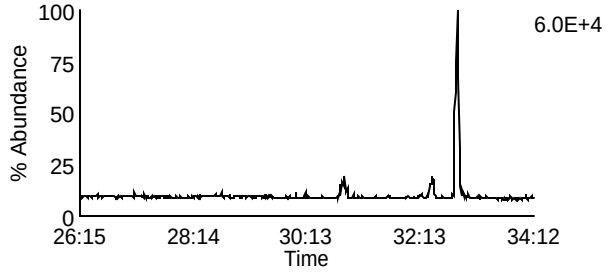
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

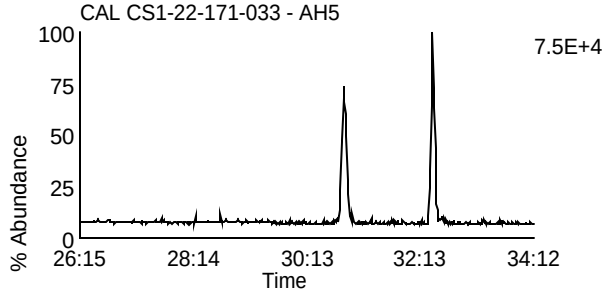
Data File: U230524B_04 G2 C1 - 339.8597
CAL CS1-22-171-033 - AH5



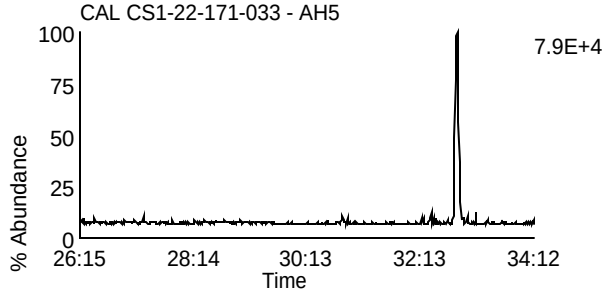
Data File: U230524B_04 G2 C4 - 353.8576
CAL CS1-22-171-033 - AH5



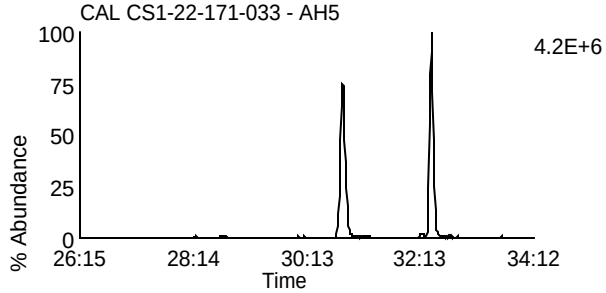
Data File: U230524B_04 G2 C2 - 341.8567
CAL CS1-22-171-033 - AH5



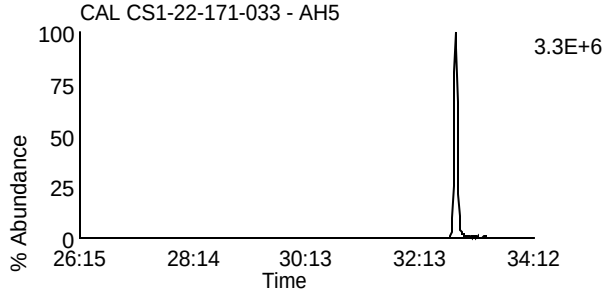
Data File: U230524B_04 G2 C8 - 355.8546
CAL CS1-22-171-033 - AH5



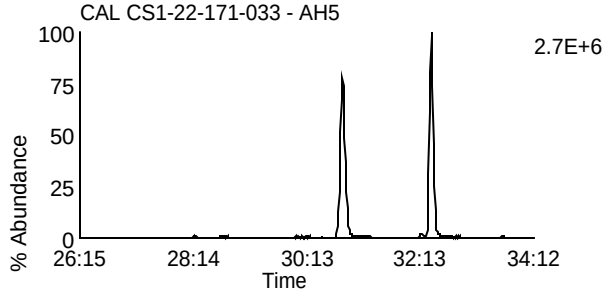
Data File: U230524B_04 G2 C3 - 351.8999
CAL CS1-22-171-033 - AH5



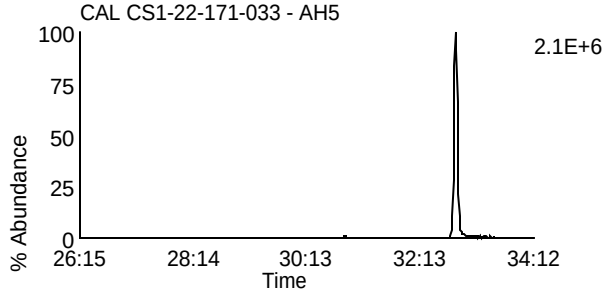
Data File: U230524B_04 G2 C10 - 367.8948
CAL CS1-22-171-033 - AH5



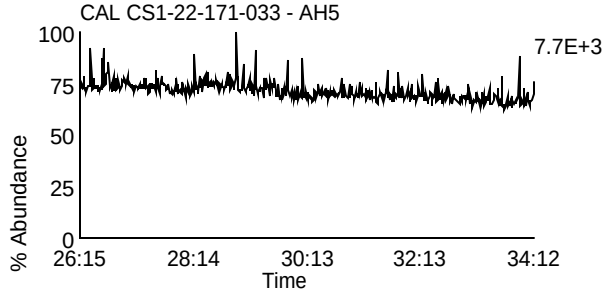
Data File: U230524B_04 G2 C5 - 353.8969
CAL CS1-22-171-033 - AH5



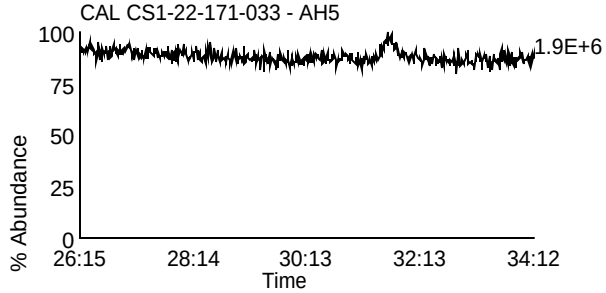
Data File: U230524B_04 G2 C11 - 369.8918
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G2 C12 - 409.7974
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G2 C6 - 354.9792
CAL CS1-22-171-033 - AH5

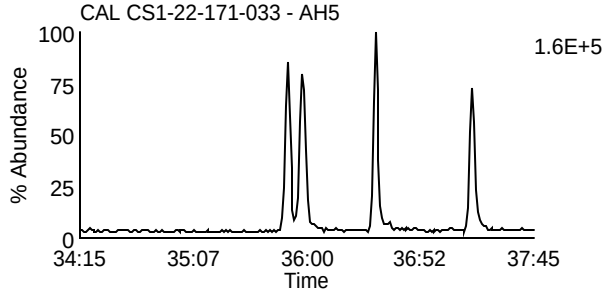


Homologue Group: Hexas

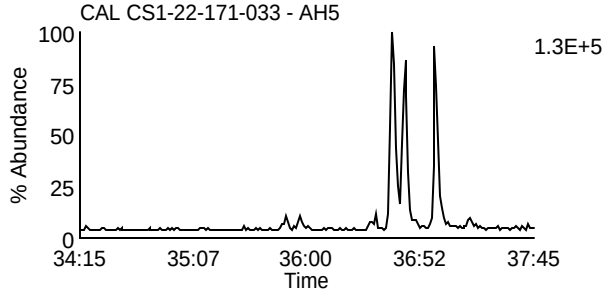
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

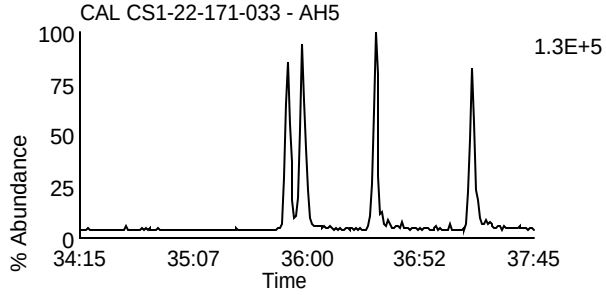
Data File: U230524B_04 G3 C1 - 373.8207
CAL CS1-22-171-033 - AH5



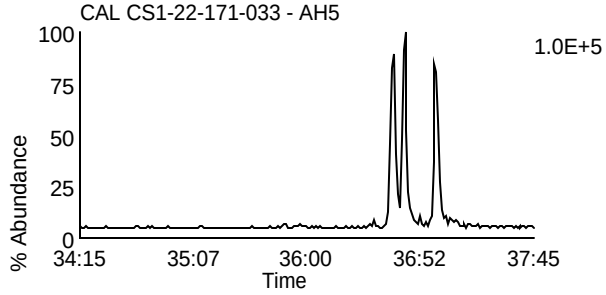
Data File: U230524B_04 G3 C7 - 389.8156
CAL CS1-22-171-033 - AH5



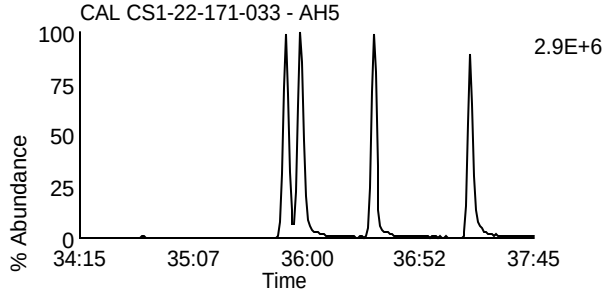
Data File: U230524B_04 G3 C2 - 375.8178
CAL CS1-22-171-033 - AH5



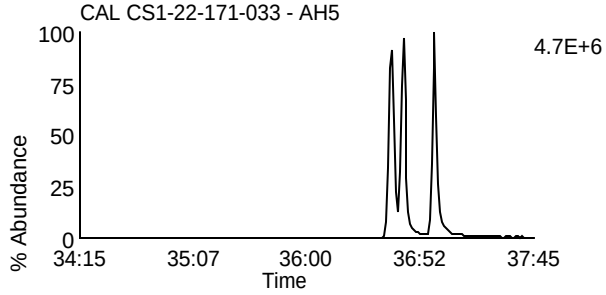
Data File: U230524B_04 G3 C8 - 391.8127
CAL CS1-22-171-033 - AH5



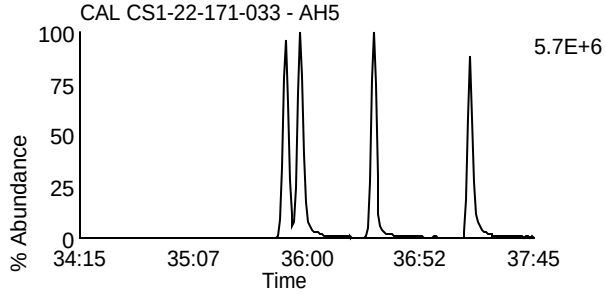
Data File: U230524B_04 G3 C5 - 383.8639
CAL CS1-22-171-033 - AH5



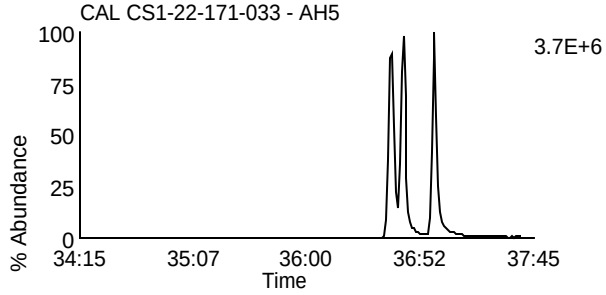
Data File: U230524B_04 G3 C9 - 401.8559
CAL CS1-22-171-033 - AH5



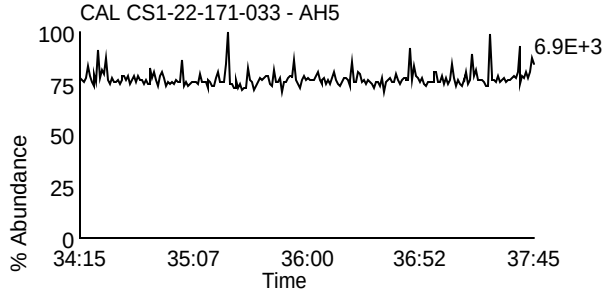
Data File: U230524B_04 G3 C6 - 385.861
CAL CS1-22-171-033 - AH5



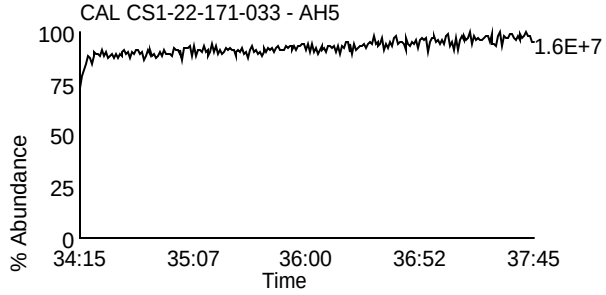
Data File: U230524B_04 G3 C10 - 403.8529
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G3 C11 - 445.7555
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G3 C3 - 380.976
CAL CS1-22-171-033 - AH5

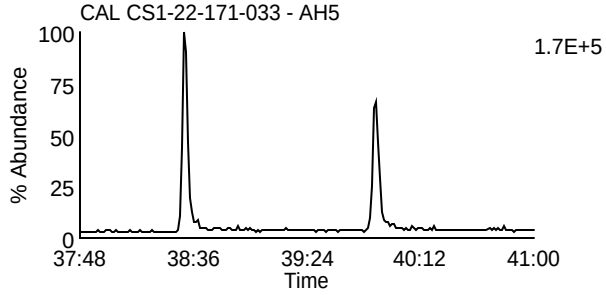


Homologue Group: Heptas

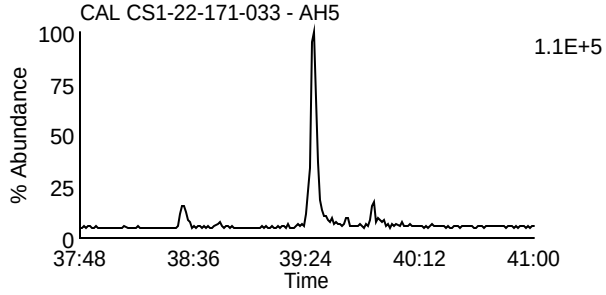
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

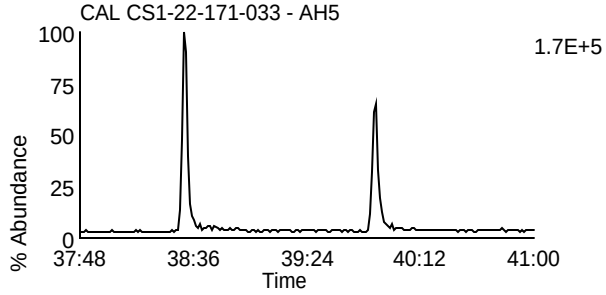
Data File: U230524B_04 G4 C3 - 407.7818
CAL CS1-22-171-033 - AH5



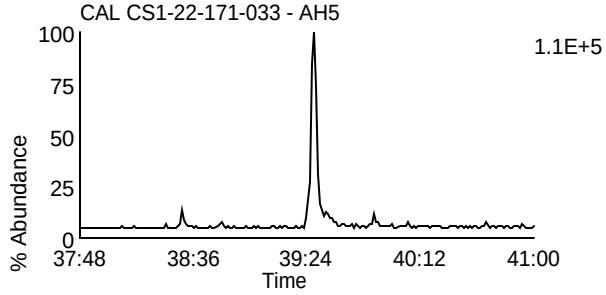
Data File: U230524B_04 G4 C8 - 423.7767
CAL CS1-22-171-033 - AH5



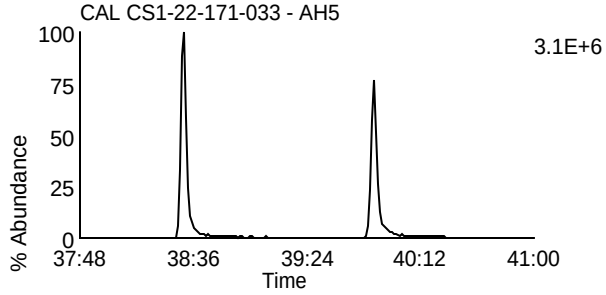
Data File: U230524B_04 G4 C4 - 409.7788
CAL CS1-22-171-033 - AH5



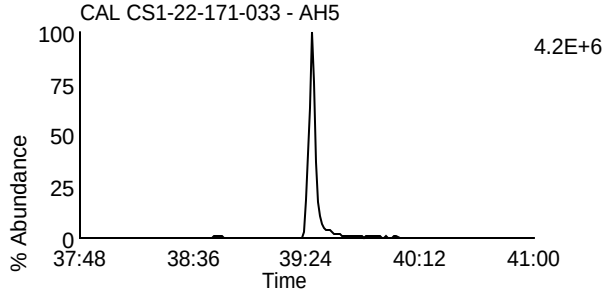
Data File: U230524B_04 G4 C9 - 425.7737
CAL CS1-22-171-033 - AH5



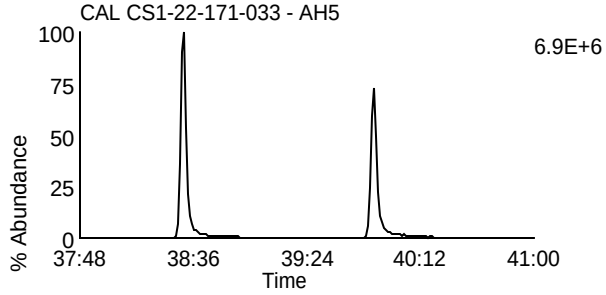
Data File: U230524B_04 G4 C6 - 417.825
CAL CS1-22-171-033 - AH5



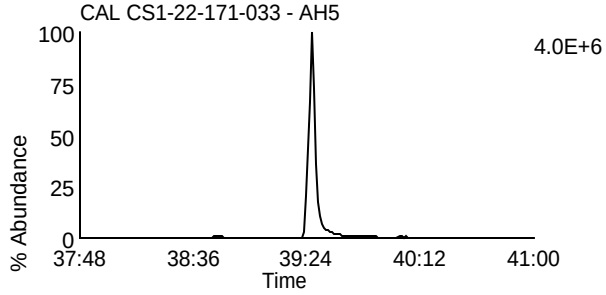
Data File: U230524B_04 G4 C11 - 435.8169
CAL CS1-22-171-033 - AH5



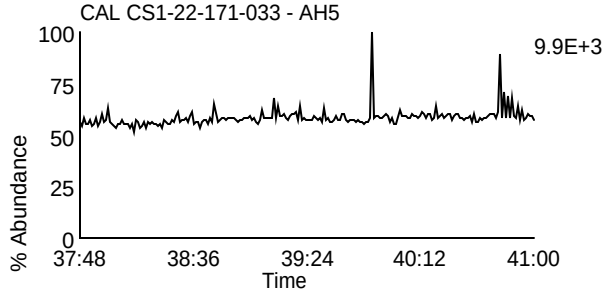
Data File: U230524B_04 G4 C7 - 419.822
CAL CS1-22-171-033 - AH5



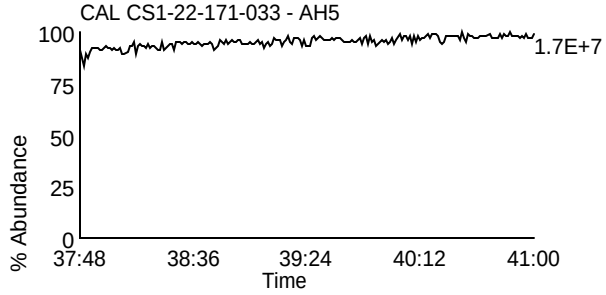
Data File: U230524B_04 G4 C12 - 437.814
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G4 C13 - 479.7165
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G4 C1 - 380.976
CAL CS1-22-171-033 - AH5

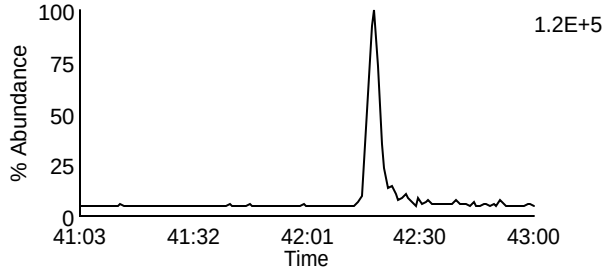


Homologue Group: Octas

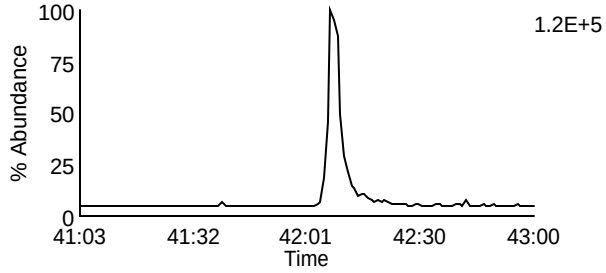
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

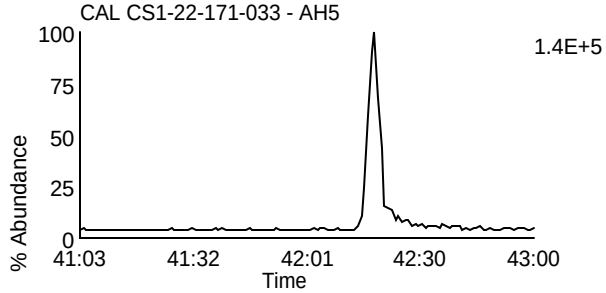
Data File: U230524B_04 G5 C4 - 441.7428
CAL CS1-22-171-033 - AH5



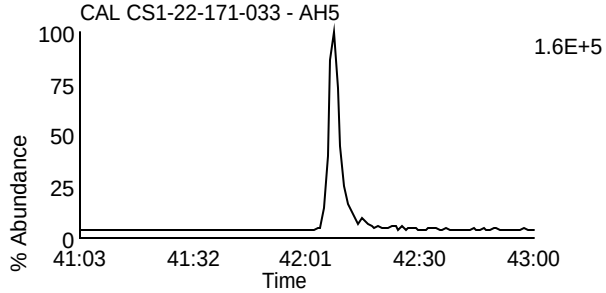
Data File: U230524B_04 G5 C8 - 457.7377
CAL CS1-22-171-033 - AH5



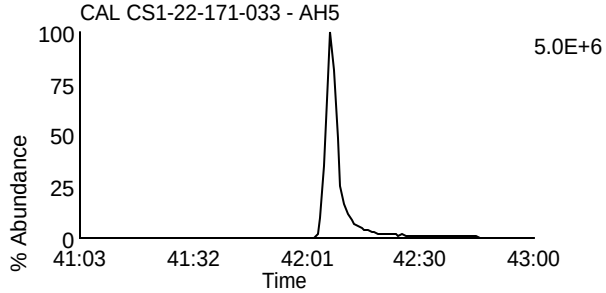
Data File: U230524B_04 G5 C5 - 443.7398
CAL CS1-22-171-033 - AH5



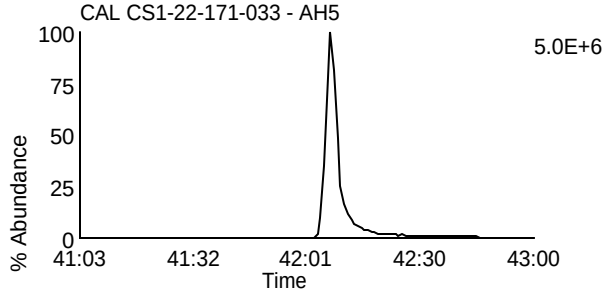
Data File: U230524B_04 G5 C9 - 459.7347
CAL CS1-22-171-033 - AH5



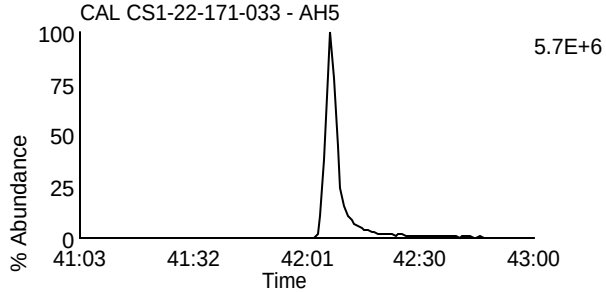
Data File: U230524B_04 G5 C11 - 469.7779
CAL CS1-22-171-033 - AH5



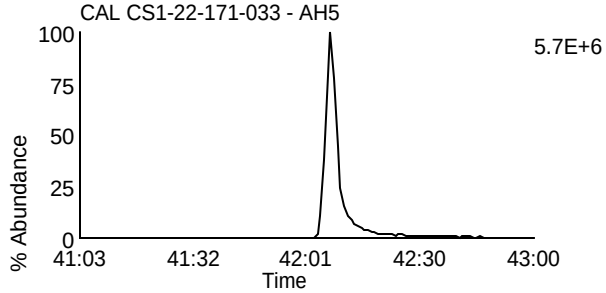
Data File: U230524B_04 G5 C11 - 469.7779
CAL CS1-22-171-033 - AH5



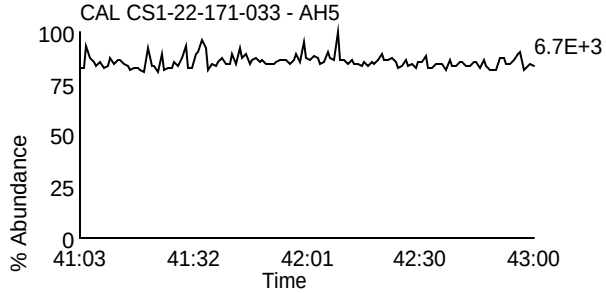
Data File: U230524B_04 G5 C12 - 471.7749
CAL CS1-22-171-033 - AH5



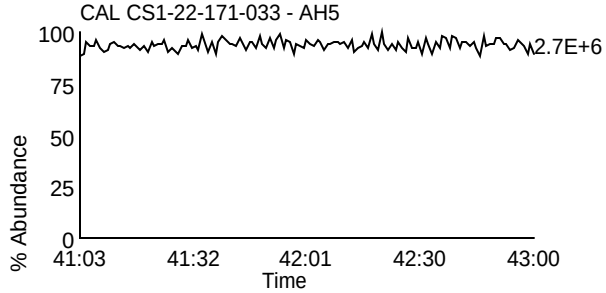
Data File: U230524B_04 G5 C12 - 471.7749
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G5 C13 - 513.6775
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G5 C2 - 430.9728
CAL CS1-22-171-033 - AH5

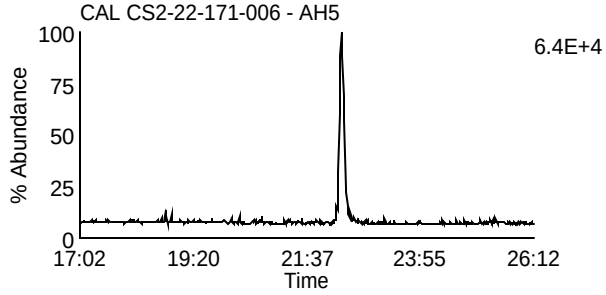


Homologue Group: Tetras

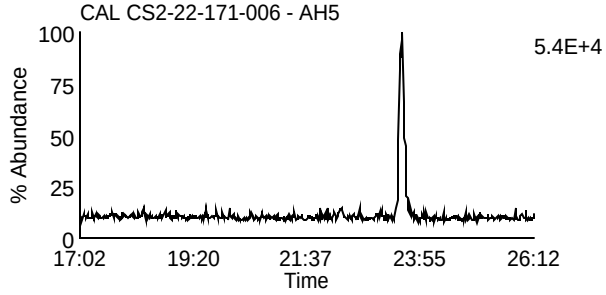
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

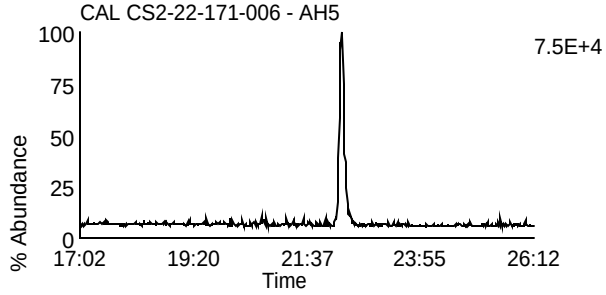
Data File: U230524B_03 G1 C1 - 303.9016
CAL CS2-22-171-006 - AH5



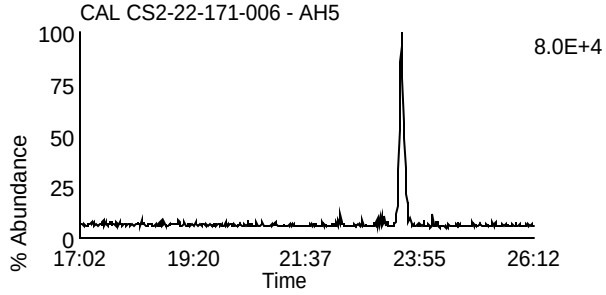
Data File: U230524B_03 G1 C7 - 319.8965
CAL CS2-22-171-006 - AH5



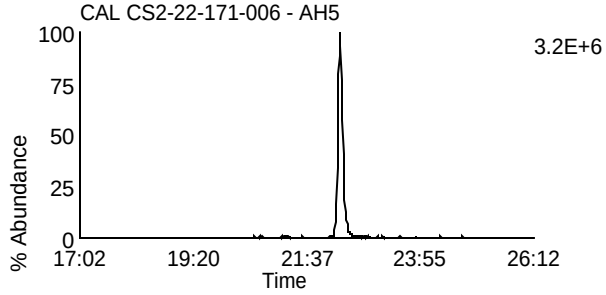
Data File: U230524B_03 G1 C2 - 305.8987
CAL CS2-22-171-006 - AH5



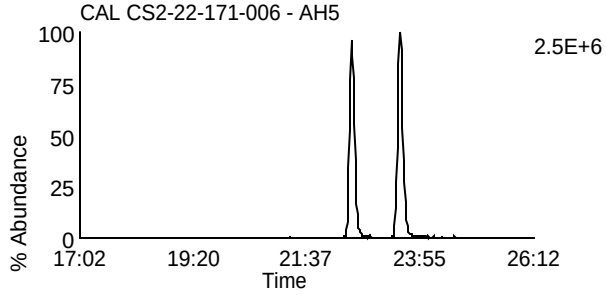
Data File: U230524B_03 G1 C8 - 321.8936
CAL CS2-22-171-006 - AH5



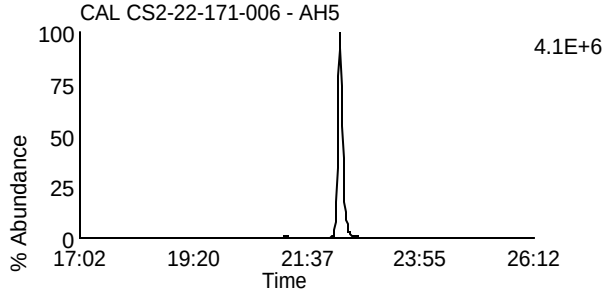
Data File: U230524B_03 G1 C3 - 315.9418
CAL CS2-22-171-006 - AH5



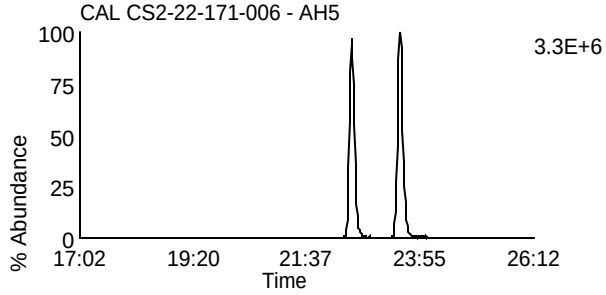
Data File: U230524B_03 G1 C10 - 331.9367
CAL CS2-22-171-006 - AH5



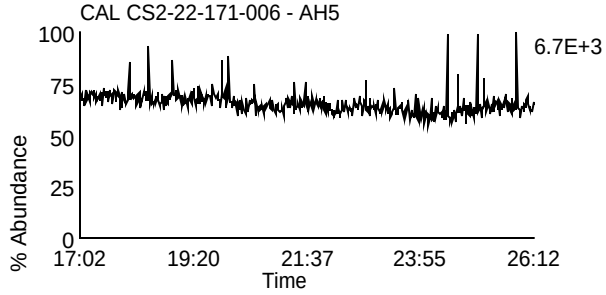
Data File: U230524B_03 G1 C4 - 317.9389
CAL CS2-22-171-006 - AH5



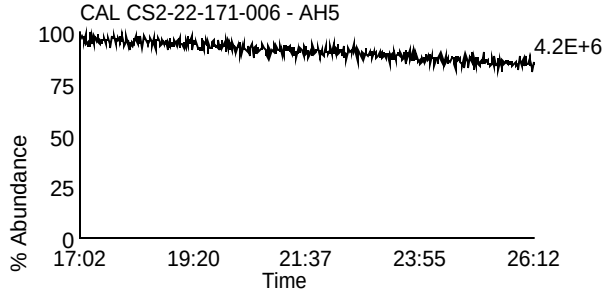
Data File: U230524B_03 G1 C11 - 333.9338
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C14 - 375.8364
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - AH5

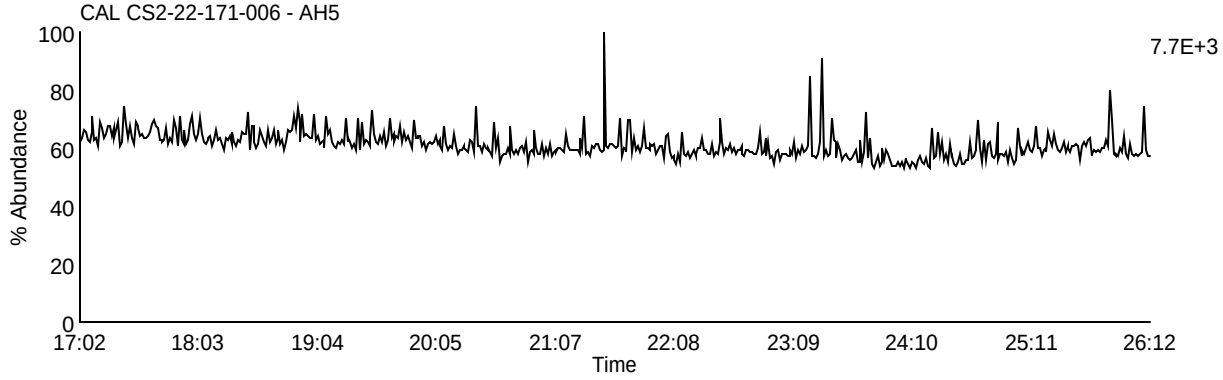


Homologue Group: Penta & Cleanup

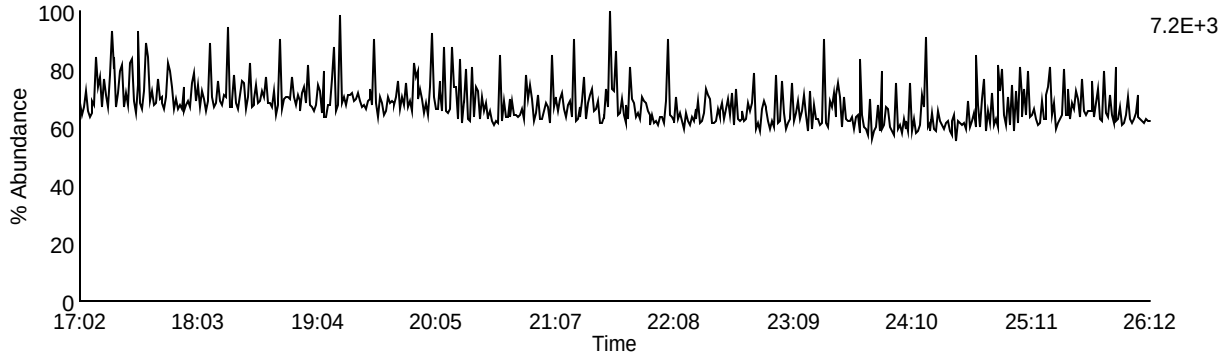
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

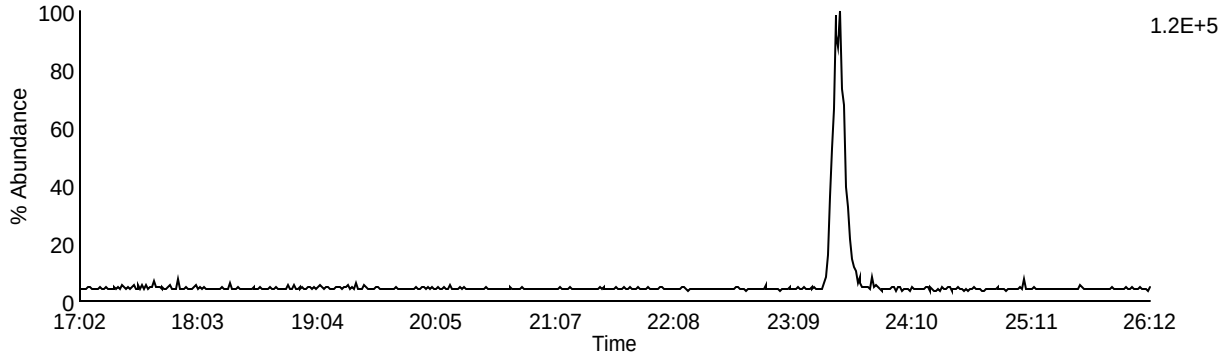
Data File: U230524B_03 G1 C12 - 339.8597
CAL CS2-22-171-006 - AH5



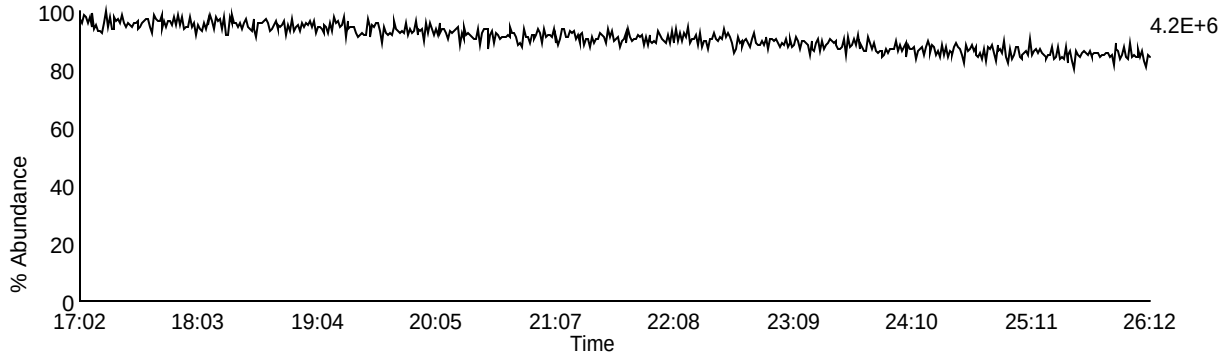
Data File: U230524B_03 G1 C13 - 341.8567
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C9 - 327.8847
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - AH5

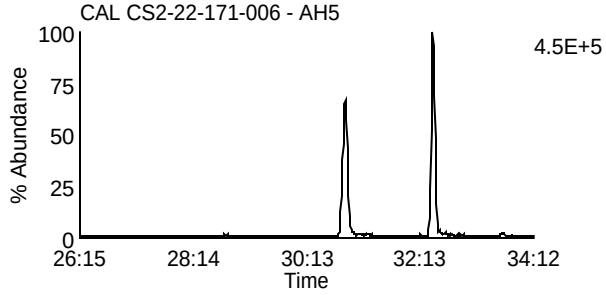


Homologue Group: Pentas

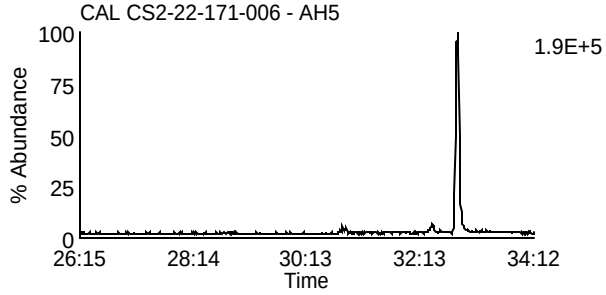
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

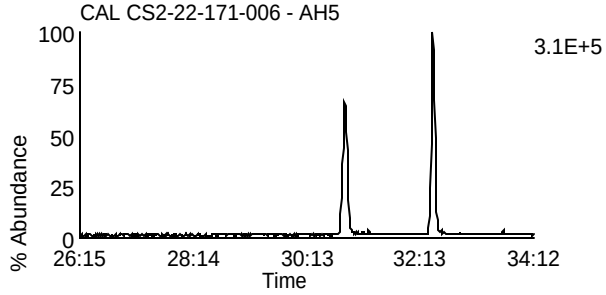
Data File: U230524B_03 G2 C1 - 339.8597
CAL CS2-22-171-006 - AH5



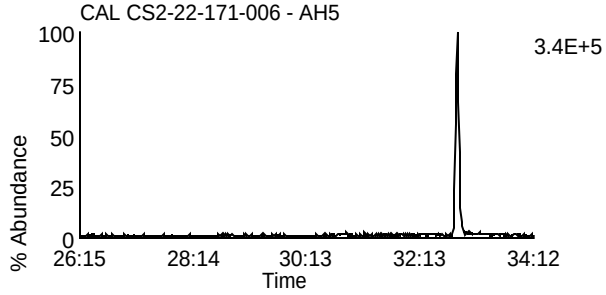
Data File: U230524B_03 G2 C4 - 353.8576
CAL CS2-22-171-006 - AH5



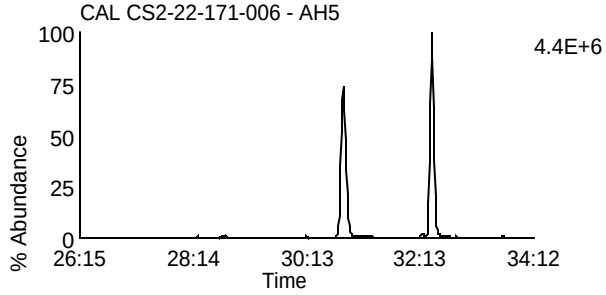
Data File: U230524B_03 G2 C2 - 341.8567
CAL CS2-22-171-006 - AH5



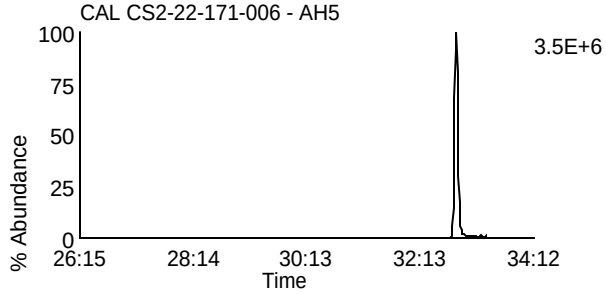
Data File: U230524B_03 G2 C8 - 355.8546
CAL CS2-22-171-006 - AH5



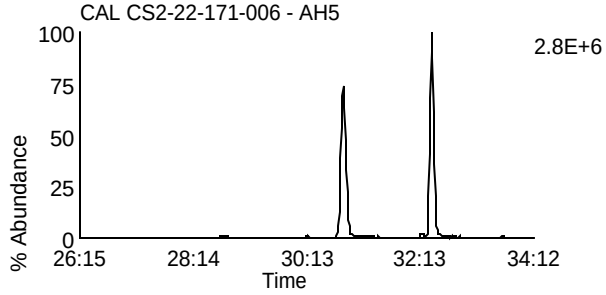
Data File: U230524B_03 G2 C3 - 351.8999
CAL CS2-22-171-006 - AH5



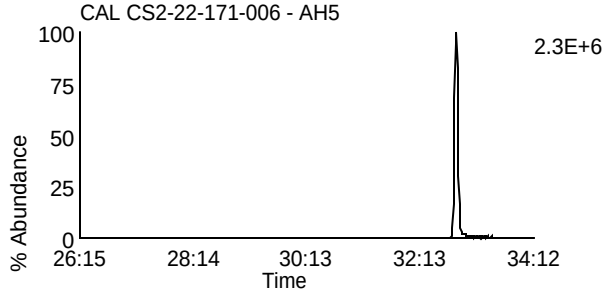
Data File: U230524B_03 G2 C10 - 367.8948
CAL CS2-22-171-006 - AH5



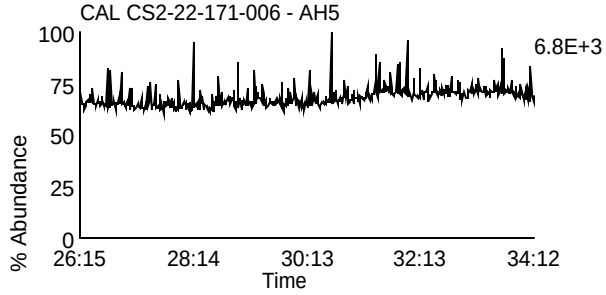
Data File: U230524B_03 G2 C5 - 353.8969
CAL CS2-22-171-006 - AH5



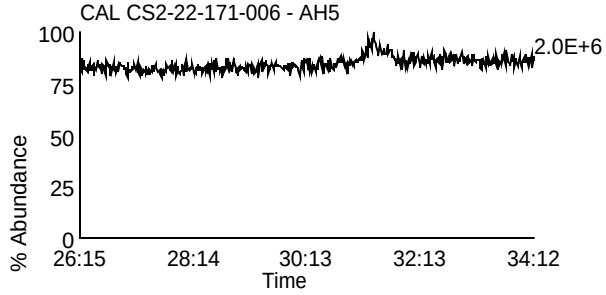
Data File: U230524B_03 G2 C11 - 369.8918
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G2 C12 - 409.7974
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G2 C6 - 354.9792
CAL CS2-22-171-006 - AH5

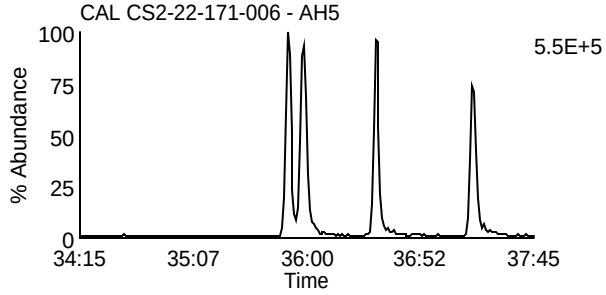


Homologue Group: Hexas

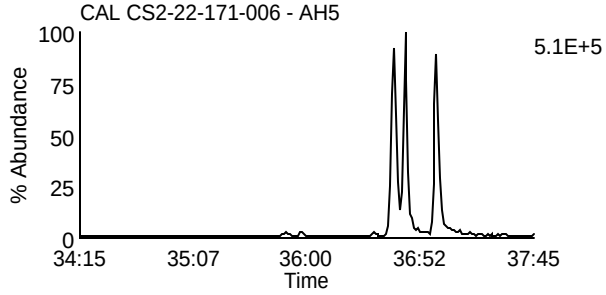
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

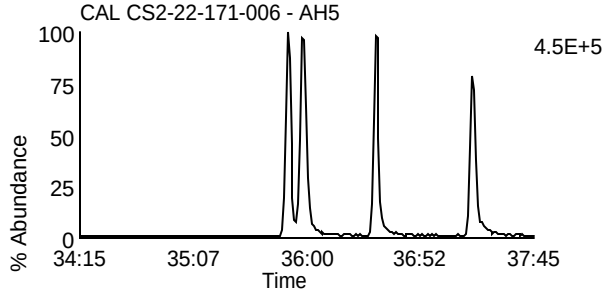
Data File: U230524B_03 G3 C1 - 373.8207
CAL CS2-22-171-006 - AH5



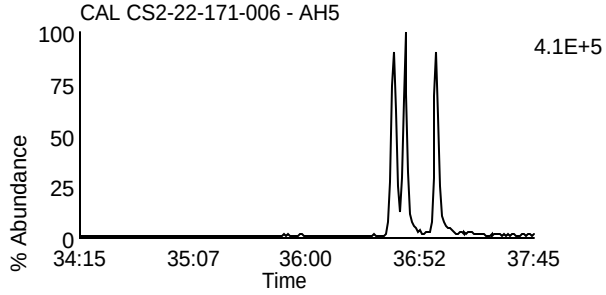
Data File: U230524B_03 G3 C7 - 389.8156
CAL CS2-22-171-006 - AH5



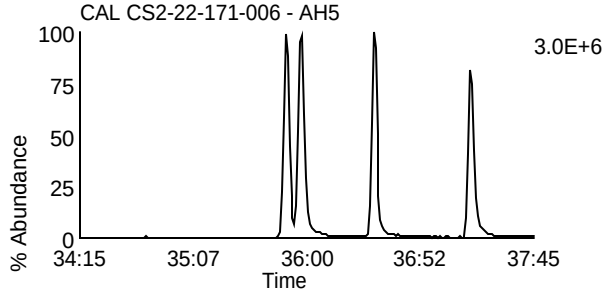
Data File: U230524B_03 G3 C2 - 375.8178
CAL CS2-22-171-006 - AH5



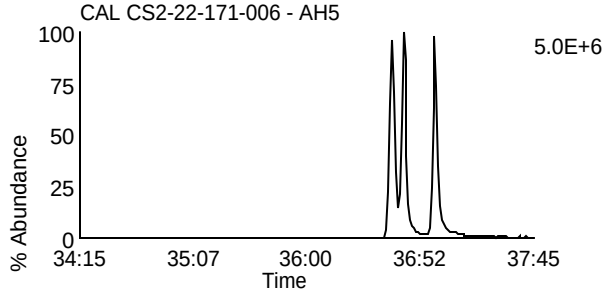
Data File: U230524B_03 G3 C8 - 391.8127
CAL CS2-22-171-006 - AH5



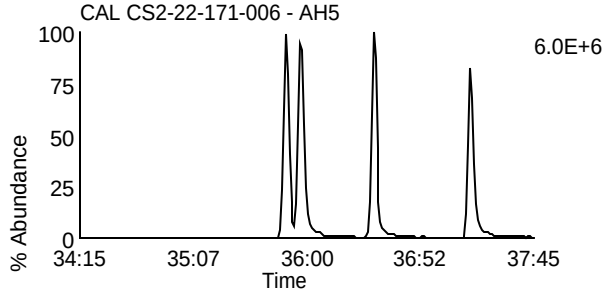
Data File: U230524B_03 G3 C5 - 383.8639
CAL CS2-22-171-006 - AH5



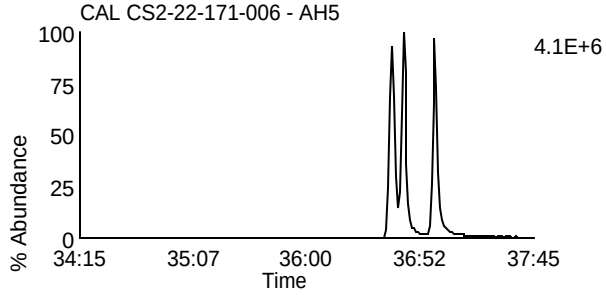
Data File: U230524B_03 G3 C9 - 401.8559
CAL CS2-22-171-006 - AH5



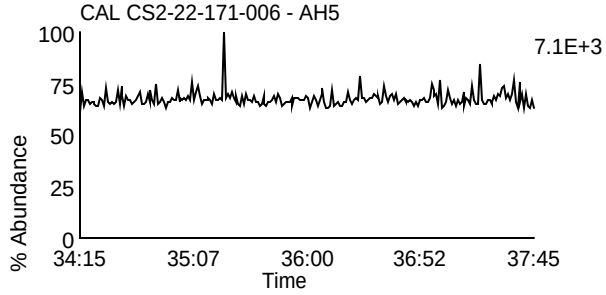
Data File: U230524B_03 G3 C6 - 385.861
CAL CS2-22-171-006 - AH5



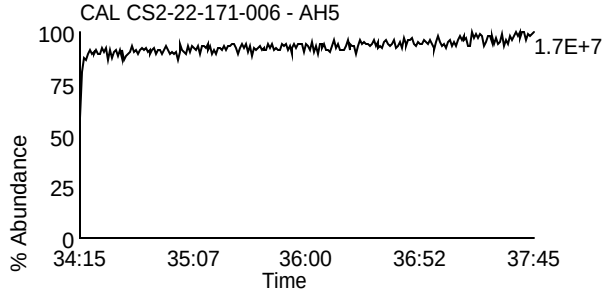
Data File: U230524B_03 G3 C10 - 403.8529
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G3 C11 - 445.7555
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G3 C3 - 380.976
CAL CS2-22-171-006 - AH5

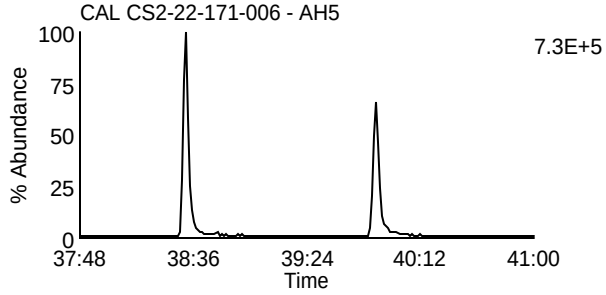


Homologue Group: Heptas

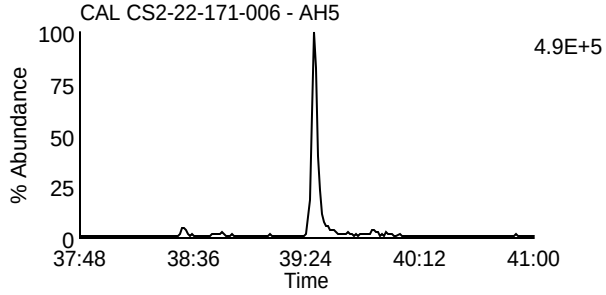
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

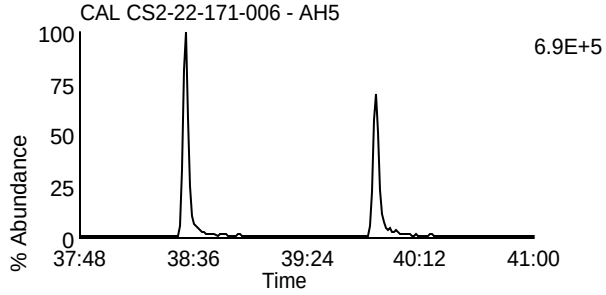
Data File: U230524B_03 G4 C3 - 407.7818
CAL CS2-22-171-006 - AH5



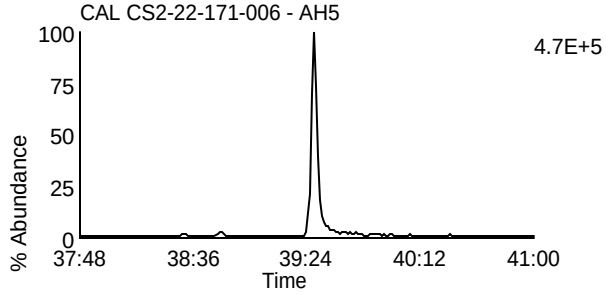
Data File: U230524B_03 G4 C8 - 423.7767
CAL CS2-22-171-006 - AH5



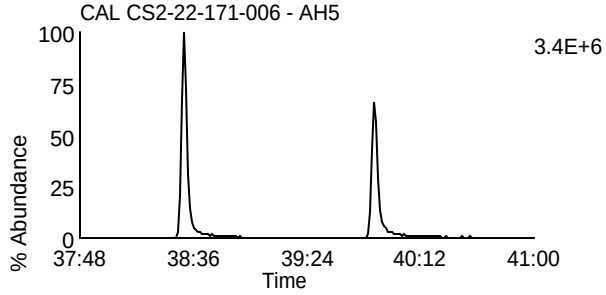
Data File: U230524B_03 G4 C4 - 409.7788
CAL CS2-22-171-006 - AH5



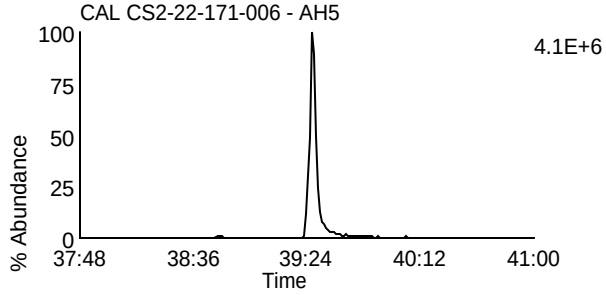
Data File: U230524B_03 G4 C9 - 425.7737
CAL CS2-22-171-006 - AH5



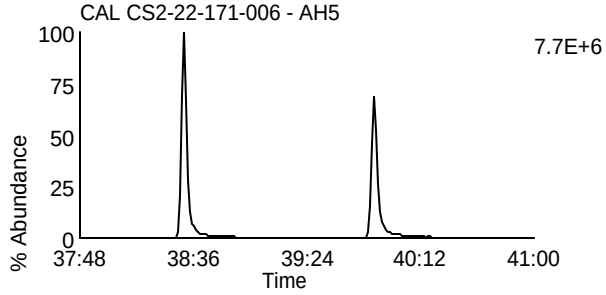
Data File: U230524B_03 G4 C6 - 417.825
CAL CS2-22-171-006 - AH5



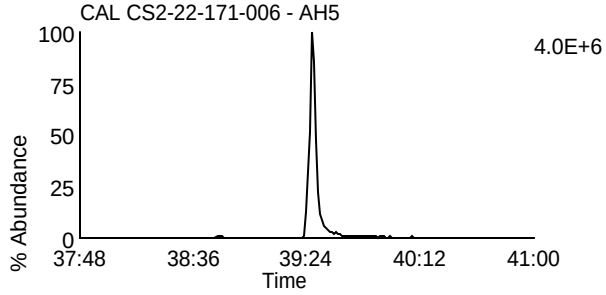
Data File: U230524B_03 G4 C11 - 435.8169
CAL CS2-22-171-006 - AH5



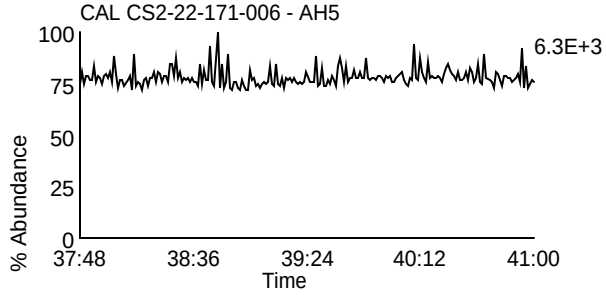
Data File: U230524B_03 G4 C7 - 419.822
CAL CS2-22-171-006 - AH5



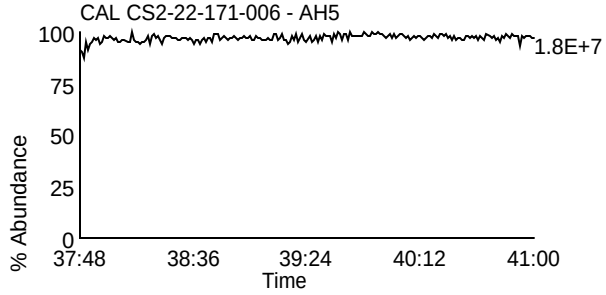
Data File: U230524B_03 G4 C12 - 437.814
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G4 C13 - 479.7165
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G4 C1 - 380.976
CAL CS2-22-171-006 - AH5

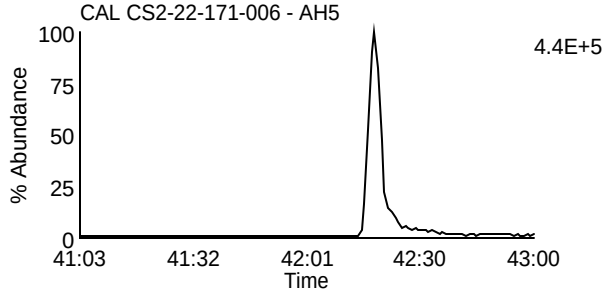


Homologue Group: Octas

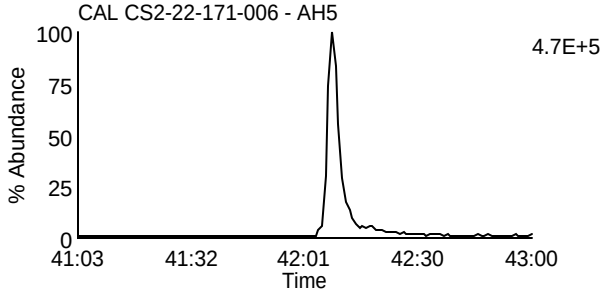
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

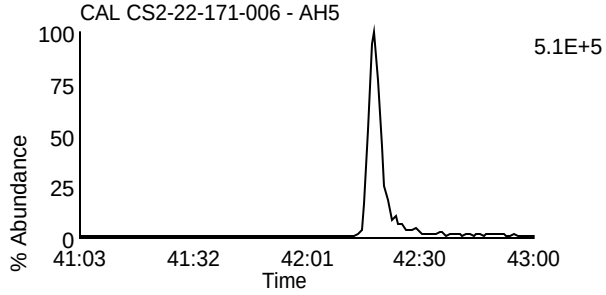
Data File: U230524B_03 G5 C4 - 441.7428
CAL CS2-22-171-006 - AH5



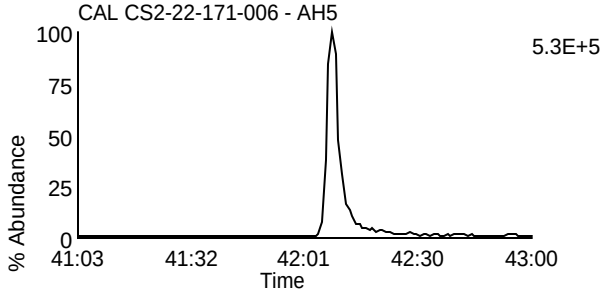
Data File: U230524B_03 G5 C8 - 457.7377
CAL CS2-22-171-006 - AH5



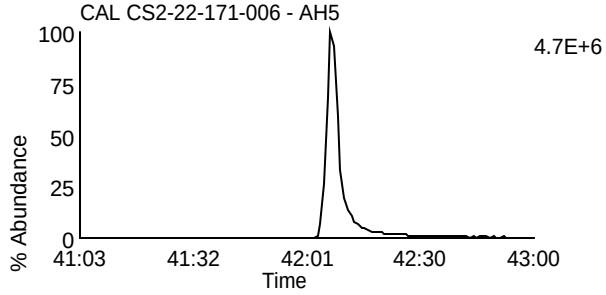
Data File: U230524B_03 G5 C5 - 443.7398
CAL CS2-22-171-006 - AH5



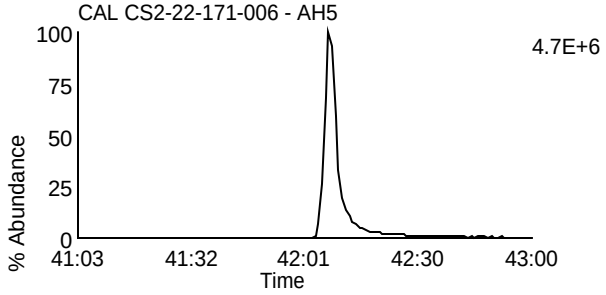
Data File: U230524B_03 G5 C9 - 459.7347
CAL CS2-22-171-006 - AH5



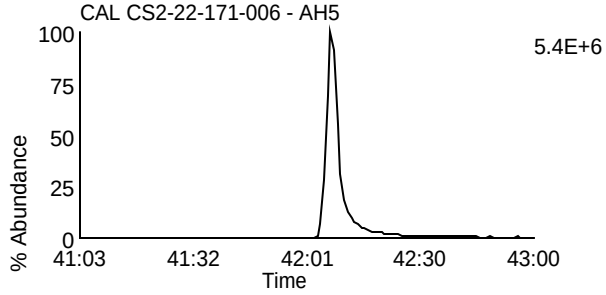
Data File: U230524B_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - AH5



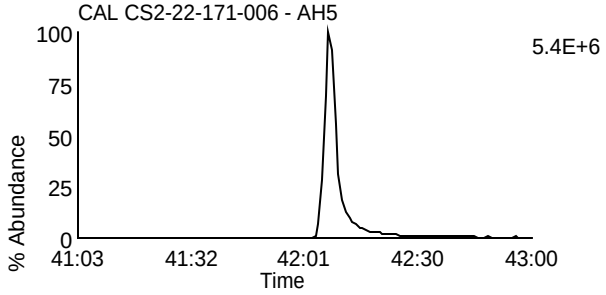
Data File: U230524B_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - AH5



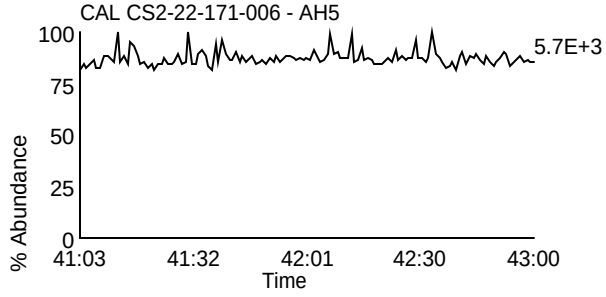
Data File: U230524B_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - AH5



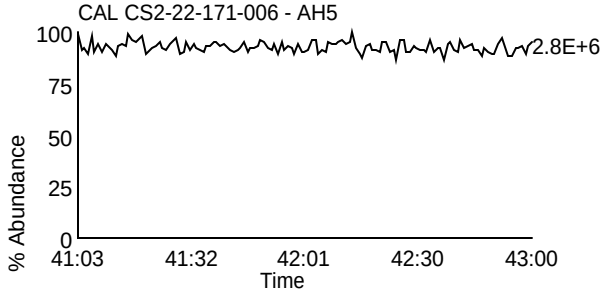
Data File: U230524B_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G5 C13 - 513.6775
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G5 C2 - 430.9728
CAL CS2-22-171-006 - AH5

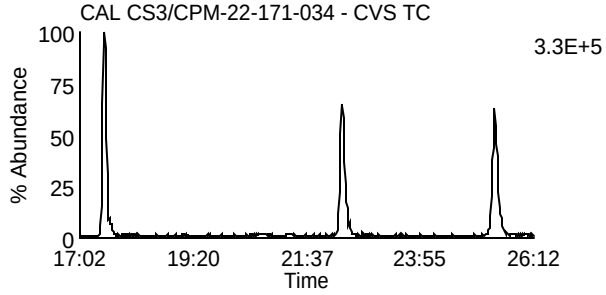


Homologue Group: Tetras

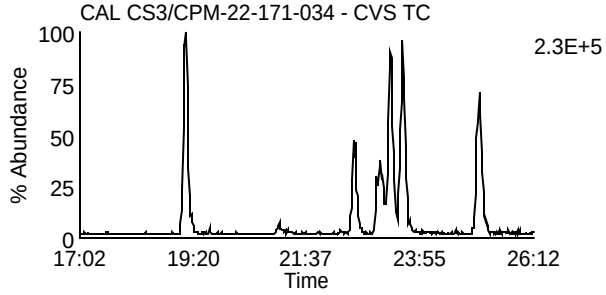
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

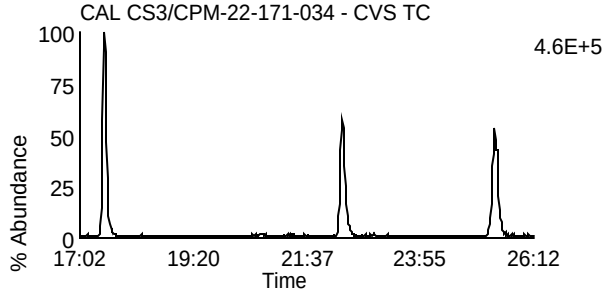
Data File: U230524B_02 G1 C1 - 303.9016
CAL CS3/CPM-22-171-034 - CVS TC



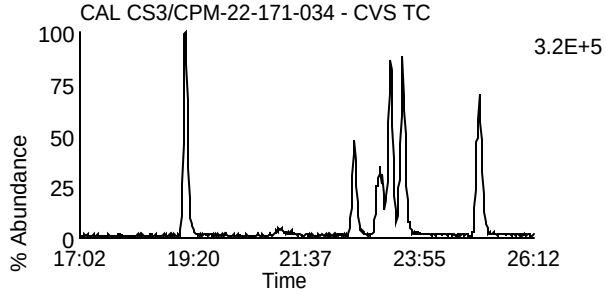
Data File: U230524B_02 G1 C7 - 319.8965
CAL CS3/CPM-22-171-034 - CVS TC



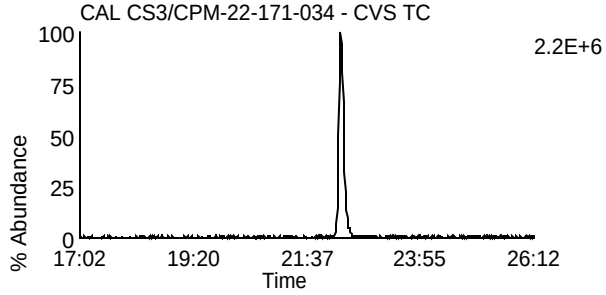
Data File: U230524B_02 G1 C2 - 305.8987
CAL CS3/CPM-22-171-034 - CVS TC



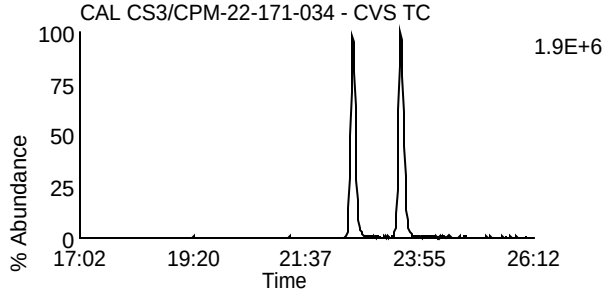
Data File: U230524B_02 G1 C8 - 321.8936
CAL CS3/CPM-22-171-034 - CVS TC



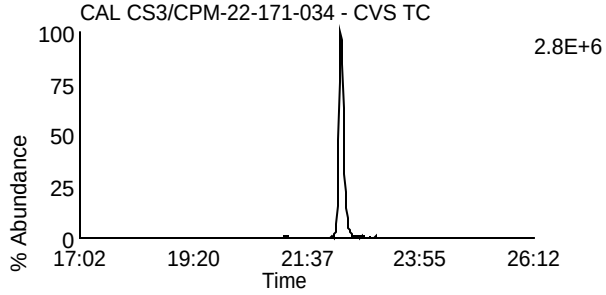
Data File: U230524B_02 G1 C3 - 315.9418
CAL CS3/CPM-22-171-034 - CVS TC



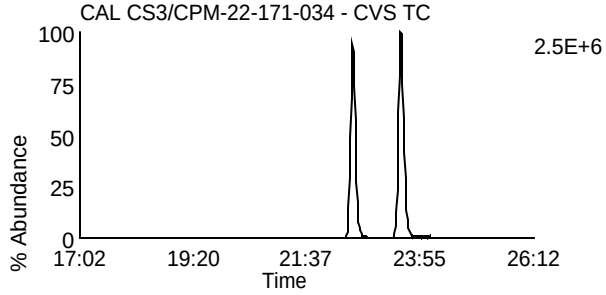
Data File: U230524B_02 G1 C10 - 331.9367
CAL CS3/CPM-22-171-034 - CVS TC



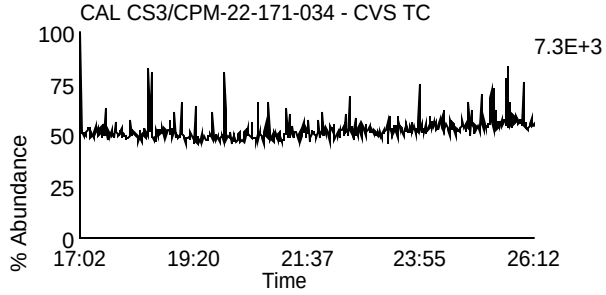
Data File: U230524B_02 G1 C4 - 317.9389
CAL CS3/CPM-22-171-034 - CVS TC



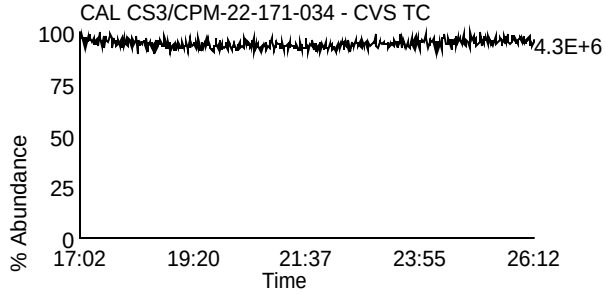
Data File: U230524B_02 G1 C11 - 333.9338
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G1 C14 - 375.8364
CAL CS3/CPM-22-171-034 - CVS TC



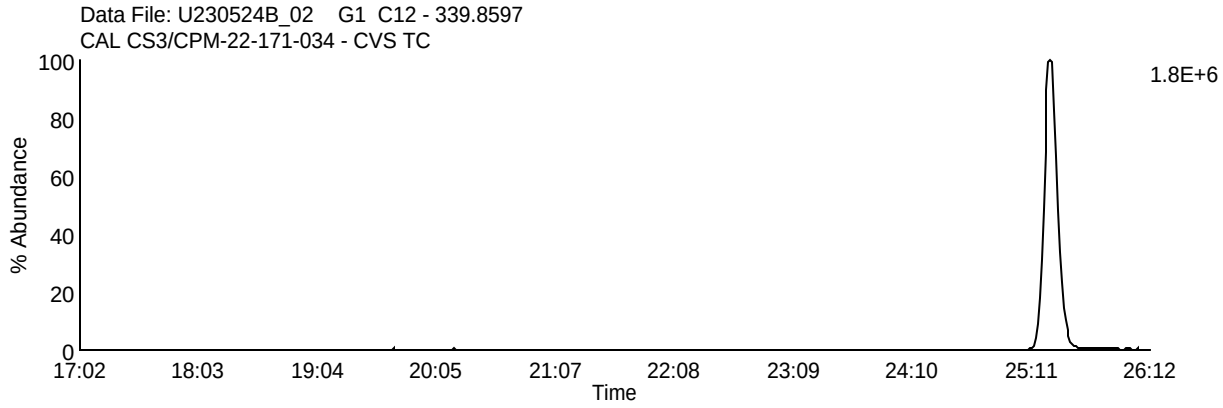
Data File: U230524B_02 G1 C5 - 318.9792
CAL CS3/CPM-22-171-034 - CVS TC

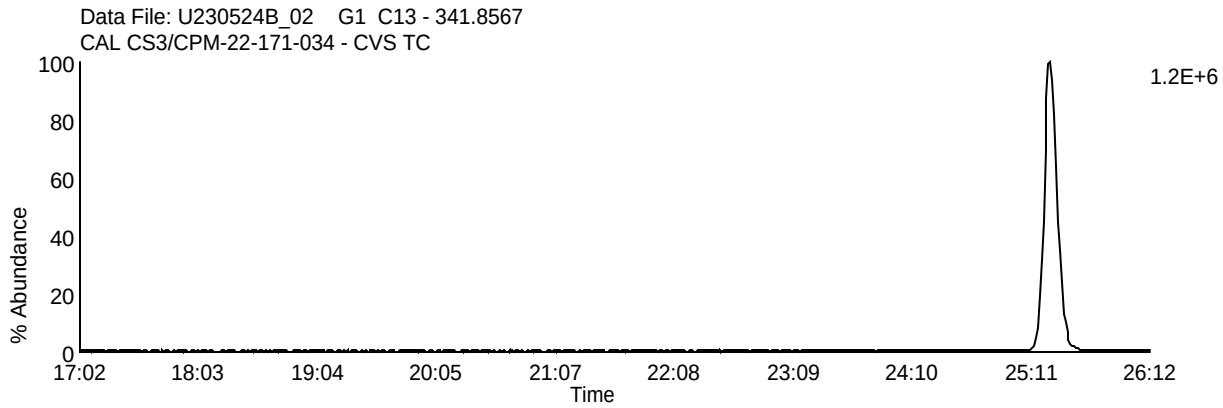


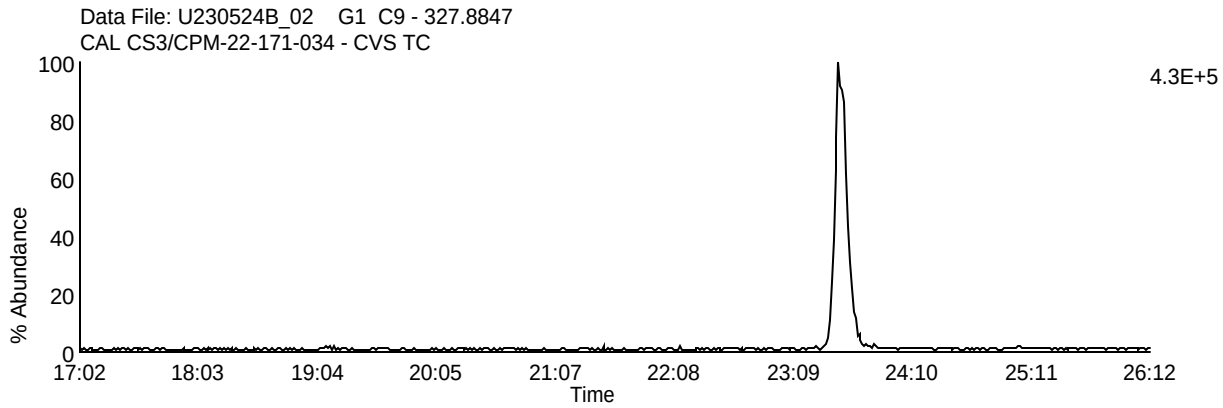
Homologue Group: Penta & Cleanup

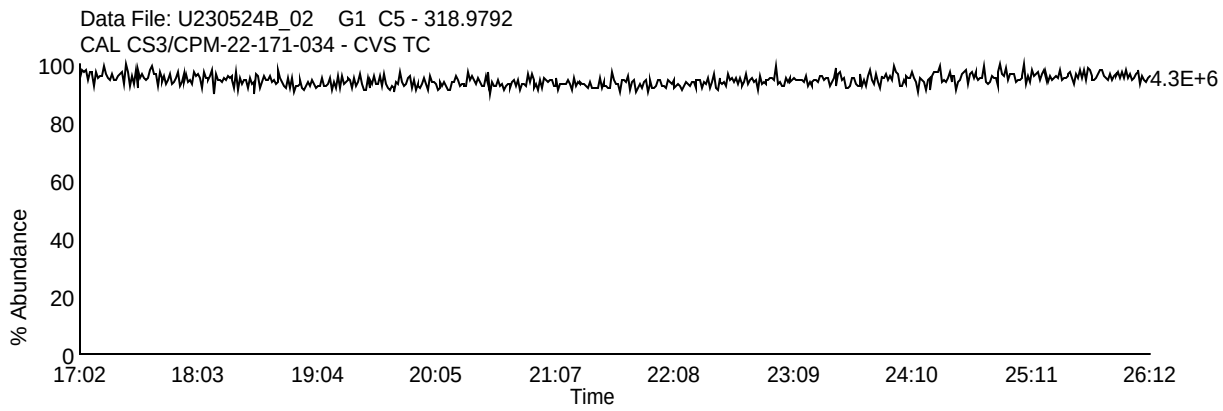
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)







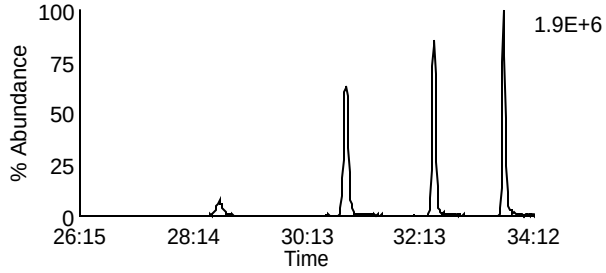


Homologue Group: Pentas

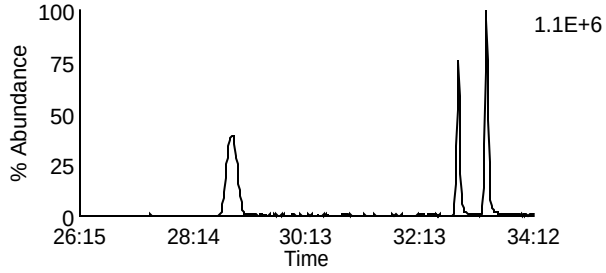
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

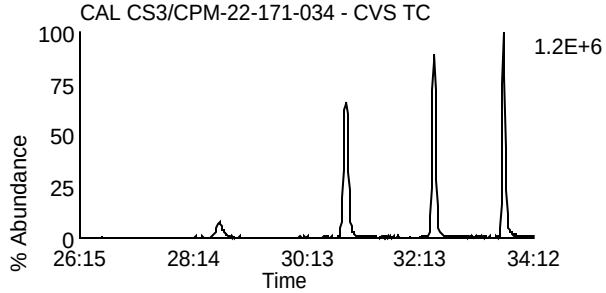
Data File: U230524B_02 G2 C1 - 339.8597
CAL CS3/CPM-22-171-034 - CVS TC



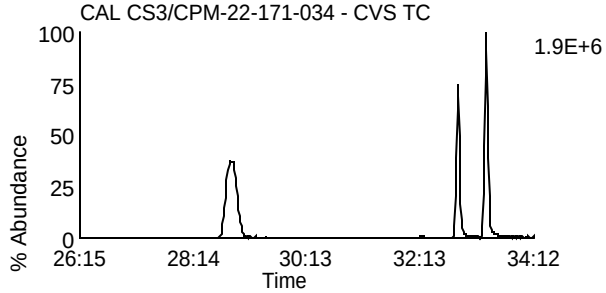
Data File: U230524B_02 G2 C4 - 353.8576
CAL CS3/CPM-22-171-034 - CVS TC



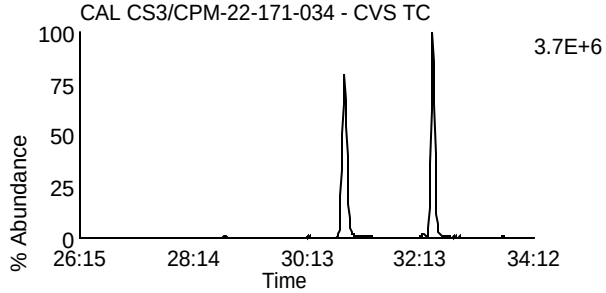
Data File: U230524B_02 G2 C2 - 341.8567
CAL CS3/CPM-22-171-034 - CVS TC



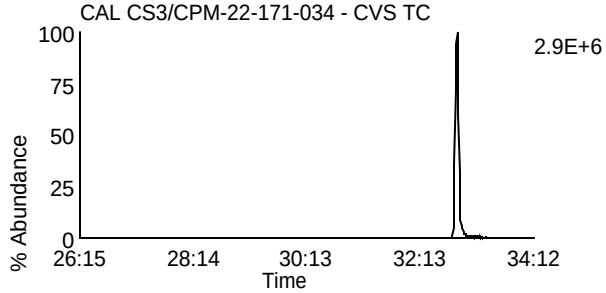
Data File: U230524B_02 G2 C8 - 355.8546
CAL CS3/CPM-22-171-034 - CVS TC



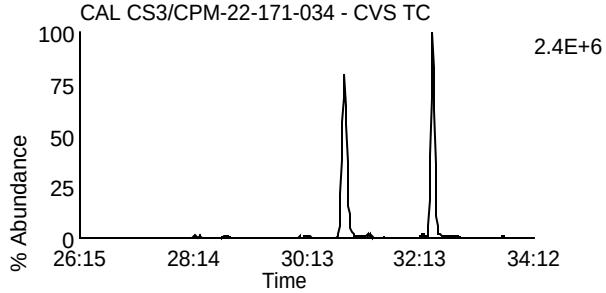
Data File: U230524B_02 G2 C3 - 351.8999
CAL CS3/CPM-22-171-034 - CVS TC



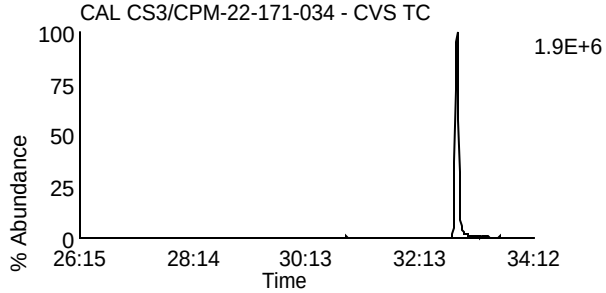
Data File: U230524B_02 G2 C10 - 367.8948
CAL CS3/CPM-22-171-034 - CVS TC



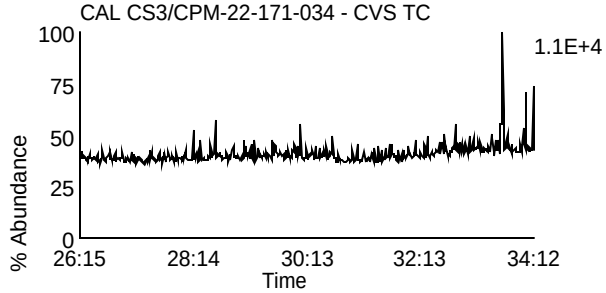
Data File: U230524B_02 G2 C5 - 353.8969
CAL CS3/CPM-22-171-034 - CVS TC



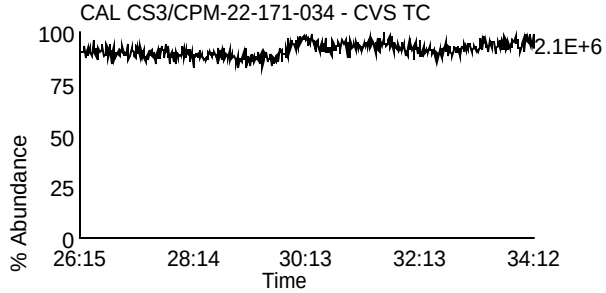
Data File: U230524B_02 G2 C11 - 369.8918
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C12 - 409.7974
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C6 - 354.9792
CAL CS3/CPM-22-171-034 - CVS TC

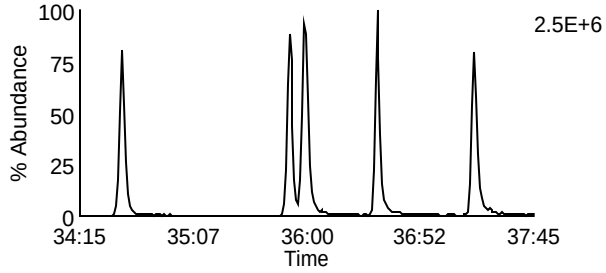


Homologue Group: Hexas

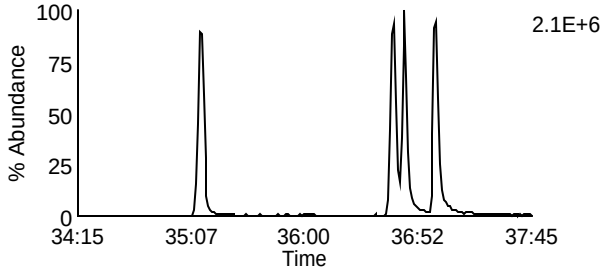
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

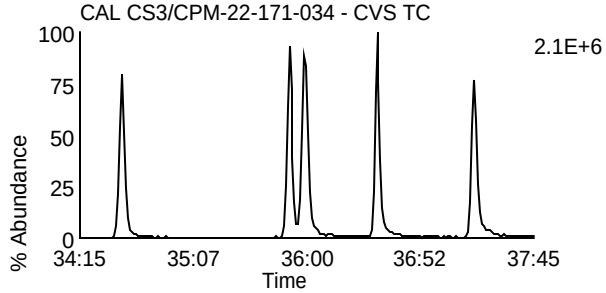
Data File: U230524B_02 G3 C1 - 373.8207
CAL CS3/CPM-22-171-034 - CVS TC



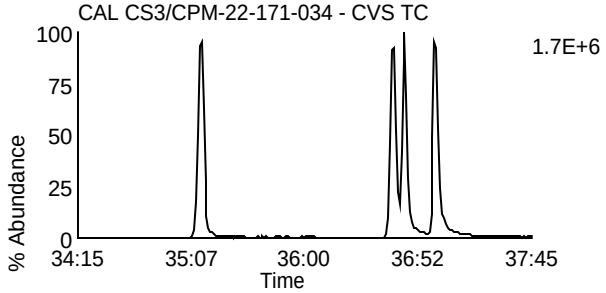
Data File: U230524B_02 G3 C7 - 389.8156
CAL CS3/CPM-22-171-034 - CVS TC



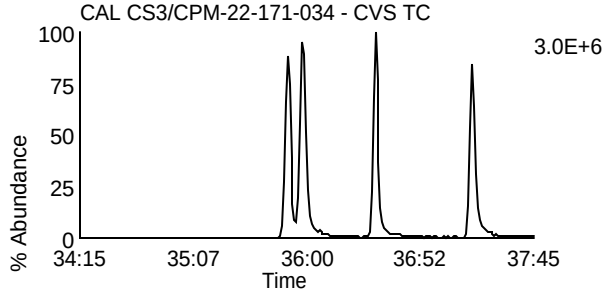
Data File: U230524B_02 G3 C2 - 375.8178
CAL CS3/CPM-22-171-034 - CVS TC



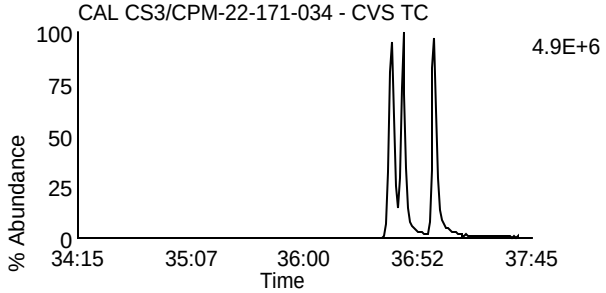
Data File: U230524B_02 G3 C8 - 391.8127
CAL CS3/CPM-22-171-034 - CVS TC



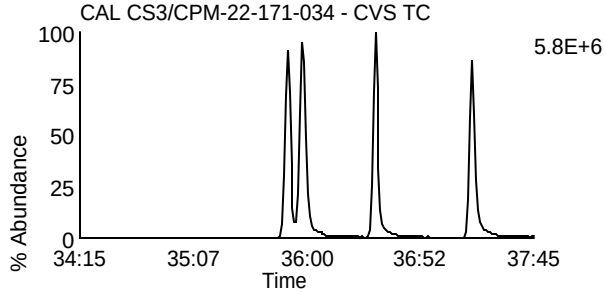
Data File: U230524B_02 G3 C5 - 383.8639
CAL CS3/CPM-22-171-034 - CVS TC



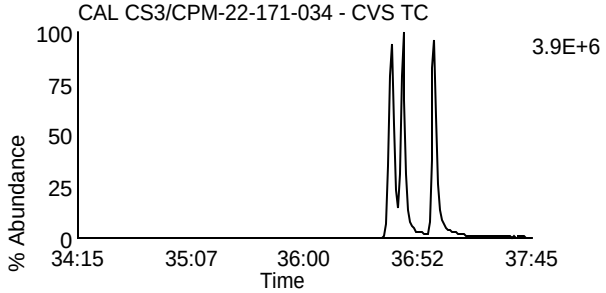
Data File: U230524B_02 G3 C9 - 401.8559
CAL CS3/CPM-22-171-034 - CVS TC



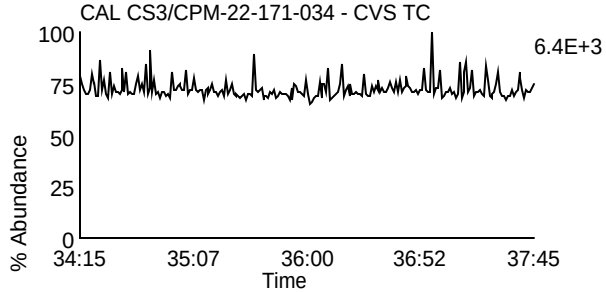
Data File: U230524B_02 G3 C6 - 385.861
CAL CS3/CPM-22-171-034 - CVS TC



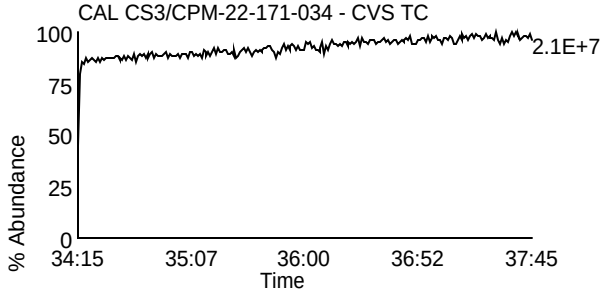
Data File: U230524B_02 G3 C10 - 403.8529
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C11 - 445.7555
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C3 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

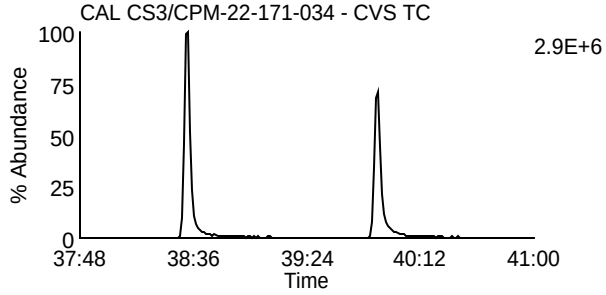


Homologue Group: Heptas

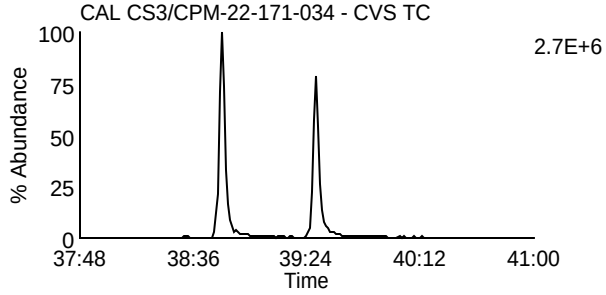
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

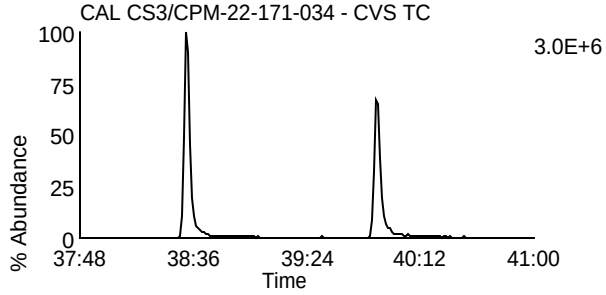
Data File: U230524B_02 G4 C3 - 407.7818
CAL CS3/CPM-22-171-034 - CVS TC



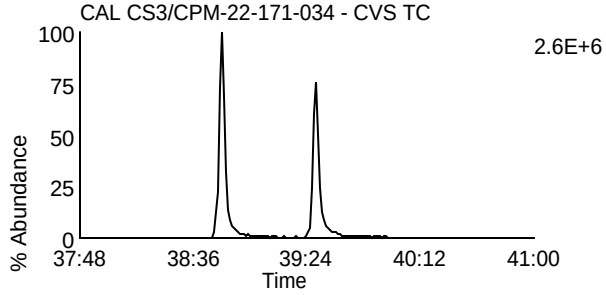
Data File: U230524B_02 G4 C8 - 423.7767
CAL CS3/CPM-22-171-034 - CVS TC



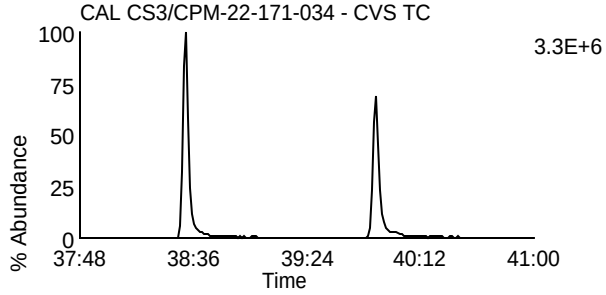
Data File: U230524B_02 G4 C4 - 409.7788
CAL CS3/CPM-22-171-034 - CVS TC



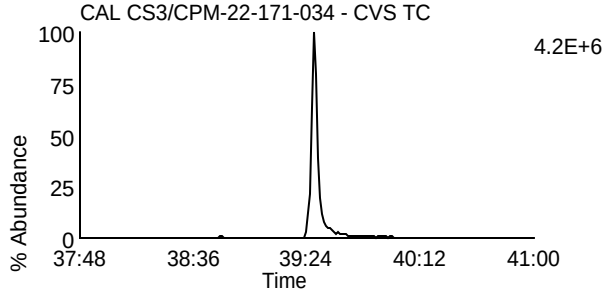
Data File: U230524B_02 G4 C9 - 425.7737
CAL CS3/CPM-22-171-034 - CVS TC



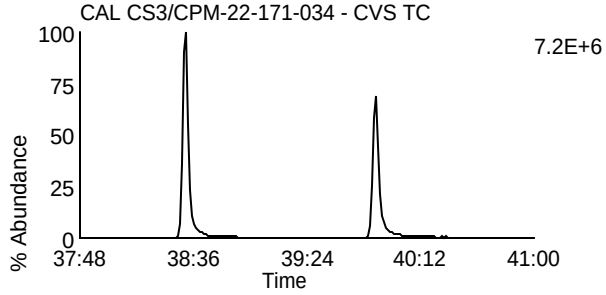
Data File: U230524B_02 G4 C6 - 417.825
CAL CS3/CPM-22-171-034 - CVS TC



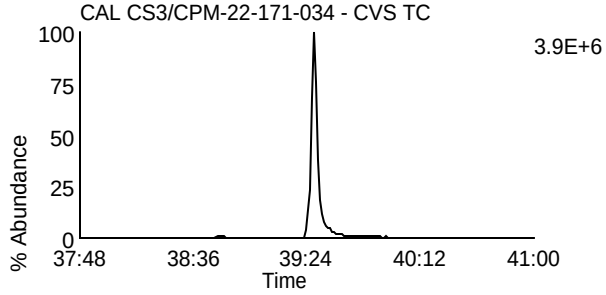
Data File: U230524B_02 G4 C11 - 435.8169
CAL CS3/CPM-22-171-034 - CVS TC



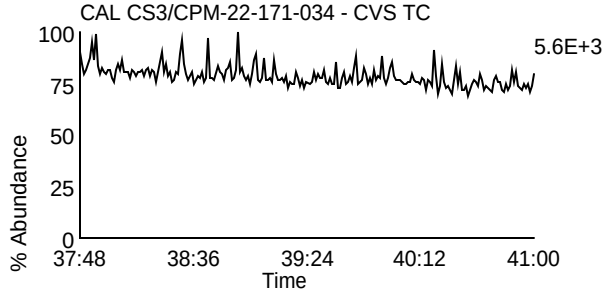
Data File: U230524B_02 G4 C7 - 419.822
CAL CS3/CPM-22-171-034 - CVS TC



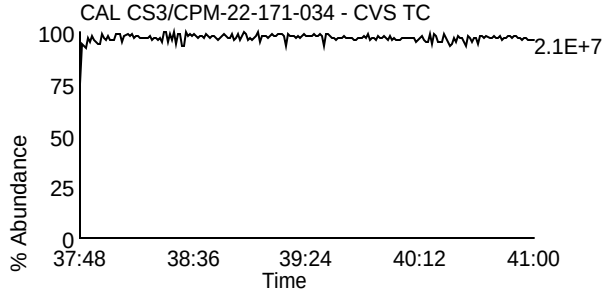
Data File: U230524B_02 G4 C12 - 437.814
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C13 - 479.7165
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C1 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

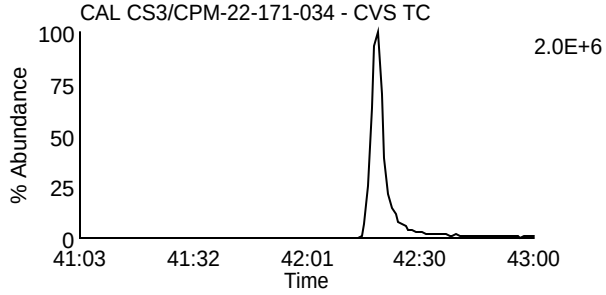


Homologue Group: Octas

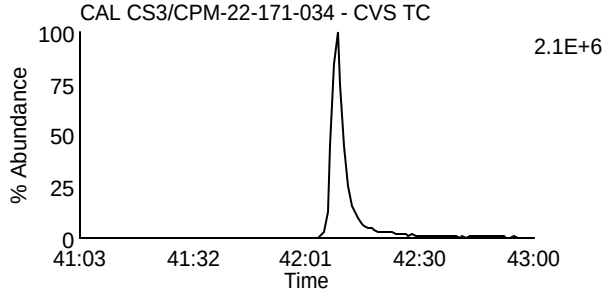
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

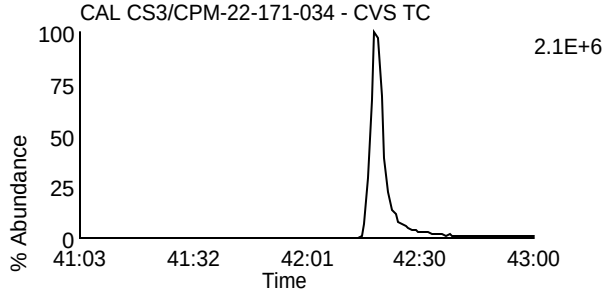
Data File: U230524B_02 G5 C4 - 441.7428
CAL CS3/CPM-22-171-034 - CVS TC



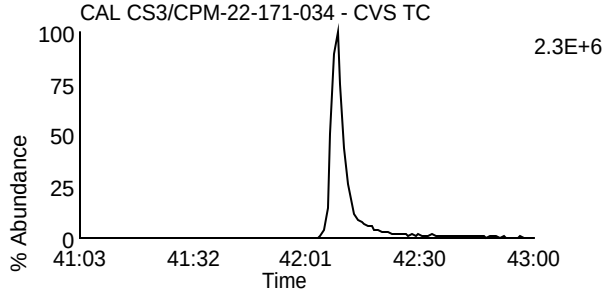
Data File: U230524B_02 G5 C8 - 457.7377
CAL CS3/CPM-22-171-034 - CVS TC



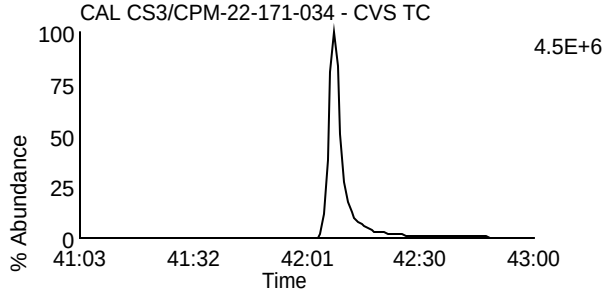
Data File: U230524B_02 G5 C5 - 443.7398
CAL CS3/CPM-22-171-034 - CVS TC



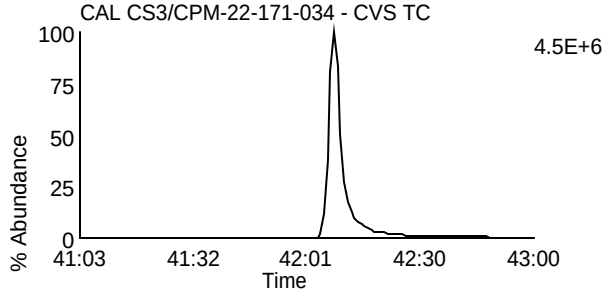
Data File: U230524B_02 G5 C9 - 459.7347
CAL CS3/CPM-22-171-034 - CVS TC



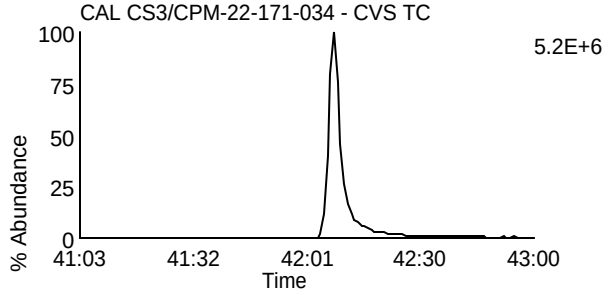
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



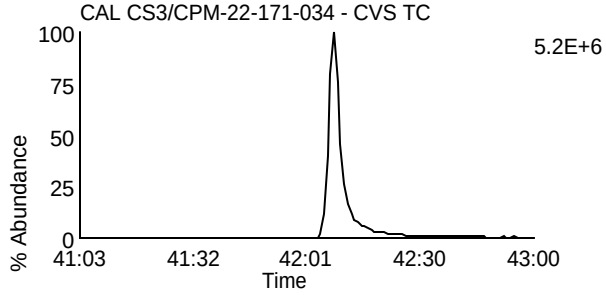
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



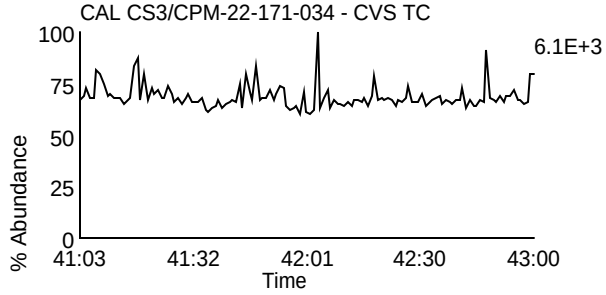
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



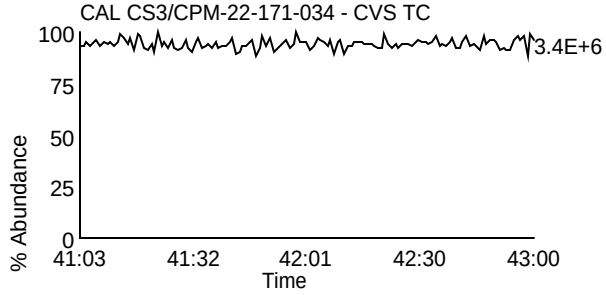
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C13 - 513.6775
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C2 - 430.9728
CAL CS3/CPM-22-171-034 - CVS TC

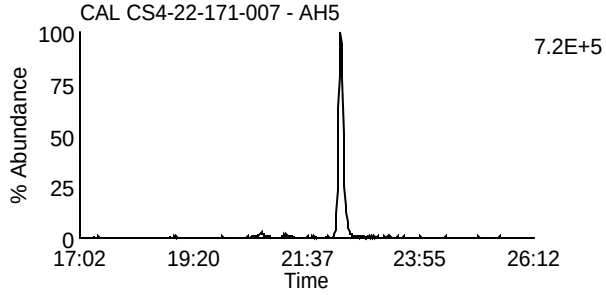


Homologue Group: Tetras

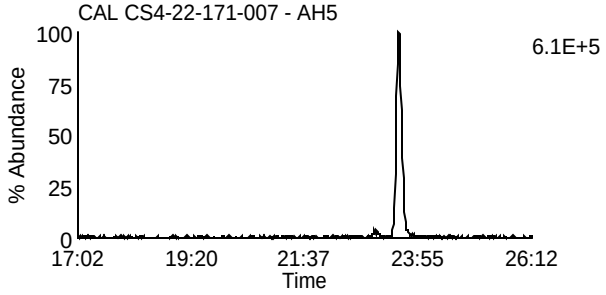
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

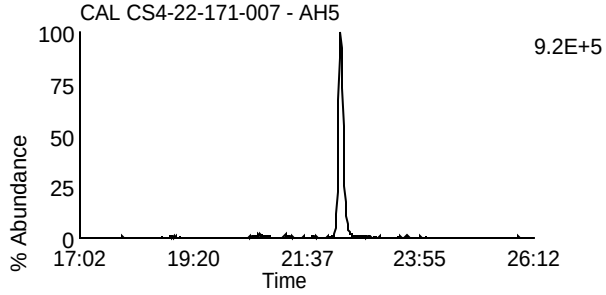
Data File: U230524B_06 G1 C1 - 303.9016
CAL CS4-22-171-007 - AH5



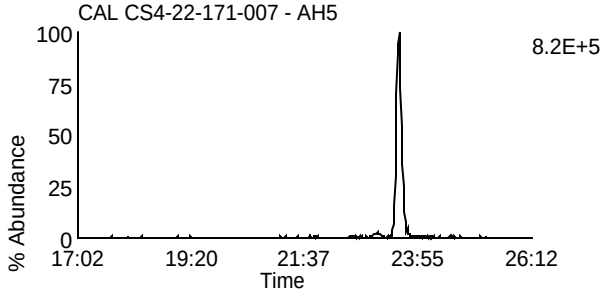
Data File: U230524B_06 G1 C7 - 319.8965
CAL CS4-22-171-007 - AH5



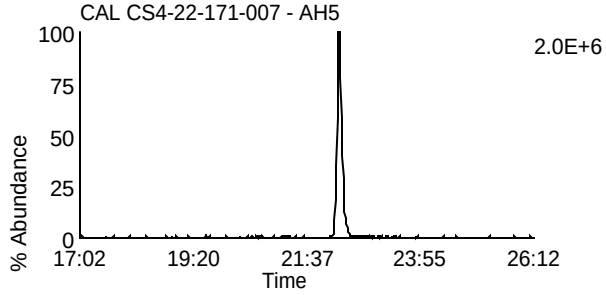
Data File: U230524B_06 G1 C2 - 305.8987
CAL CS4-22-171-007 - AH5



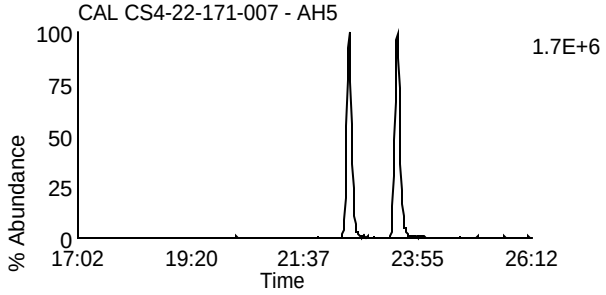
Data File: U230524B_06 G1 C8 - 321.8936
CAL CS4-22-171-007 - AH5



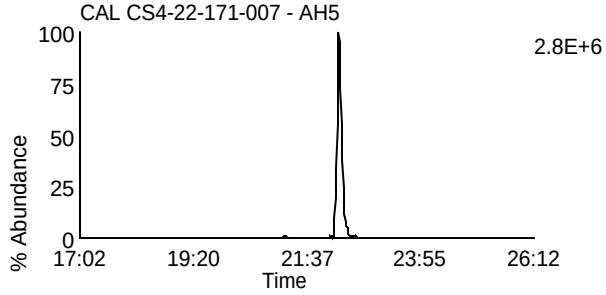
Data File: U230524B_06 G1 C3 - 315.9418
CAL CS4-22-171-007 - AH5



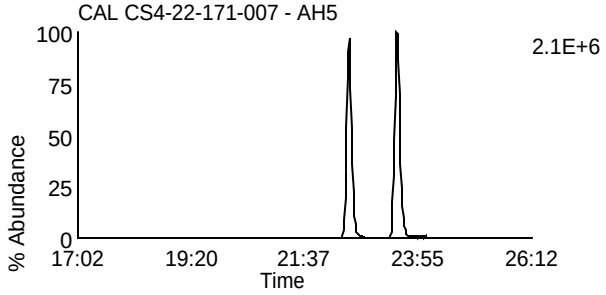
Data File: U230524B_06 G1 C10 - 331.9367
CAL CS4-22-171-007 - AH5



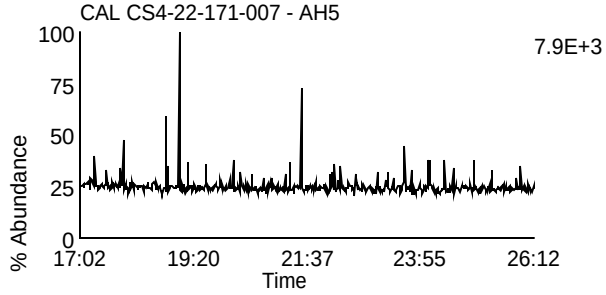
Data File: U230524B_06 G1 C4 - 317.9389
CAL CS4-22-171-007 - AH5



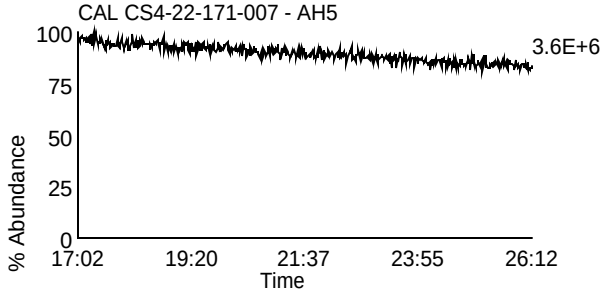
Data File: U230524B_06 G1 C11 - 333.9338
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C14 - 375.8364
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C5 - 318.9792
CAL CS4-22-171-007 - AH5

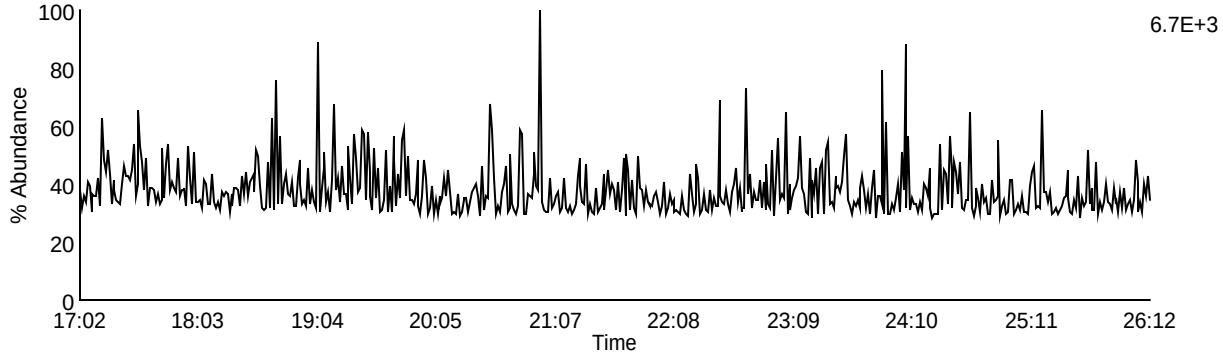


Homologue Group: Penta & Cleanup

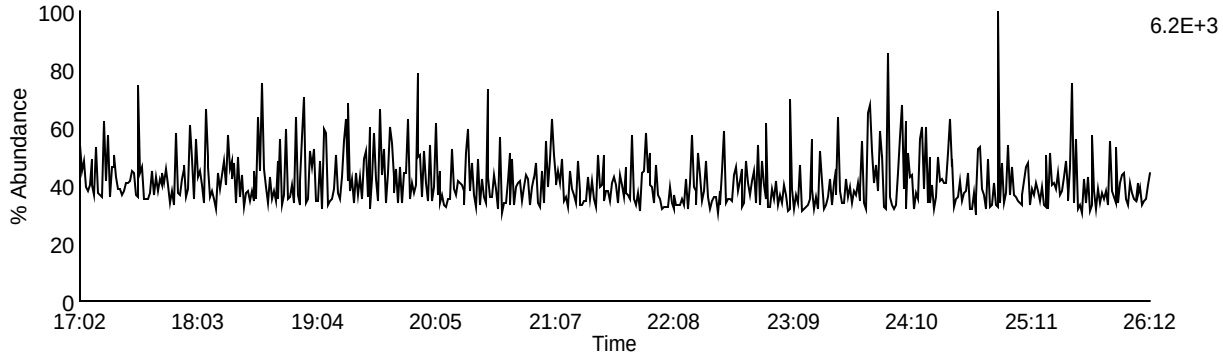
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

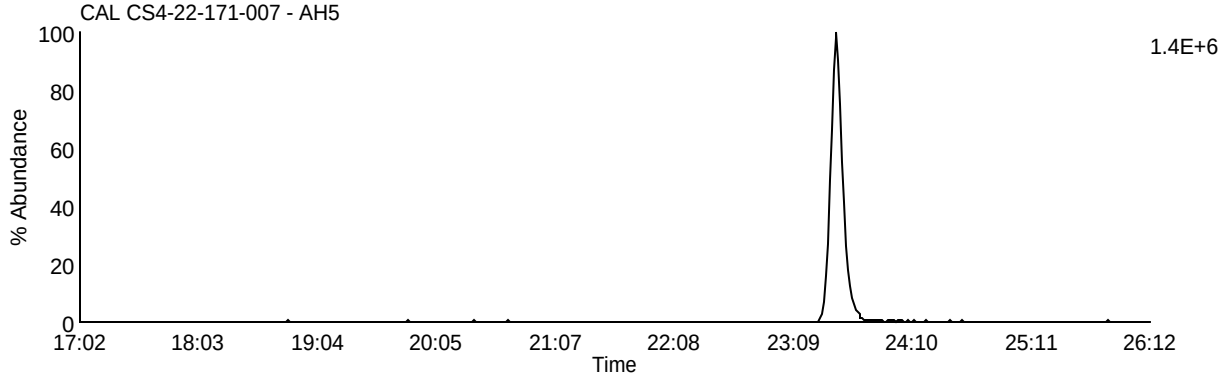
Data File: U230524B_06 G1 C12 - 339.8597
CAL CS4-22-171-007 - AH5



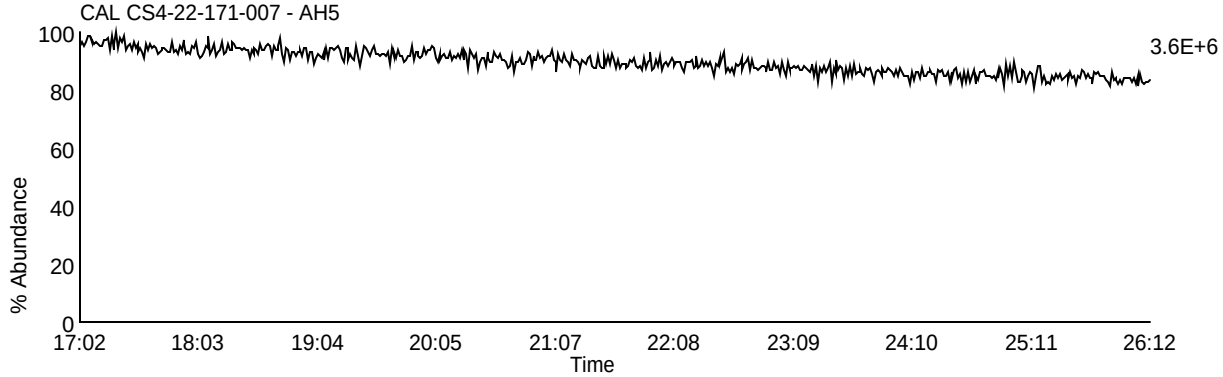
Data File: U230524B_06 G1 C13 - 341.8567
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C9 - 327.8847
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C5 - 318.9792
CAL CS4-22-171-007 - AH5

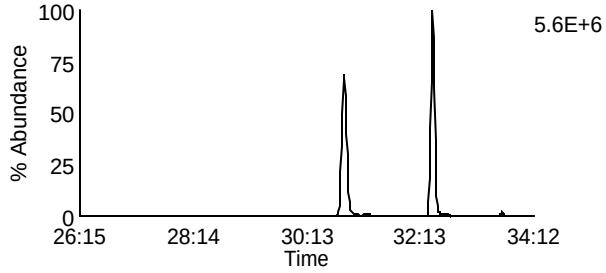


Homologue Group: Pentas

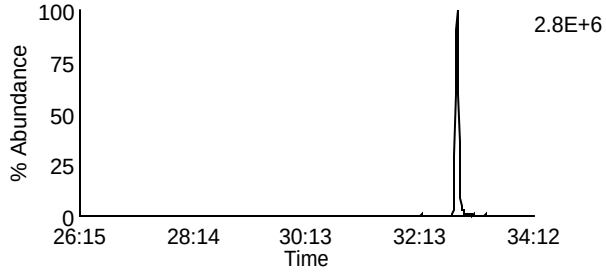
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

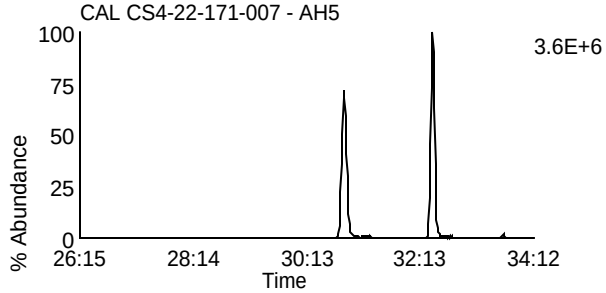
Data File: U230524B_06 G2 C1 - 339.8597
CAL CS4-22-171-007 - AH5



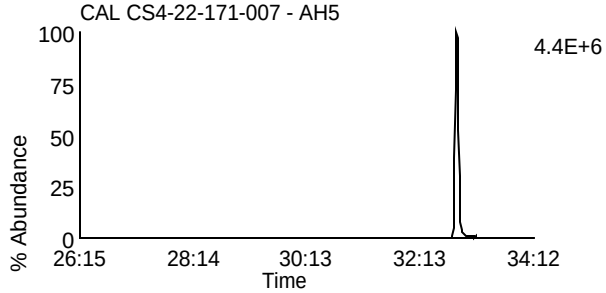
Data File: U230524B_06 G2 C4 - 353.8576
CAL CS4-22-171-007 - AH5



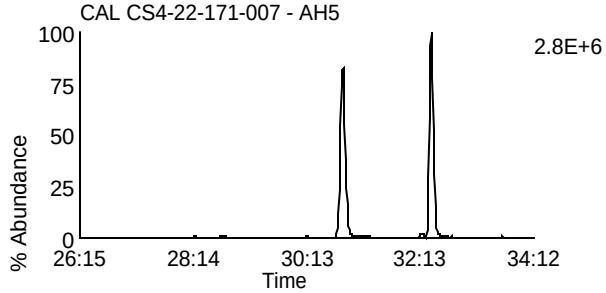
Data File: U230524B_06 G2 C2 - 341.8567
CAL CS4-22-171-007 - AH5



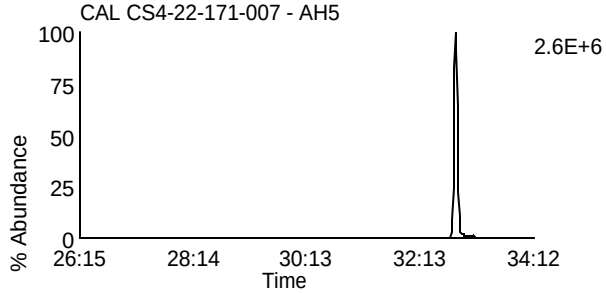
Data File: U230524B_06 G2 C8 - 355.8546
CAL CS4-22-171-007 - AH5



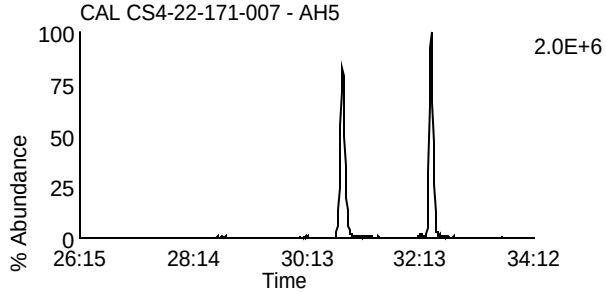
Data File: U230524B_06 G2 C3 - 351.8999
CAL CS4-22-171-007 - AH5



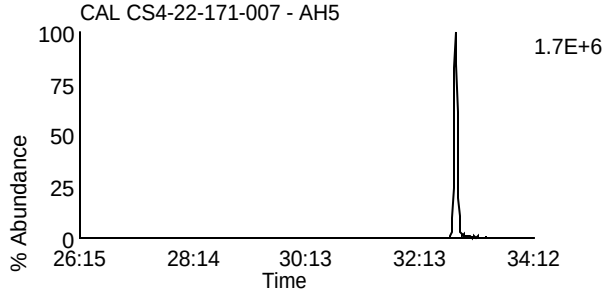
Data File: U230524B_06 G2 C10 - 367.8948
CAL CS4-22-171-007 - AH5



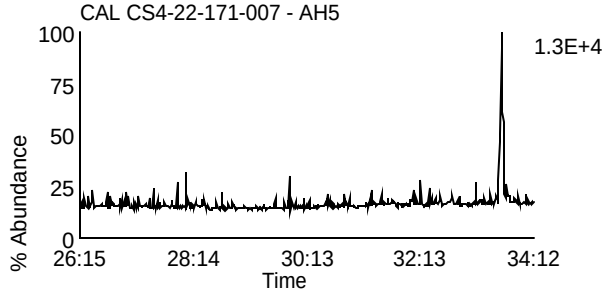
Data File: U230524B_06 G2 C5 - 353.8969
CAL CS4-22-171-007 - AH5



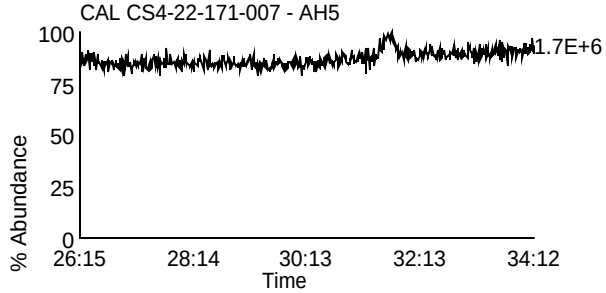
Data File: U230524B_06 G2 C11 - 369.8918
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G2 C12 - 409.7974
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G2 C6 - 354.9792
CAL CS4-22-171-007 - AH5

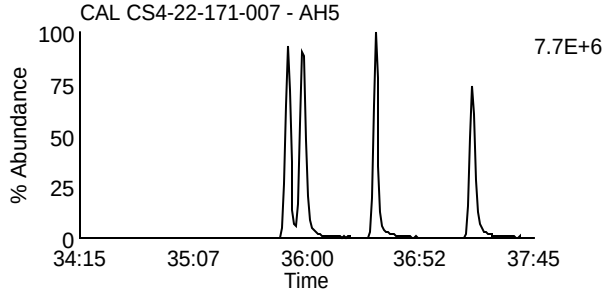


Homologue Group: Hexas

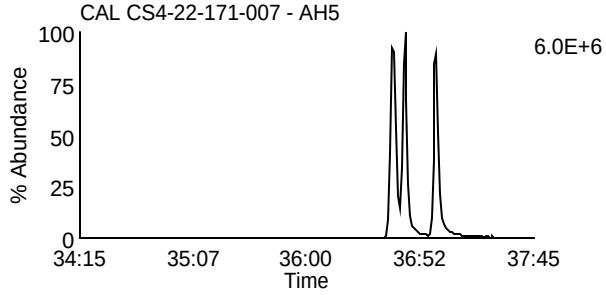
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

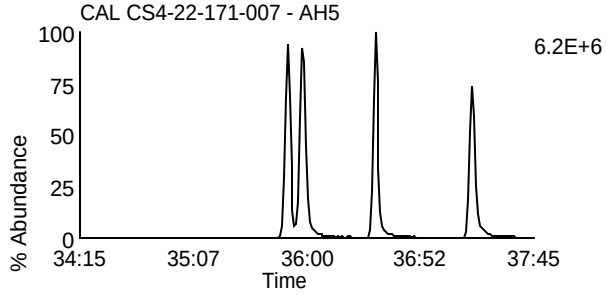
Data File: U230524B_06 G3 C1 - 373.8207
CAL CS4-22-171-007 - AH5



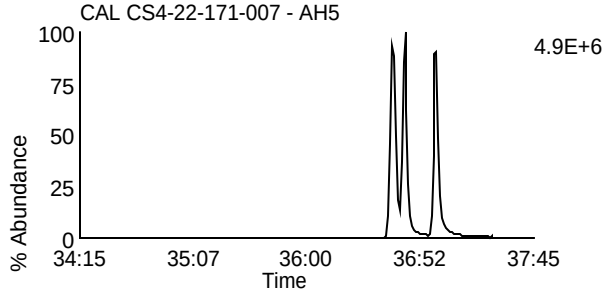
Data File: U230524B_06 G3 C7 - 389.8156
CAL CS4-22-171-007 - AH5



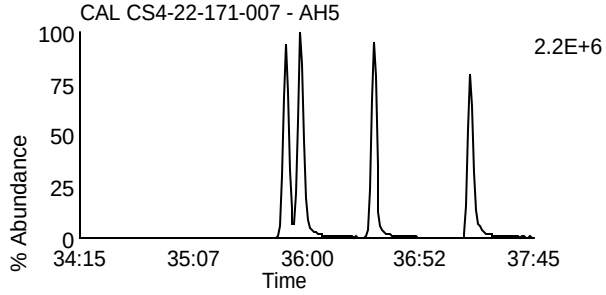
Data File: U230524B_06 G3 C2 - 375.8178
CAL CS4-22-171-007 - AH5



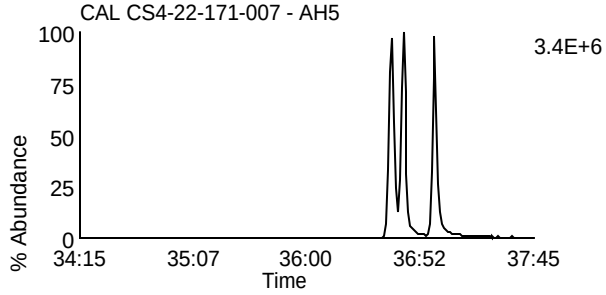
Data File: U230524B_06 G3 C8 - 391.8127
CAL CS4-22-171-007 - AH5



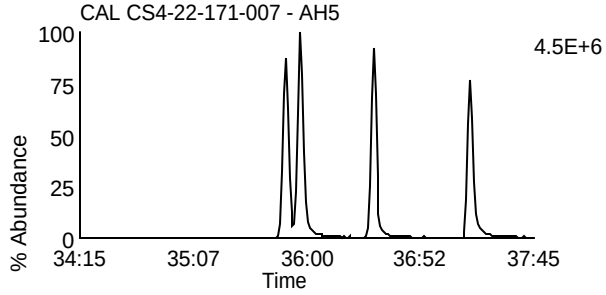
Data File: U230524B_06 G3 C5 - 383.8639
CAL CS4-22-171-007 - AH5



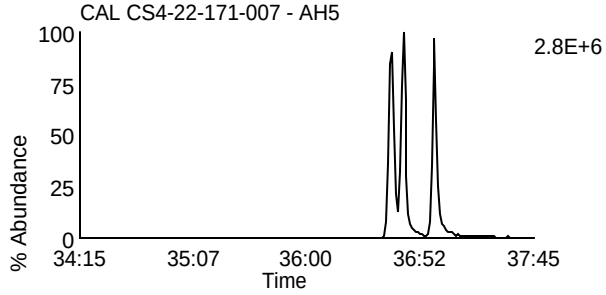
Data File: U230524B_06 G3 C9 - 401.8559
CAL CS4-22-171-007 - AH5



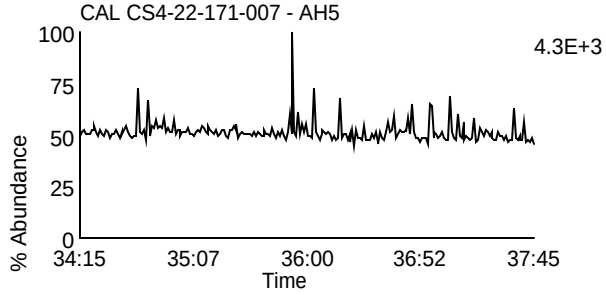
Data File: U230524B_06 G3 C6 - 385.861
CAL CS4-22-171-007 - AH5



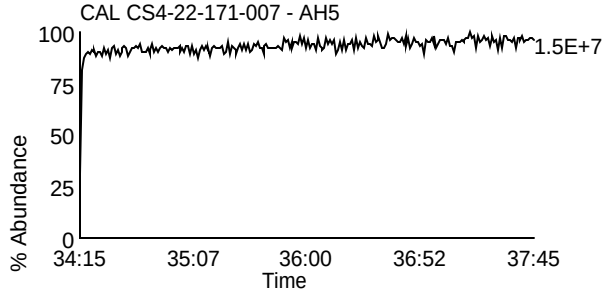
Data File: U230524B_06 G3 C10 - 403.8529
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G3 C11 - 445.7555
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G3 C3 - 380.976
CAL CS4-22-171-007 - AH5

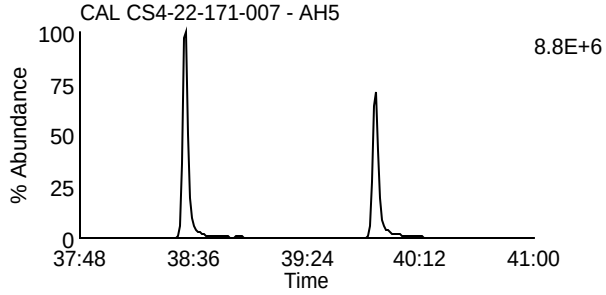


Homologue Group: Heptas

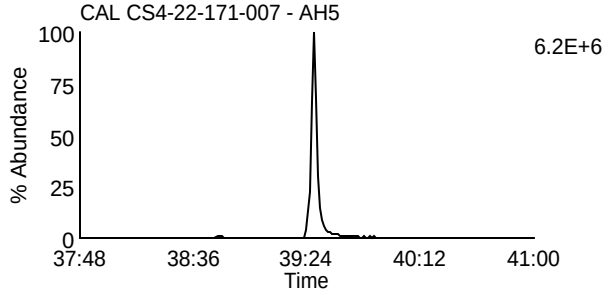
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

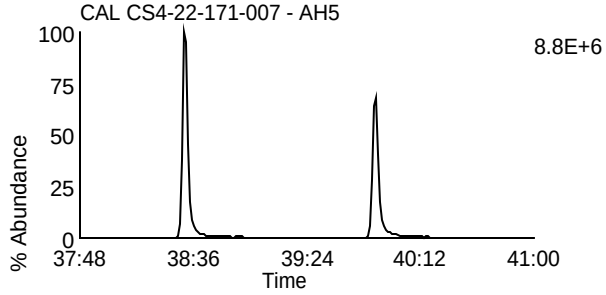
Data File: U230524B_06 G4 C3 - 407.7818
CAL CS4-22-171-007 - AH5



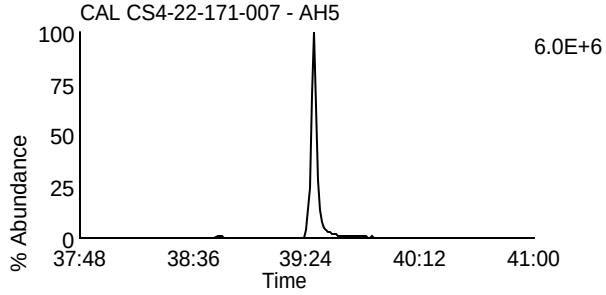
Data File: U230524B_06 G4 C8 - 423.7767
CAL CS4-22-171-007 - AH5



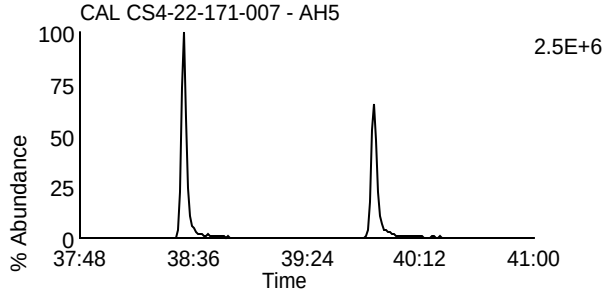
Data File: U230524B_06 G4 C4 - 409.7788
CAL CS4-22-171-007 - AH5



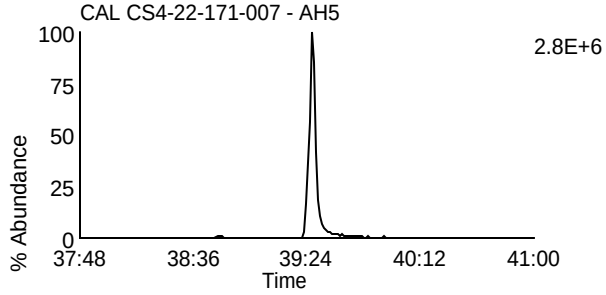
Data File: U230524B_06 G4 C9 - 425.7737
CAL CS4-22-171-007 - AH5



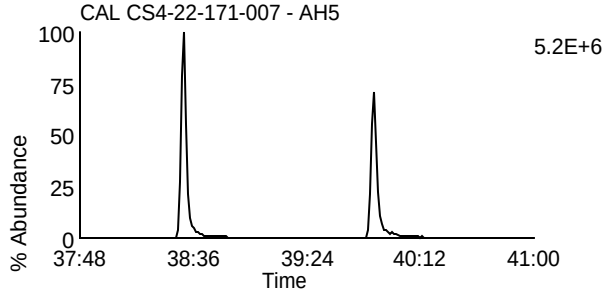
Data File: U230524B_06 G4 C6 - 417.825
CAL CS4-22-171-007 - AH5



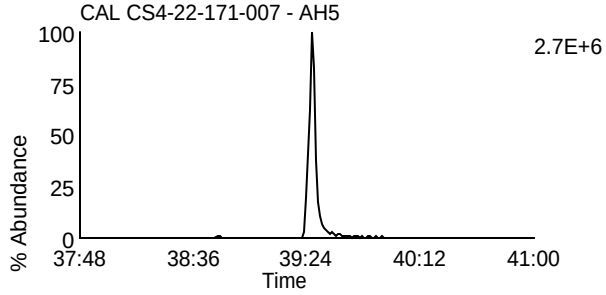
Data File: U230524B_06 G4 C11 - 435.8169
CAL CS4-22-171-007 - AH5



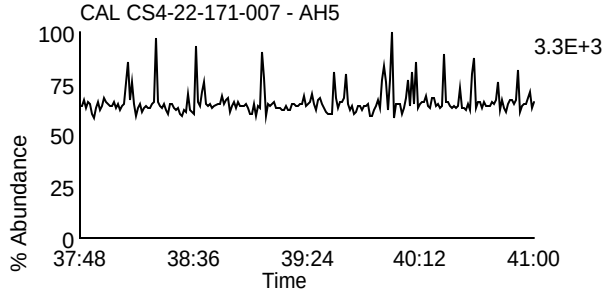
Data File: U230524B_06 G4 C7 - 419.822
CAL CS4-22-171-007 - AH5



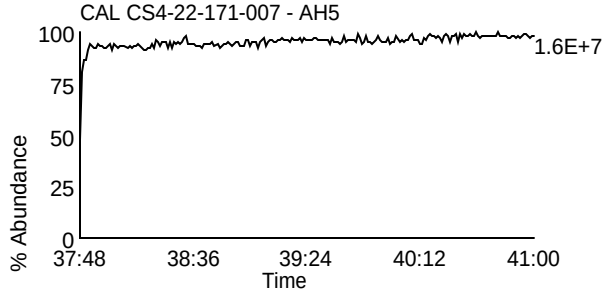
Data File: U230524B_06 G4 C12 - 437.814
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G4 C13 - 479.7165
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G4 C1 - 380.976
CAL CS4-22-171-007 - AH5

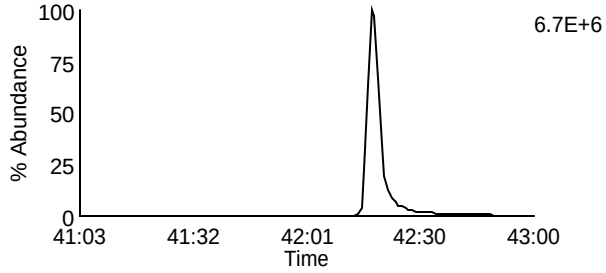


Homologue Group: Octas

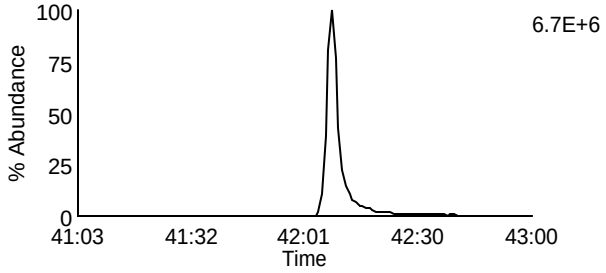
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

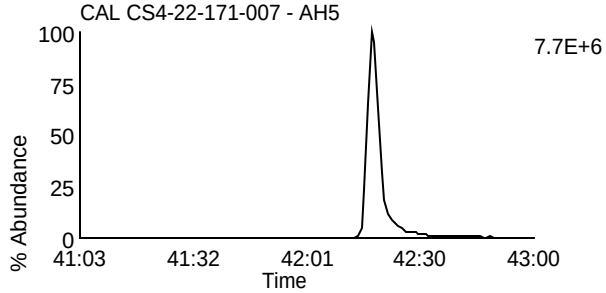
Data File: U230524B_06 G5 C4 - 441.7428
CAL CS4-22-171-007 - AH5



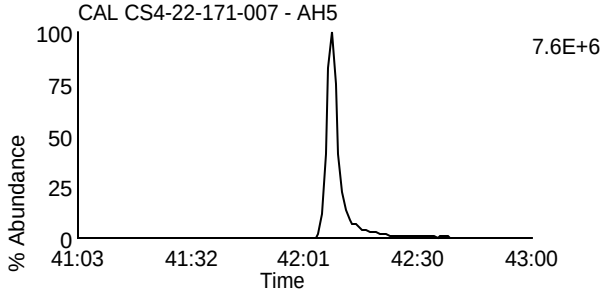
Data File: U230524B_06 G5 C8 - 457.7377
CAL CS4-22-171-007 - AH5



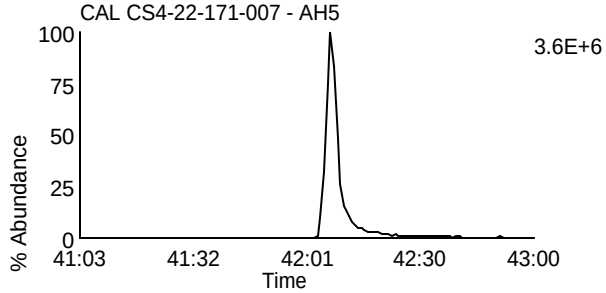
Data File: U230524B_06 G5 C5 - 443.7398
CAL CS4-22-171-007 - AH5



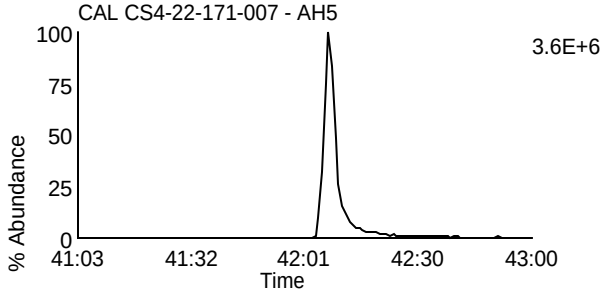
Data File: U230524B_06 G5 C9 - 459.7347
CAL CS4-22-171-007 - AH5



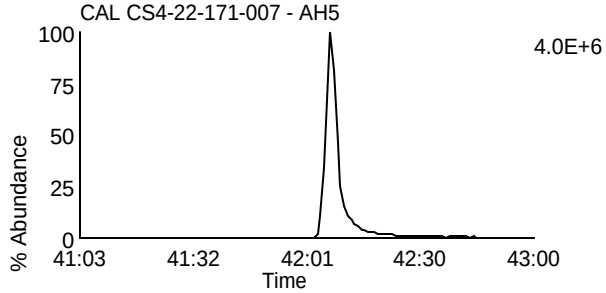
Data File: U230524B_06 G5 C11 - 469.7779
CAL CS4-22-171-007 - AH5



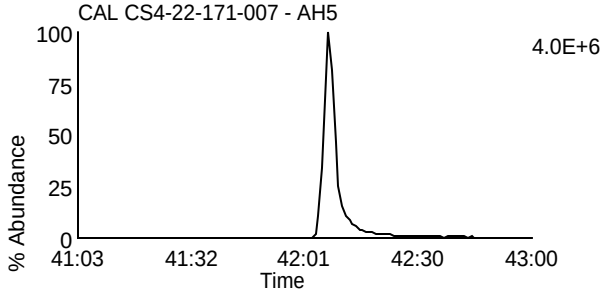
Data File: U230524B_06 G5 C11 - 469.7779
CAL CS4-22-171-007 - AH5



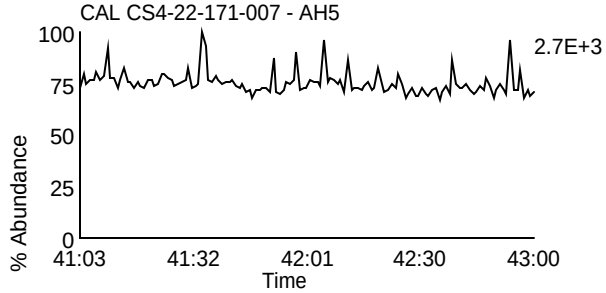
Data File: U230524B_06 G5 C12 - 471.7749
CAL CS4-22-171-007 - AH5



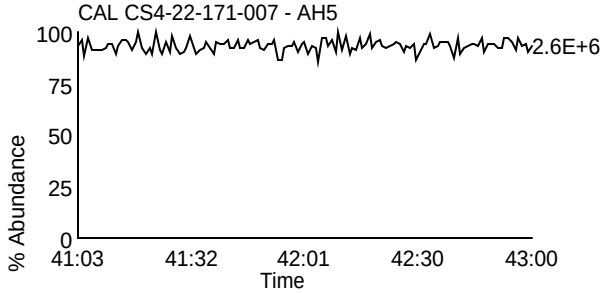
Data File: U230524B_06 G5 C12 - 471.7749
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G5 C13 - 513.6775
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G5 C2 - 430.9728
CAL CS4-22-171-007 - AH5

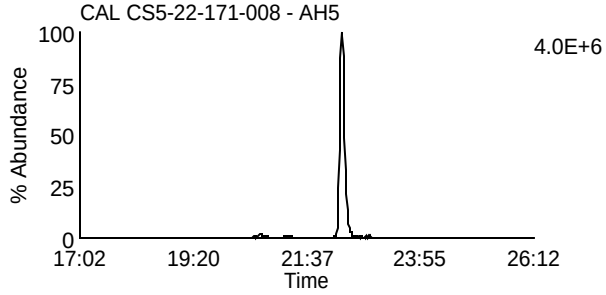


Homologue Group: Tetras

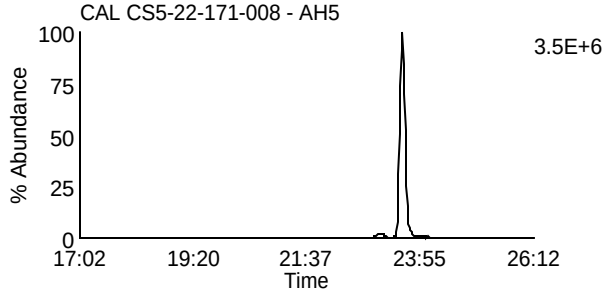
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

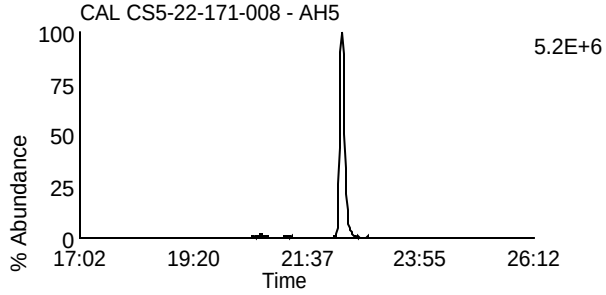
Data File: U230524B_05 G1 C1 - 303.9016
CAL CS5-22-171-008 - AH5



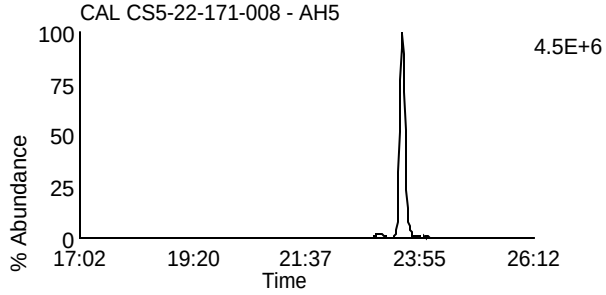
Data File: U230524B_05 G1 C7 - 319.8965
CAL CS5-22-171-008 - AH5



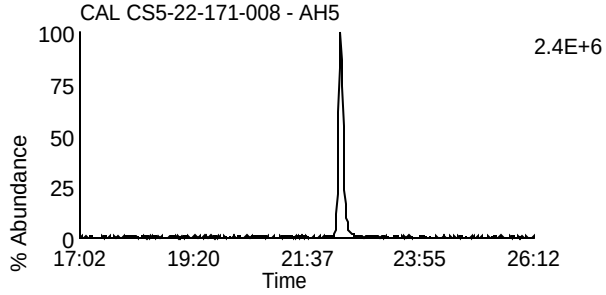
Data File: U230524B_05 G1 C2 - 305.8987
CAL CS5-22-171-008 - AH5



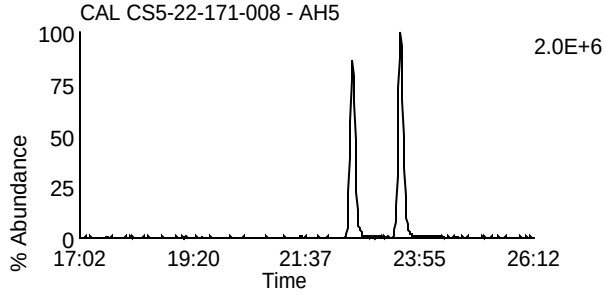
Data File: U230524B_05 G1 C8 - 321.8936
CAL CS5-22-171-008 - AH5



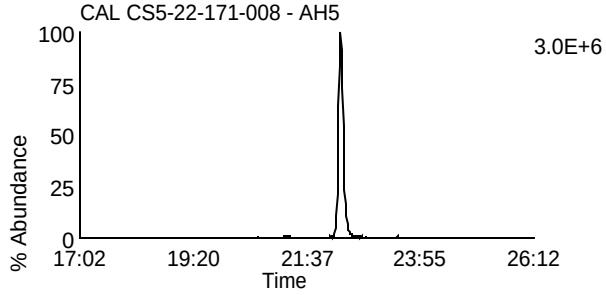
Data File: U230524B_05 G1 C3 - 315.9418
CAL CS5-22-171-008 - AH5



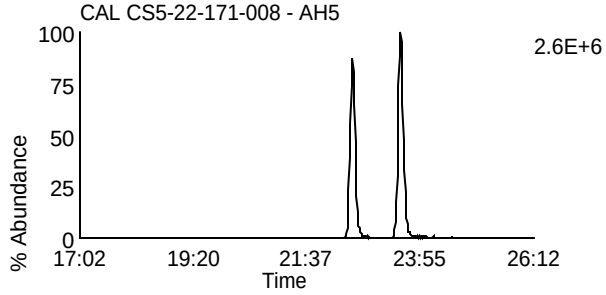
Data File: U230524B_05 G1 C10 - 331.9367
CAL CS5-22-171-008 - AH5



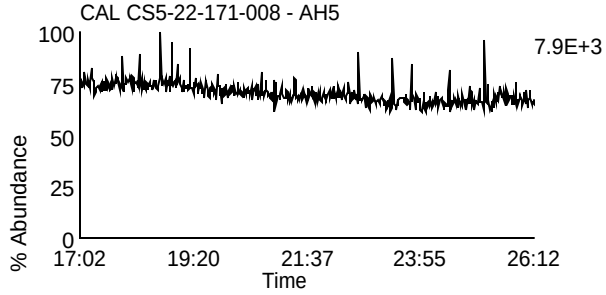
Data File: U230524B_05 G1 C4 - 317.9389
CAL CS5-22-171-008 - AH5



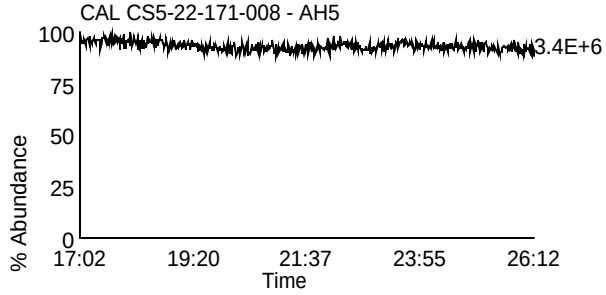
Data File: U230524B_05 G1 C11 - 333.9338
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G1 C14 - 375.8364
CAL CS5-22-171-008 - AH5



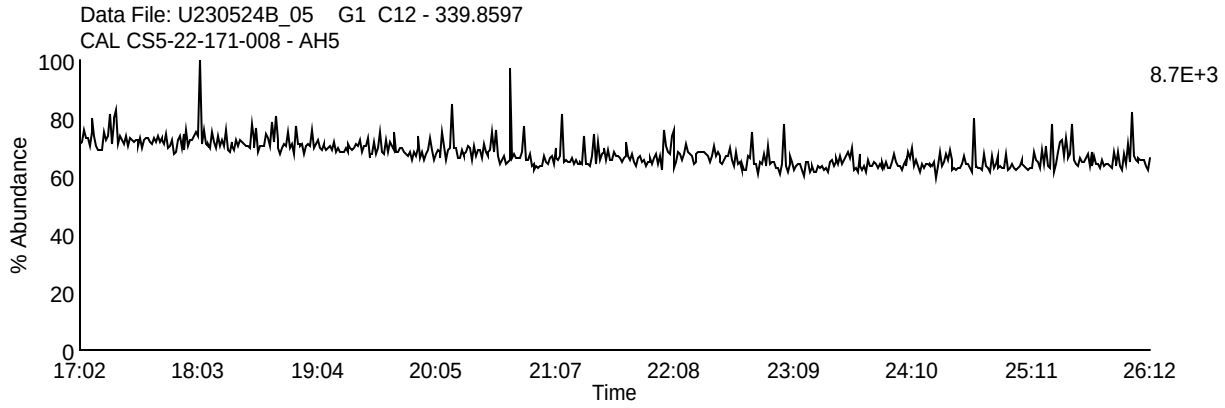
Data File: U230524B_05 G1 C5 - 318.9792
CAL CS5-22-171-008 - AH5

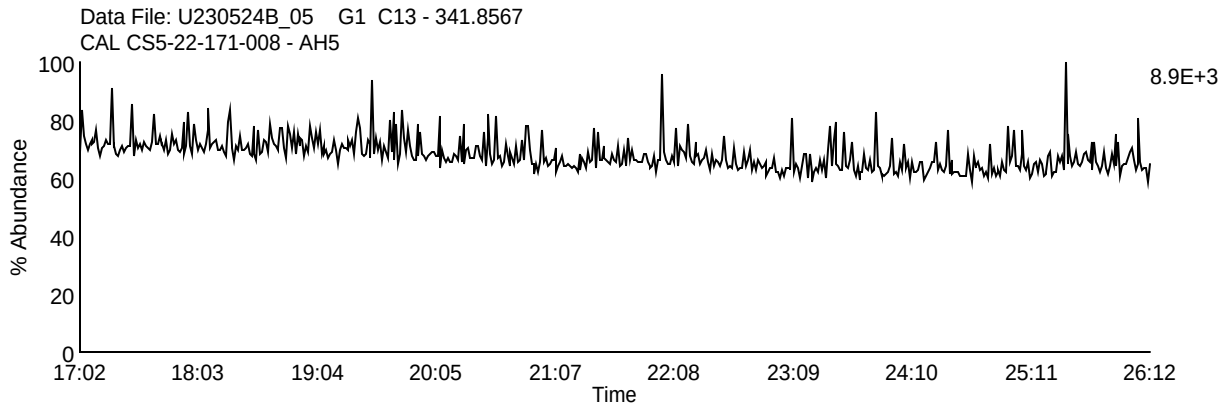


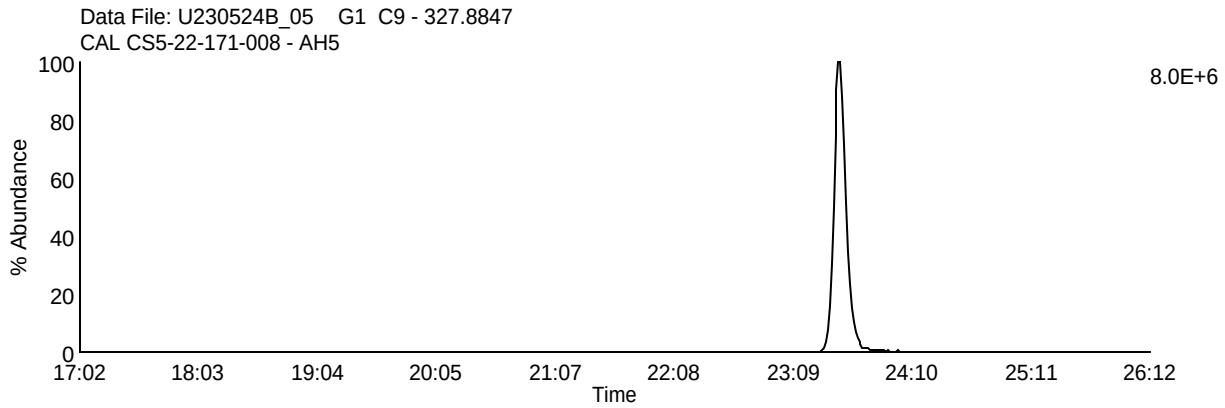
Homologue Group: Penta & Cleanup

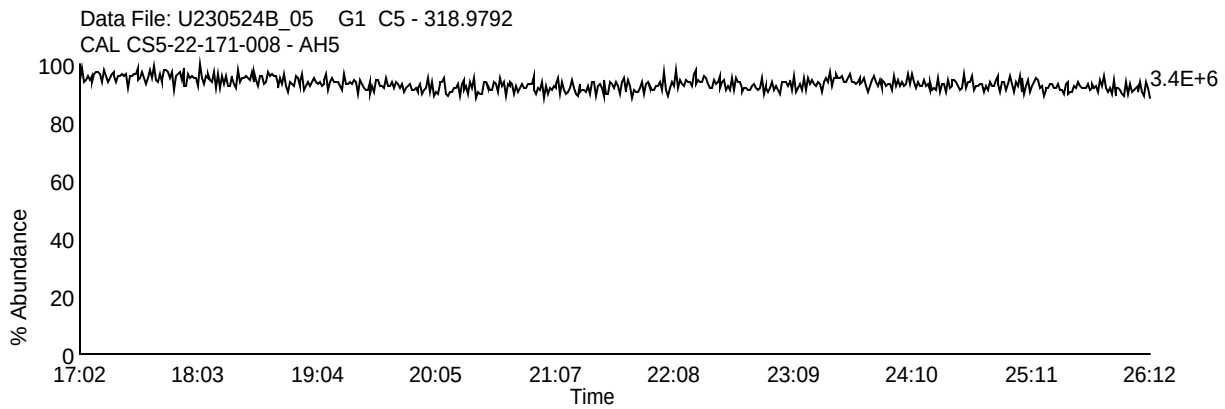
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)







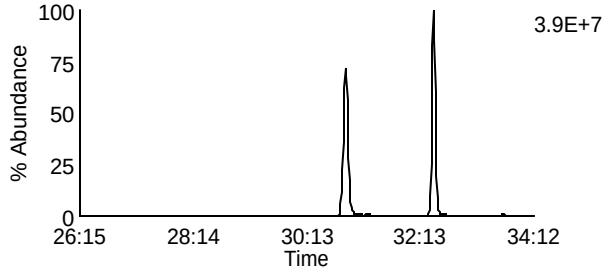


Homologue Group: Pentas

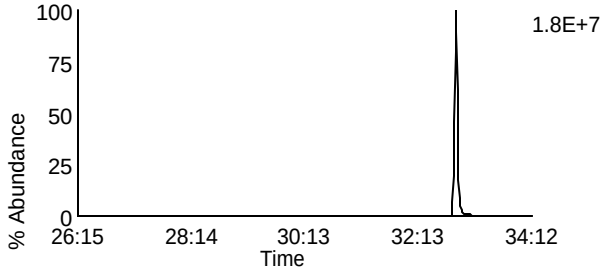
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

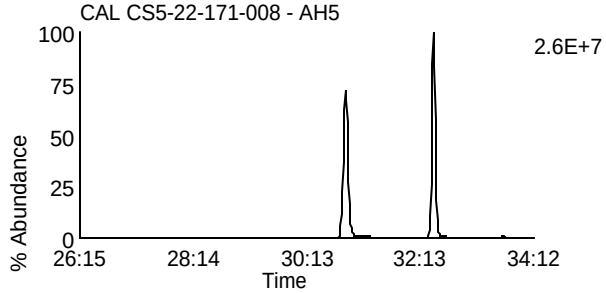
Data File: U230524B_05 G2 C1 - 339.8597
CAL CS5-22-171-008 - AH5



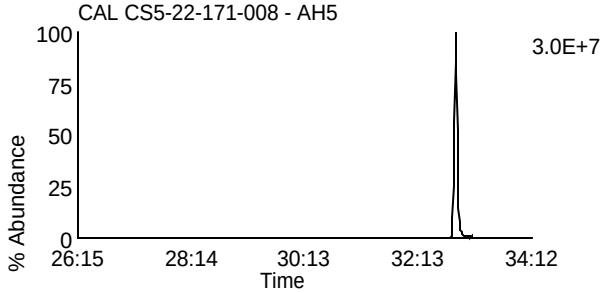
Data File: U230524B_05 G2 C4 - 353.8576
CAL CS5-22-171-008 - AH5



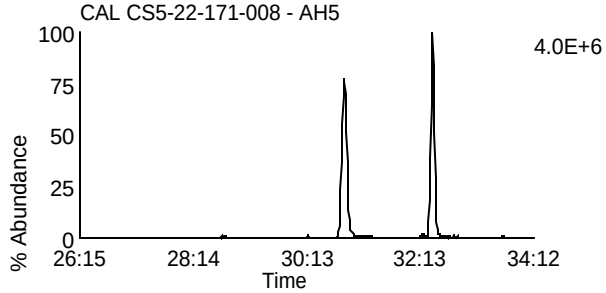
Data File: U230524B_05 G2 C2 - 341.8567
CAL CS5-22-171-008 - AH5



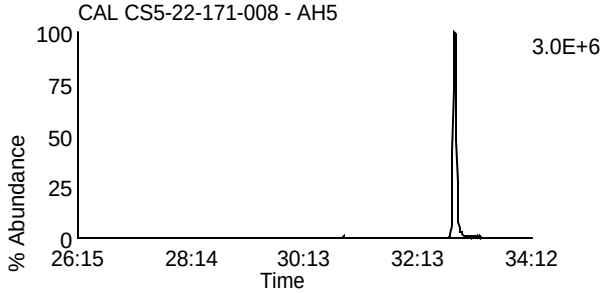
Data File: U230524B_05 G2 C8 - 355.8546
CAL CS5-22-171-008 - AH5



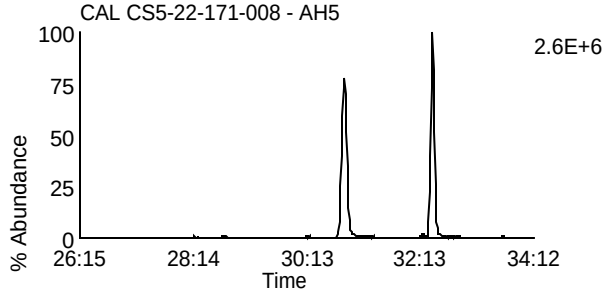
Data File: U230524B_05 G2 C3 - 351.8999
CAL CS5-22-171-008 - AH5



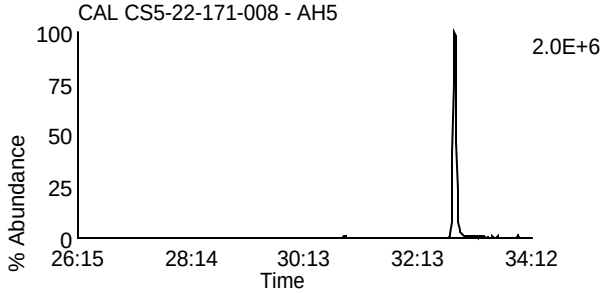
Data File: U230524B_05 G2 C10 - 367.8948
CAL CS5-22-171-008 - AH5



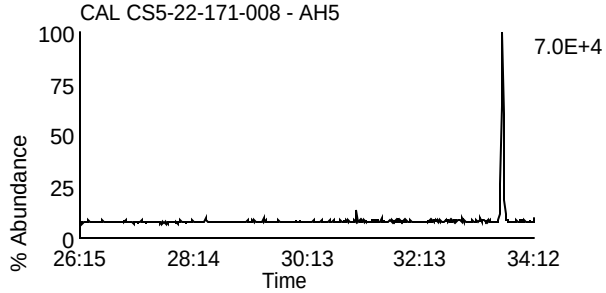
Data File: U230524B_05 G2 C5 - 353.8969
CAL CS5-22-171-008 - AH5



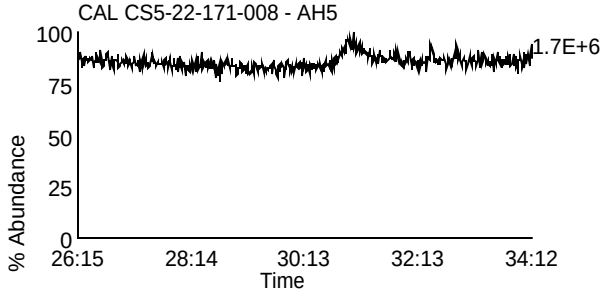
Data File: U230524B_05 G2 C11 - 369.8918
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G2 C12 - 409.7974
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G2 C6 - 354.9792
CAL CS5-22-171-008 - AH5

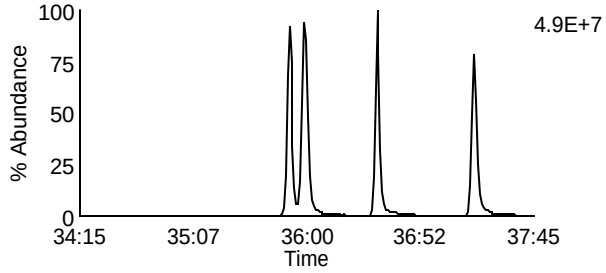


Homologue Group: Hexas

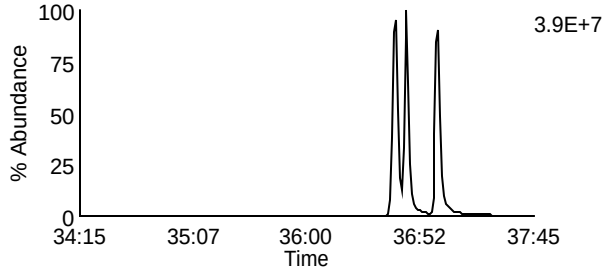
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

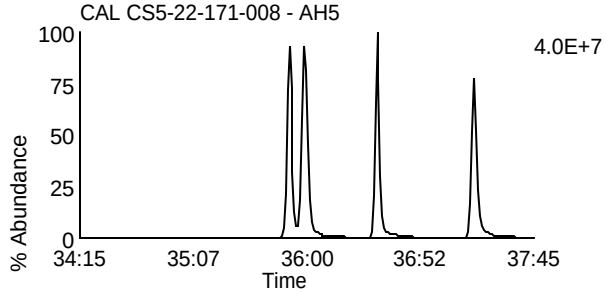
Data File: U230524B_05 G3 C1 - 373.8207
CAL CS5-22-171-008 - AH5



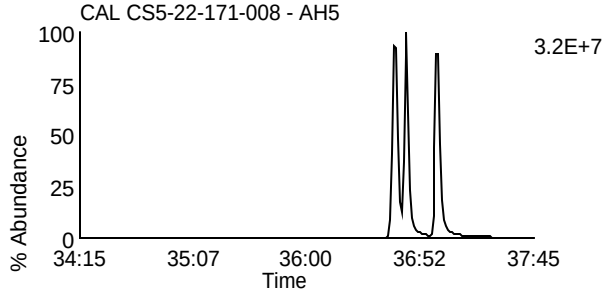
Data File: U230524B_05 G3 C7 - 389.8156
CAL CS5-22-171-008 - AH5



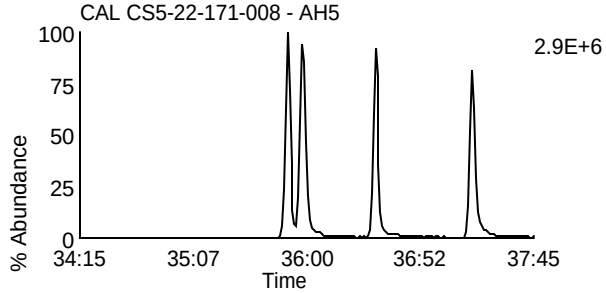
Data File: U230524B_05 G3 C2 - 375.8178
CAL CS5-22-171-008 - AH5



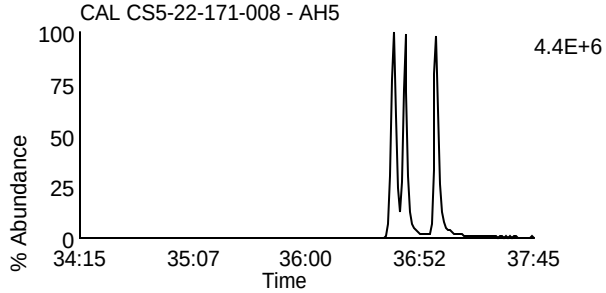
Data File: U230524B_05 G3 C8 - 391.8127
CAL CS5-22-171-008 - AH5



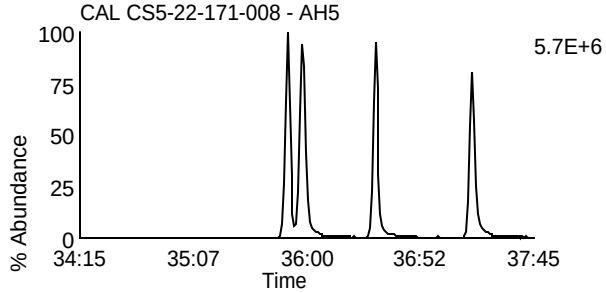
Data File: U230524B_05 G3 C5 - 383.8639
CAL CS5-22-171-008 - AH5



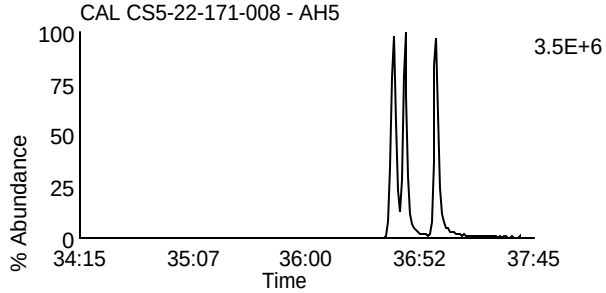
Data File: U230524B_05 G3 C9 - 401.8559
CAL CS5-22-171-008 - AH5



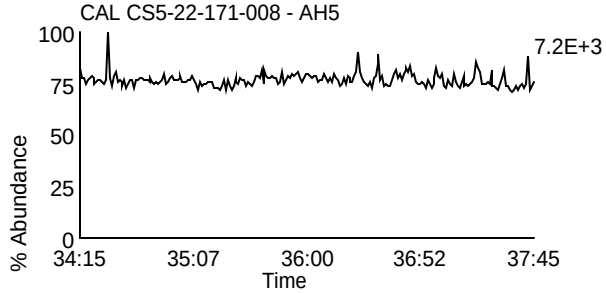
Data File: U230524B_05 G3 C6 - 385.861
CAL CS5-22-171-008 - AH5



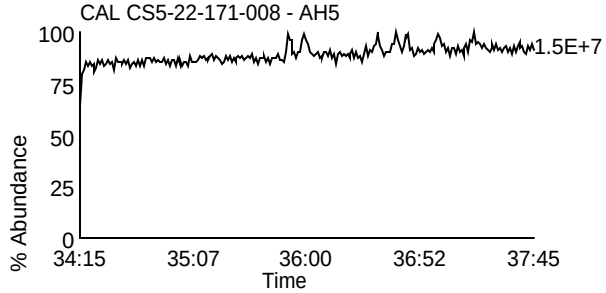
Data File: U230524B_05 G3 C10 - 403.8529
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G3 C11 - 445.7555
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G3 C3 - 380.976
CAL CS5-22-171-008 - AH5

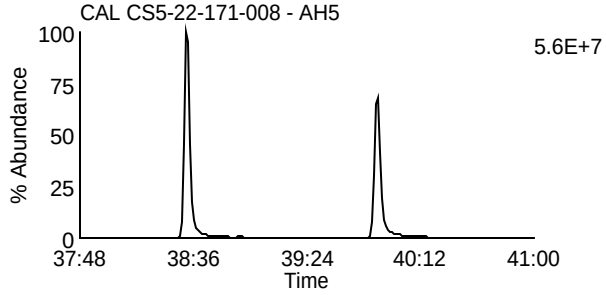


Homologue Group: Heptas

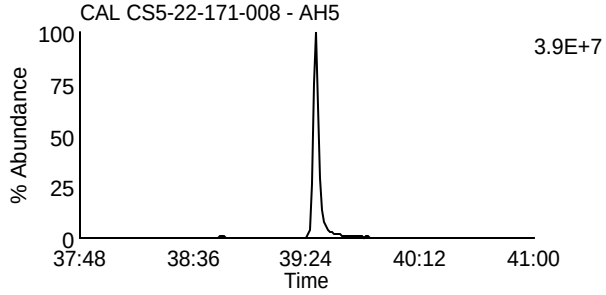
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

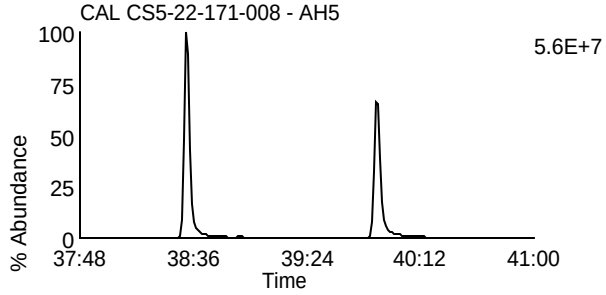
Data File: U230524B_05 G4 C3 - 407.7818
CAL CS5-22-171-008 - AH5



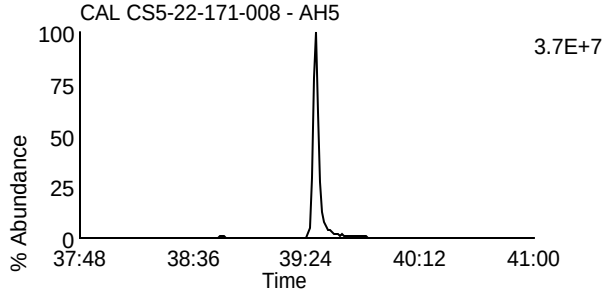
Data File: U230524B_05 G4 C8 - 423.7767
CAL CS5-22-171-008 - AH5



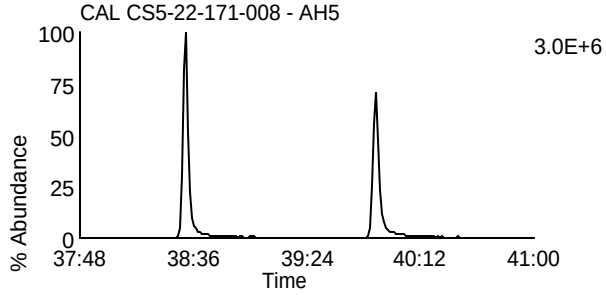
Data File: U230524B_05 G4 C4 - 409.7788
CAL CS5-22-171-008 - AH5



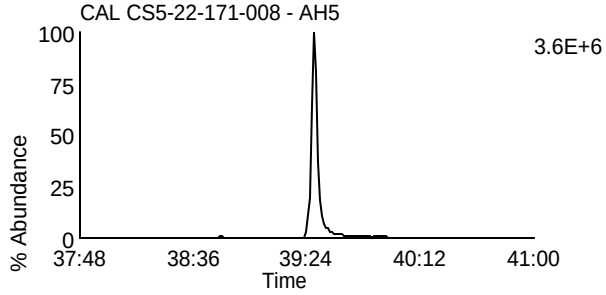
Data File: U230524B_05 G4 C9 - 425.7737
CAL CS5-22-171-008 - AH5



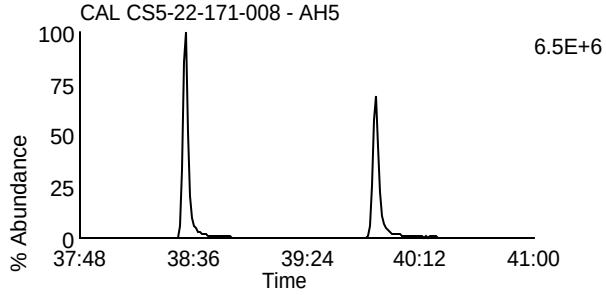
Data File: U230524B_05 G4 C6 - 417.825
CAL CS5-22-171-008 - AH5



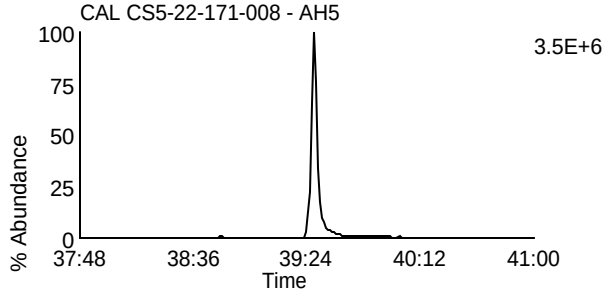
Data File: U230524B_05 G4 C11 - 435.8169
CAL CS5-22-171-008 - AH5



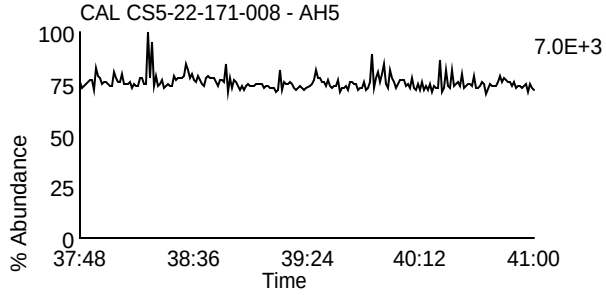
Data File: U230524B_05 G4 C7 - 419.822
CAL CS5-22-171-008 - AH5



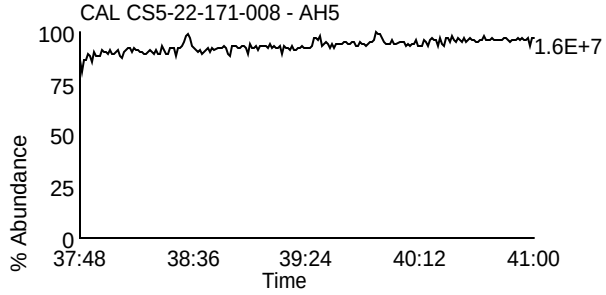
Data File: U230524B_05 G4 C12 - 437.814
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G4 C13 - 479.7165
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G4 C1 - 380.976
CAL CS5-22-171-008 - AH5

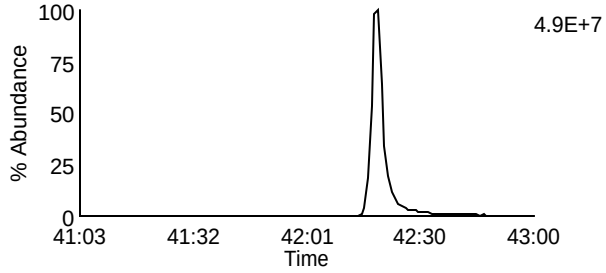


Homologue Group: Octas

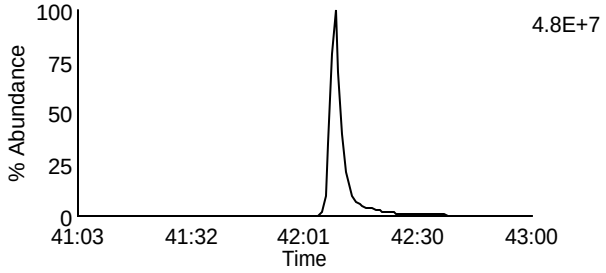
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

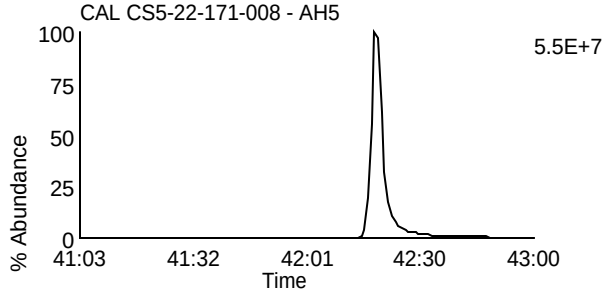
Data File: U230524B_05 G5 C4 - 441.7428
CAL CS5-22-171-008 - AH5



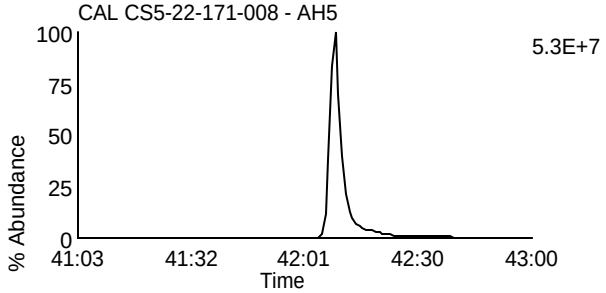
Data File: U230524B_05 G5 C8 - 457.7377
CAL CS5-22-171-008 - AH5



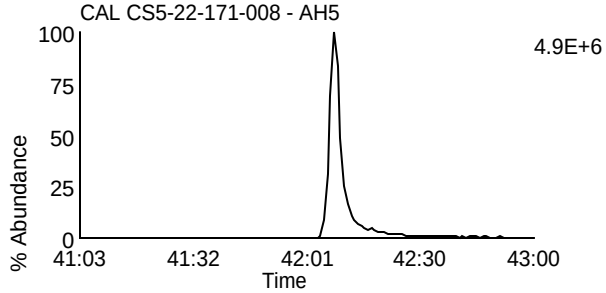
Data File: U230524B_05 G5 C5 - 443.7398
CAL CS5-22-171-008 - AH5



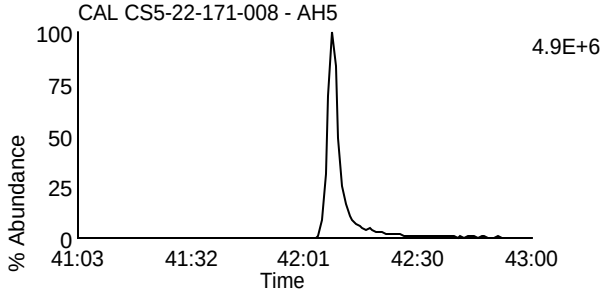
Data File: U230524B_05 G5 C9 - 459.7347
CAL CS5-22-171-008 - AH5



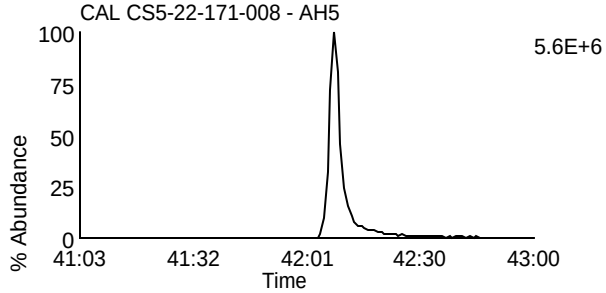
Data File: U230524B_05 G5 C11 - 469.7779
CAL CS5-22-171-008 - AH5



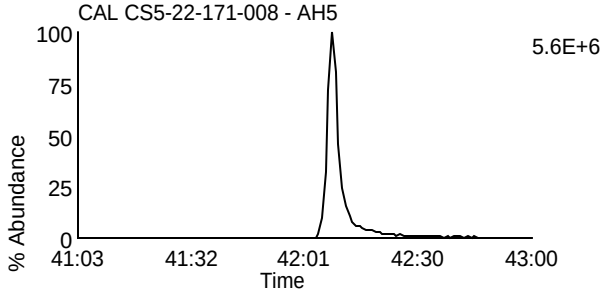
Data File: U230524B_05 G5 C11 - 469.7779
CAL CS5-22-171-008 - AH5



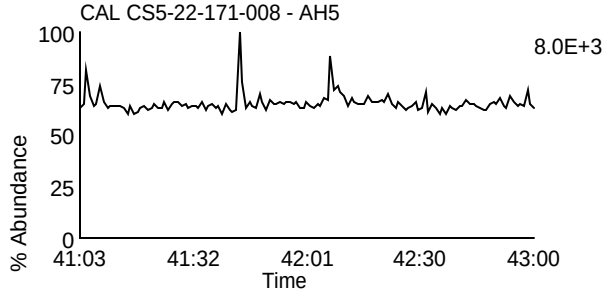
Data File: U230524B_05 G5 C12 - 471.7749
CAL CS5-22-171-008 - AH5



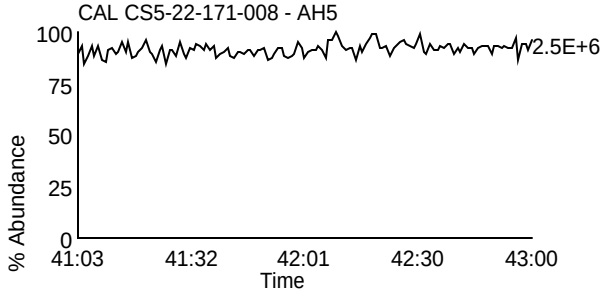
Data File: U230524B_05 G5 C12 - 471.7749
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G5 C13 - 513.6775
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G5 C2 - 430.9728
CAL CS5-22-171-008 - AH5

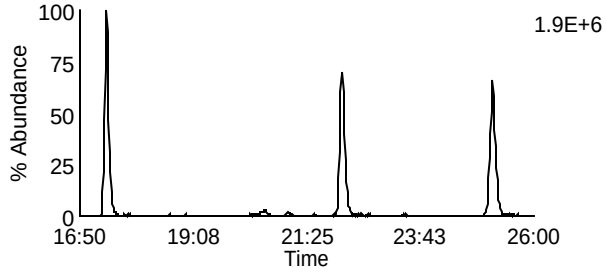


Homologue Group: Tetras

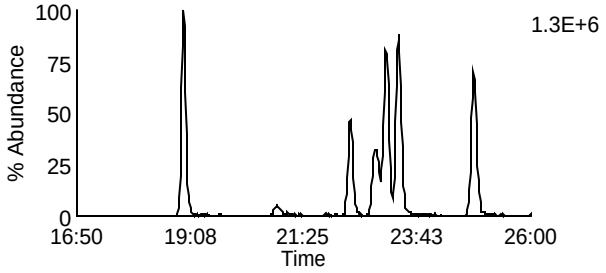
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

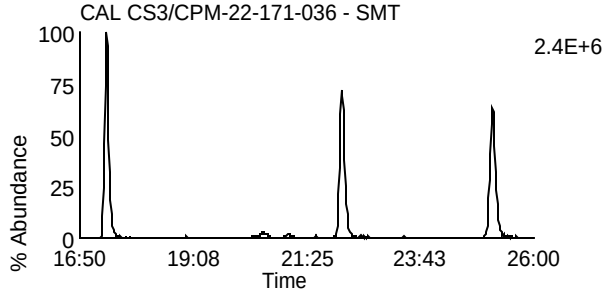
Data File: U230608A_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SMT



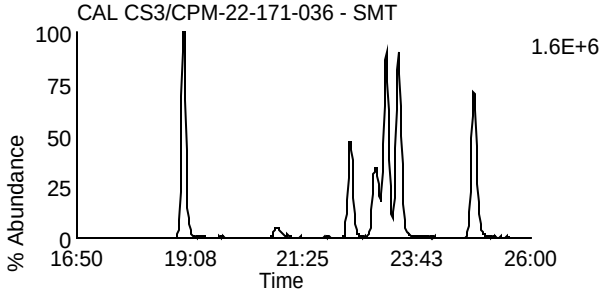
Data File: U230608A_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SMT



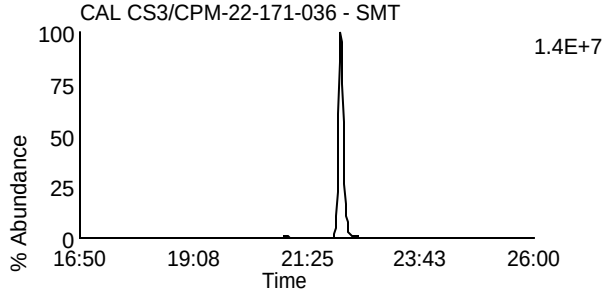
Data File: U230608A_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SMT



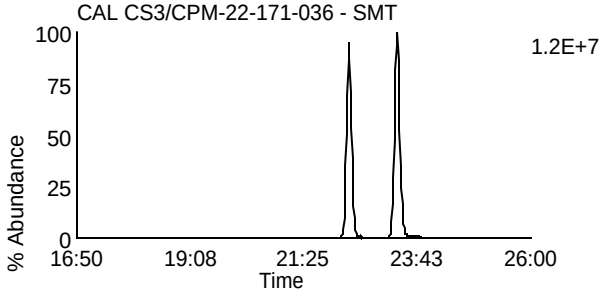
Data File: U230608A_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SMT



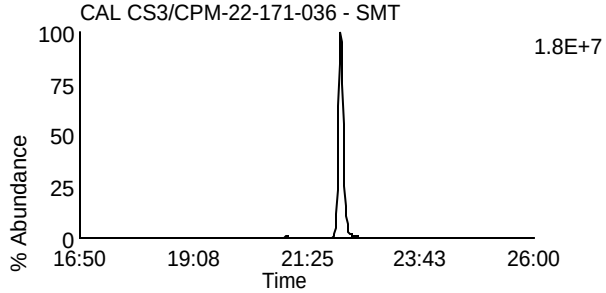
Data File: U230608A_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SMT



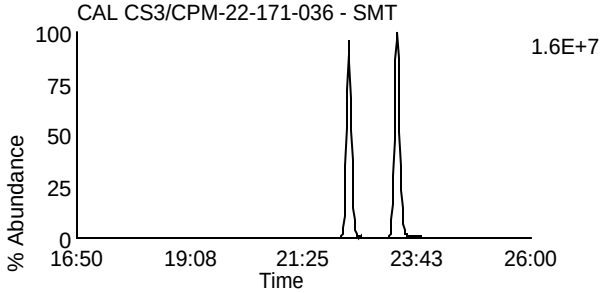
Data File: U230608A_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SMT



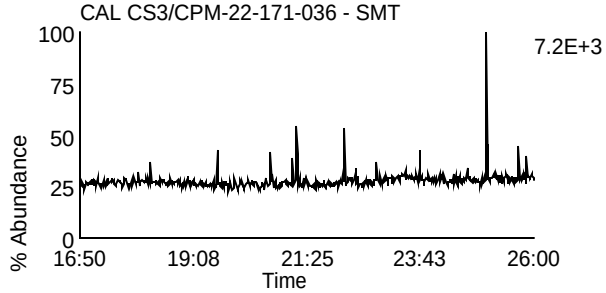
Data File: U230608A_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SMT



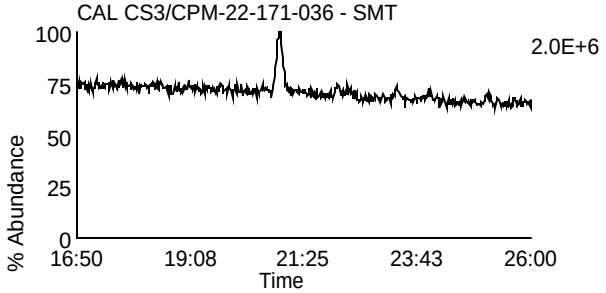
Data File: U230608A_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SMT



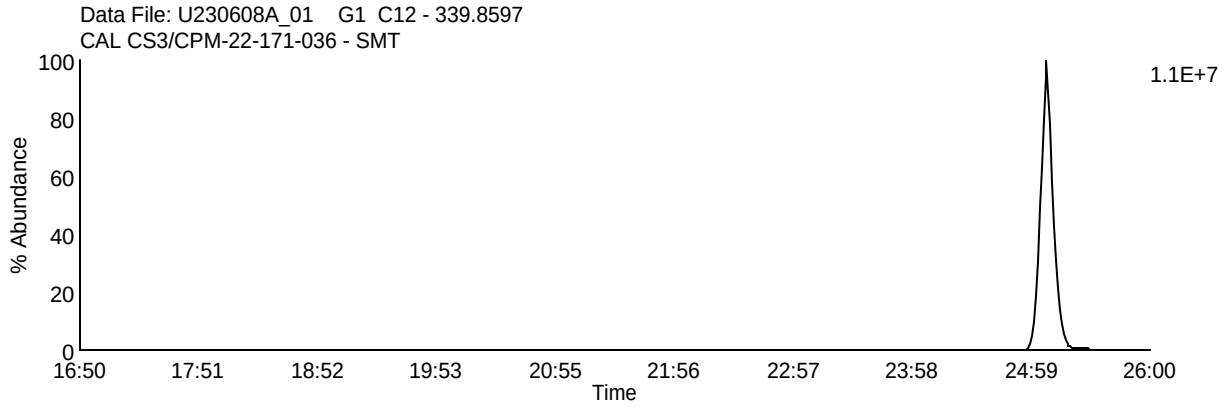
Data File: U230608A_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SMT

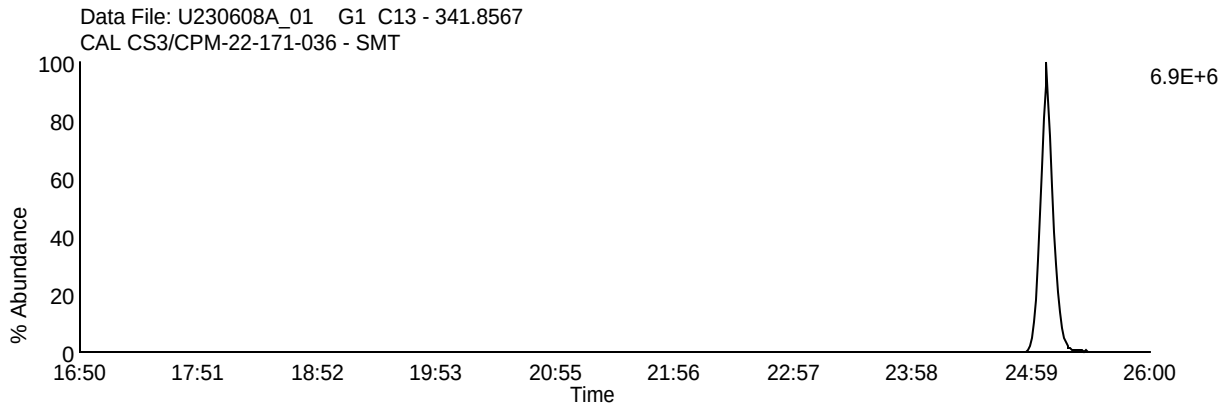


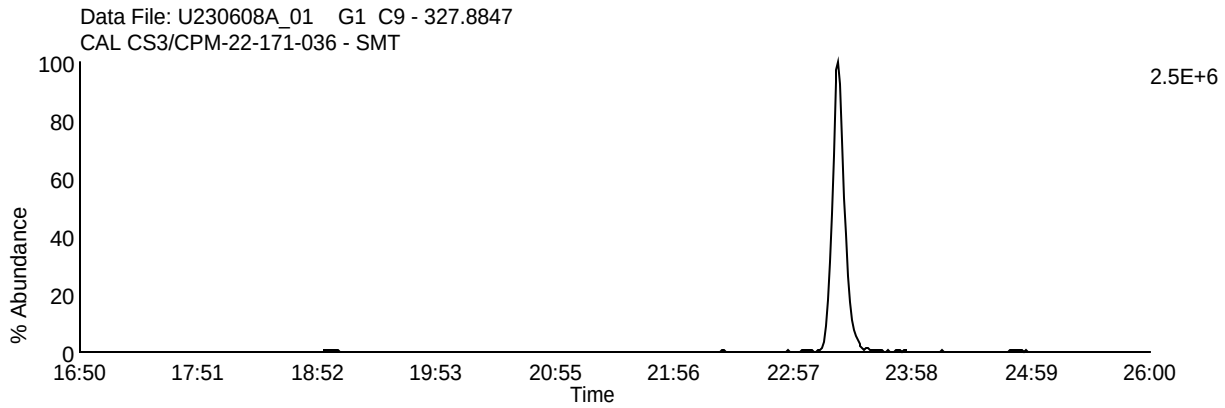
Homologue Group: Penta & Cleanup

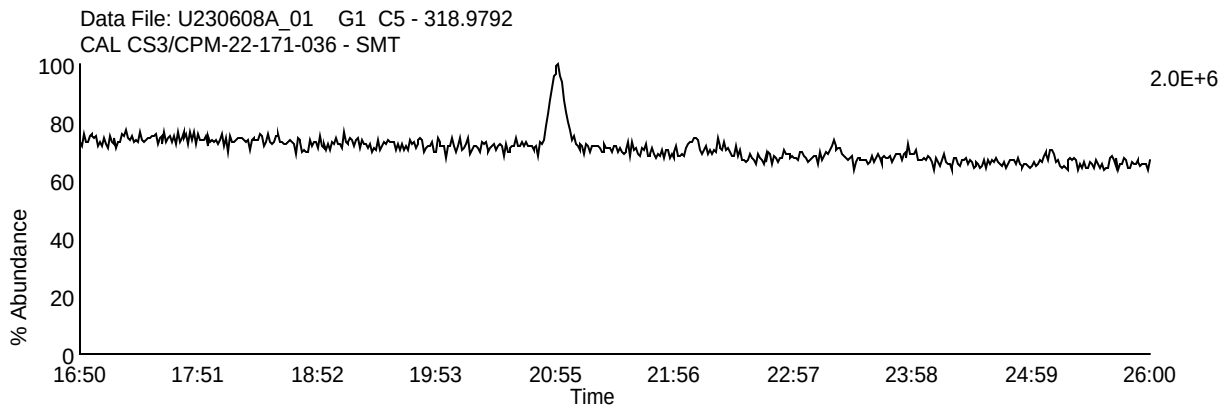
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)







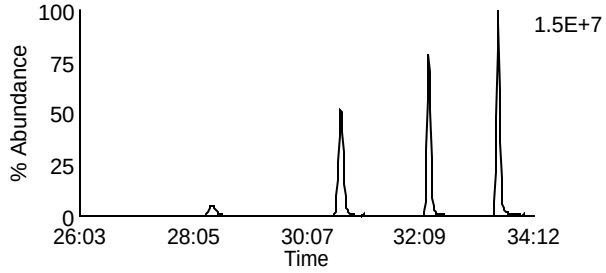


Homologue Group: Pentas

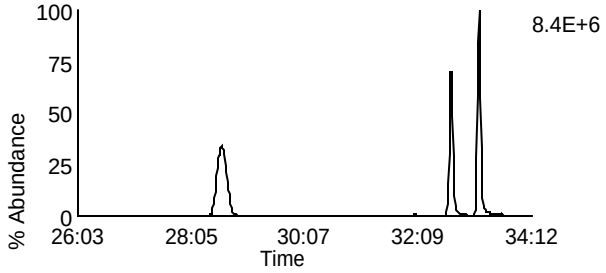
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

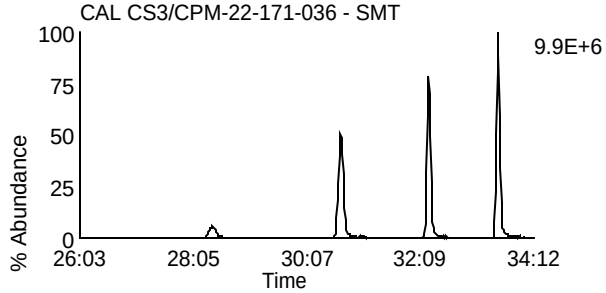
Data File: U230608A_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SMT



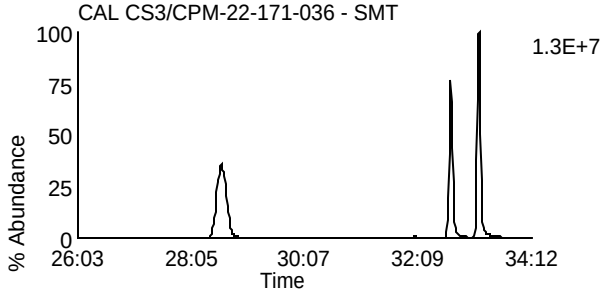
Data File: U230608A_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SMT



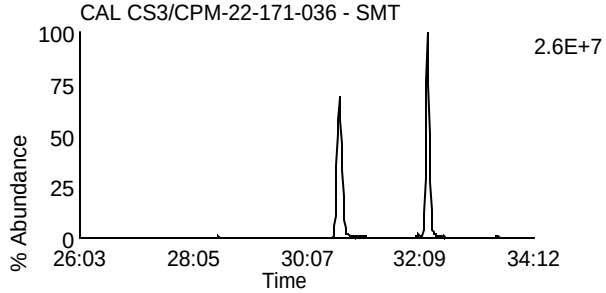
Data File: U230608A_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SMT



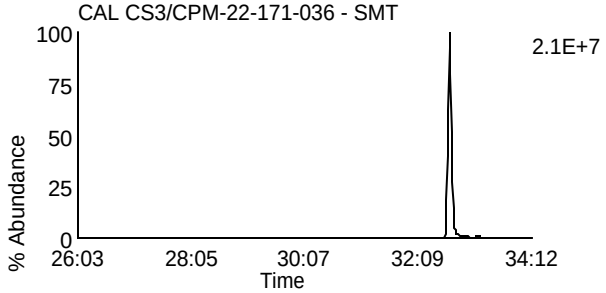
Data File: U230608A_01 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - SMT



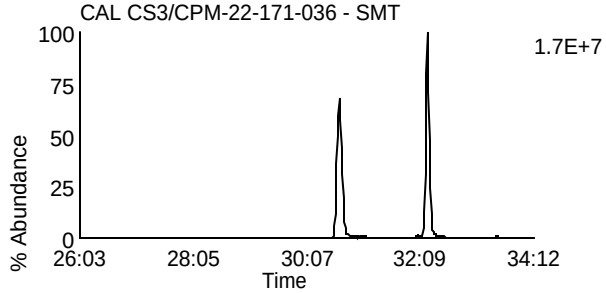
Data File: U230608A_01 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - SMT



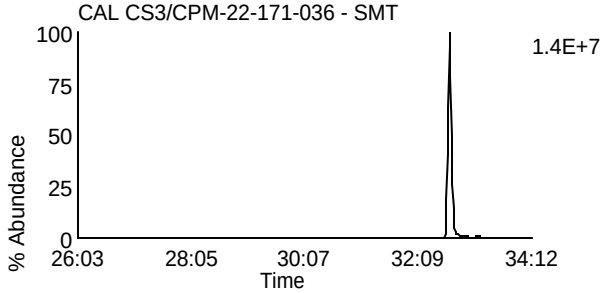
Data File: U230608A_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SMT



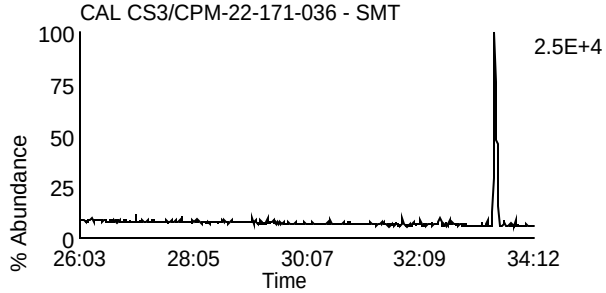
Data File: U230608A_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SMT



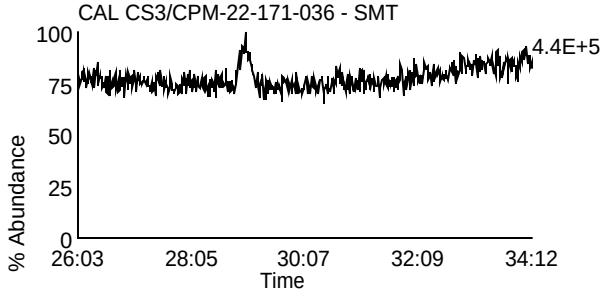
Data File: U230608A_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SMT

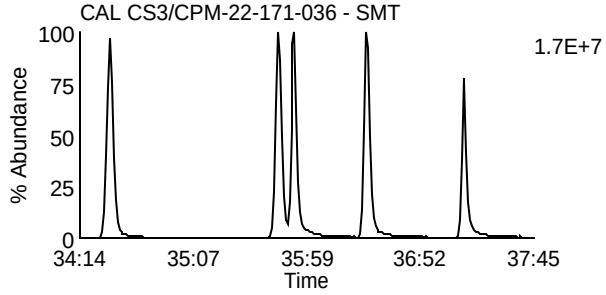


Homologue Group: Hexas

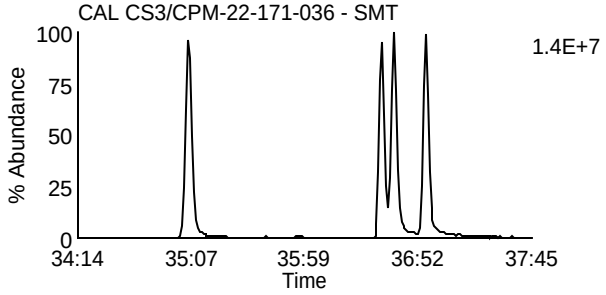
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

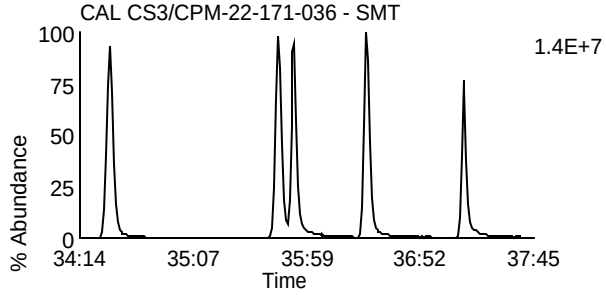
Data File: U230608A_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SMT



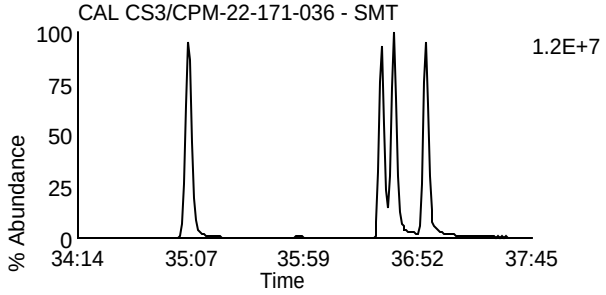
Data File: U230608A_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SMT



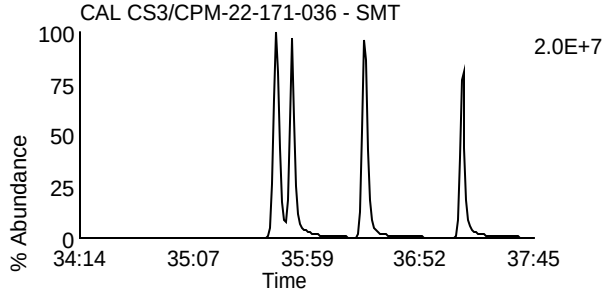
Data File: U230608A_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SMT



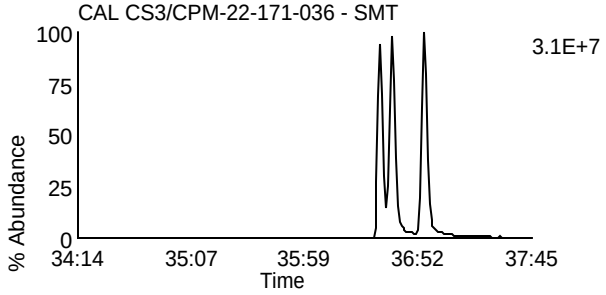
Data File: U230608A_01 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - SMT



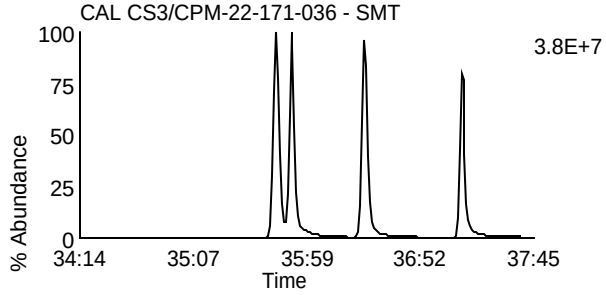
Data File: U230608A_01 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - SMT



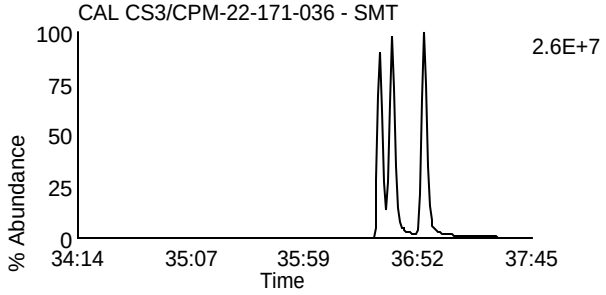
Data File: U230608A_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SMT



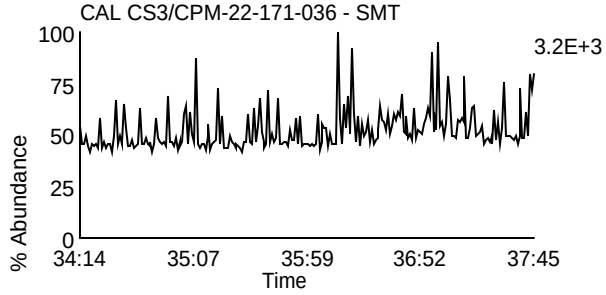
Data File: U230608A_01 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - SMT



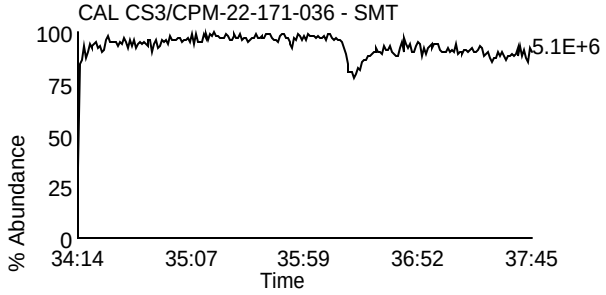
Data File: U230608A_01 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SMT

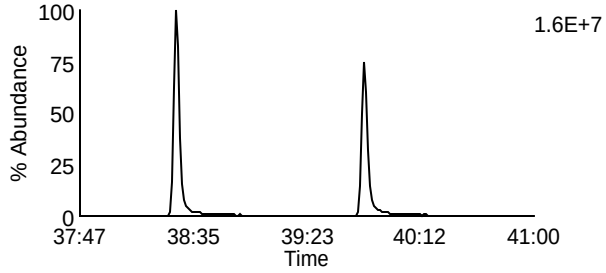


Homologue Group: Heptas

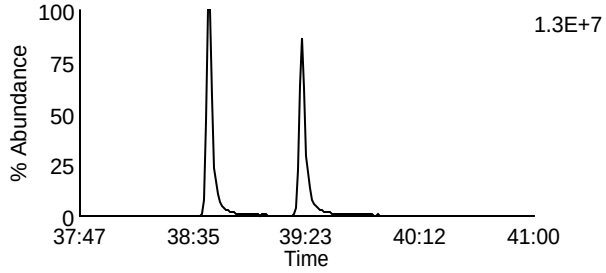
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

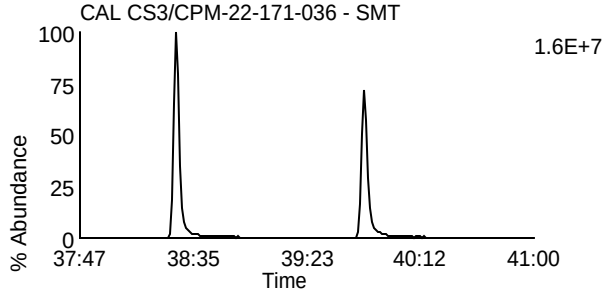
Data File: U230608A_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SMT



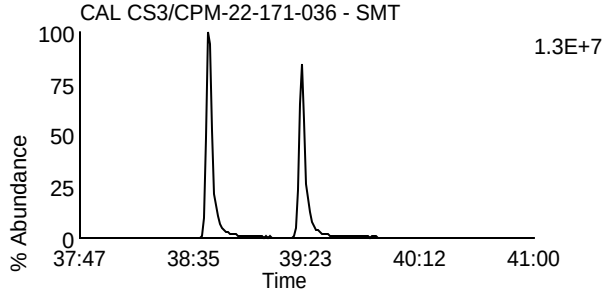
Data File: U230608A_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SMT



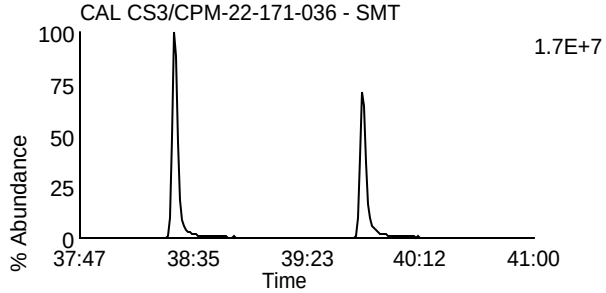
Data File: U230608A_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SMT



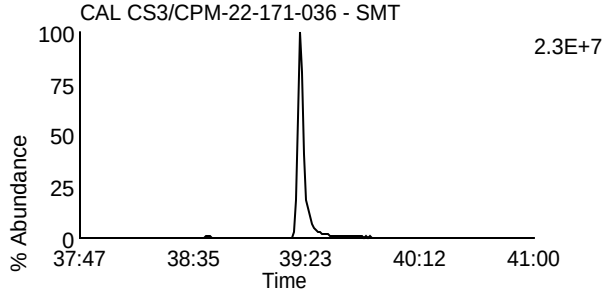
Data File: U230608A_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SMT



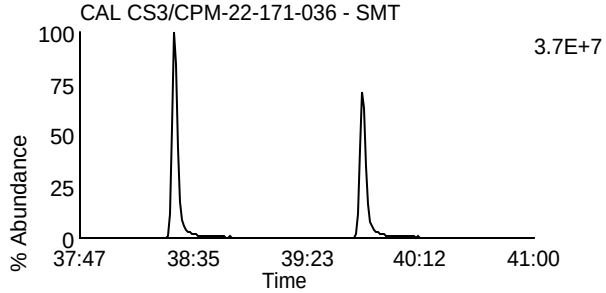
Data File: U230608A_01 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - SMT



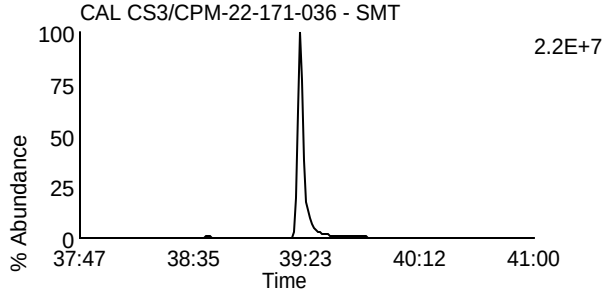
Data File: U230608A_01 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - SMT



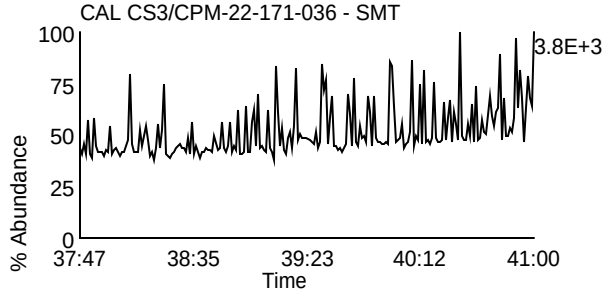
Data File: U230608A_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SMT



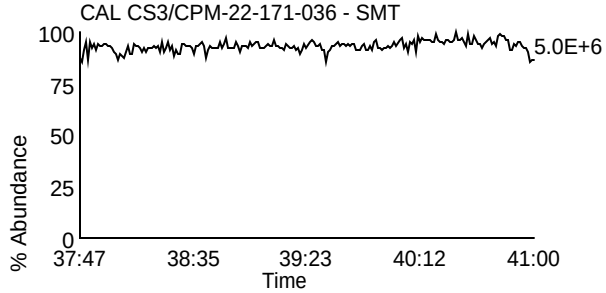
Data File: U230608A_01 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SMT

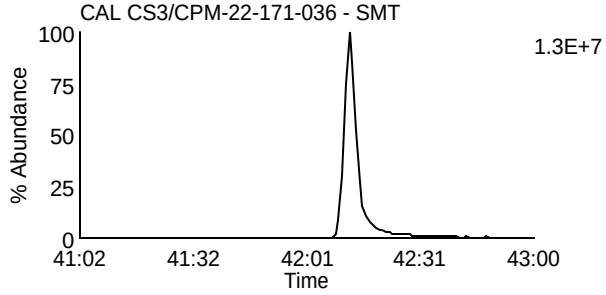


Homologue Group: Octas

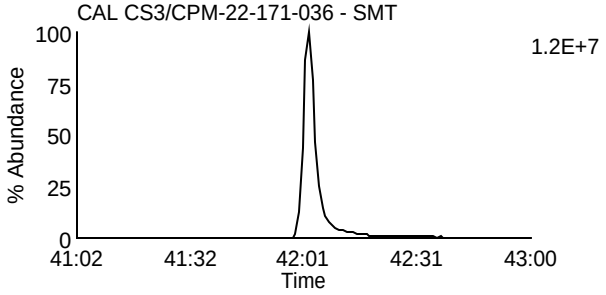
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

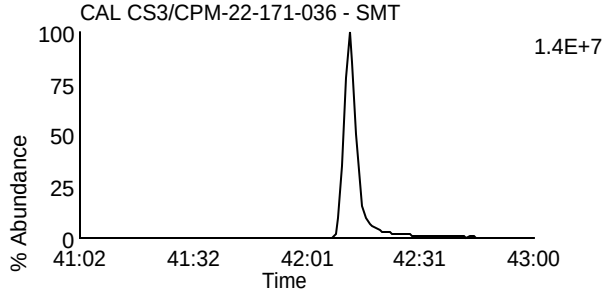
Data File: U230608A_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - SMT



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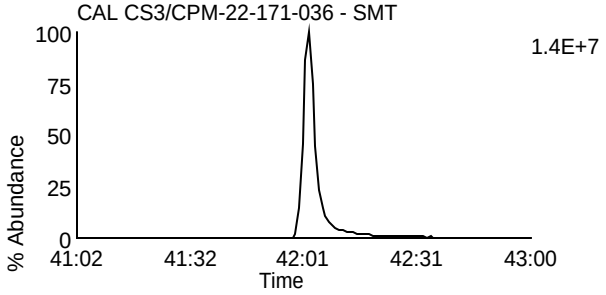
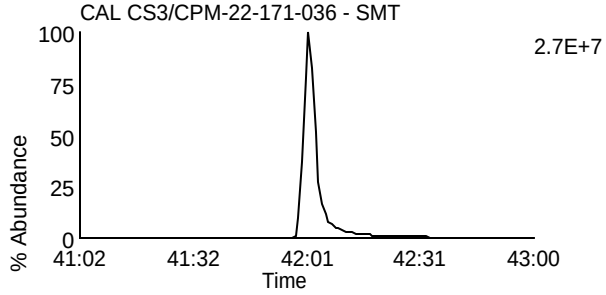
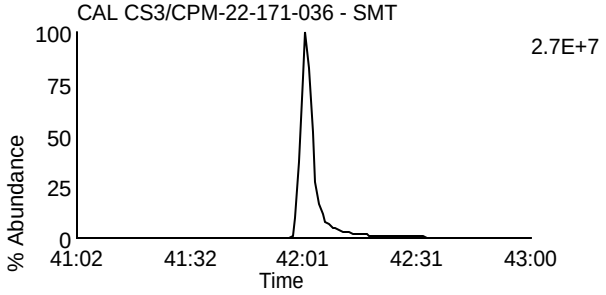
CAL CS3/CPM-22-171-036 - SMT



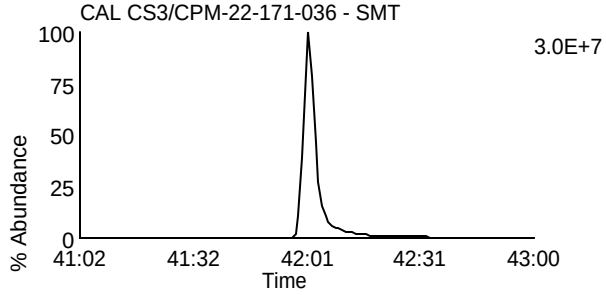
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



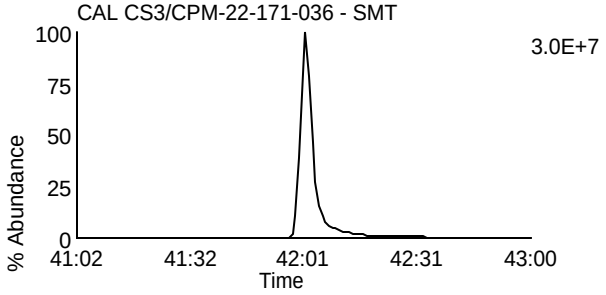
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



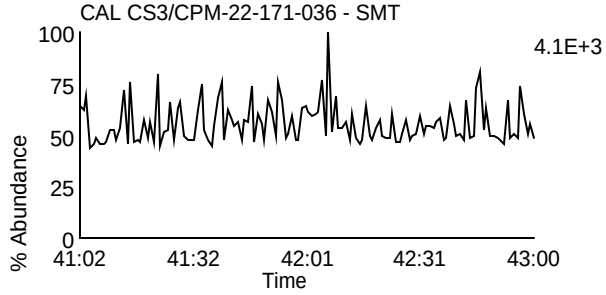
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



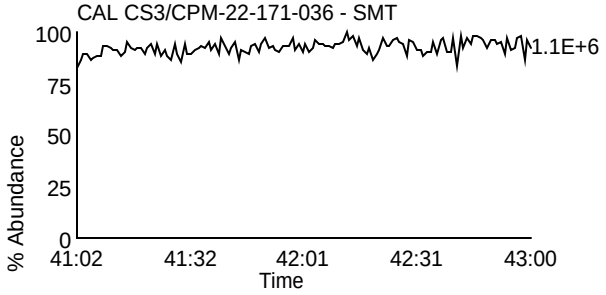
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - SMT

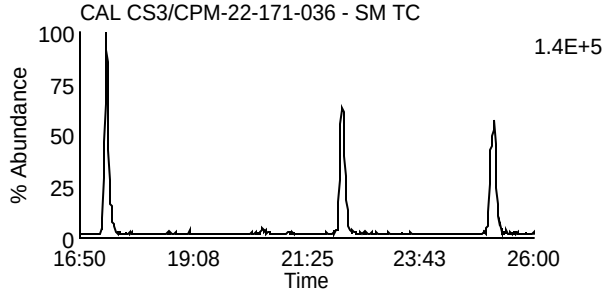


Homologue Group: Tetras

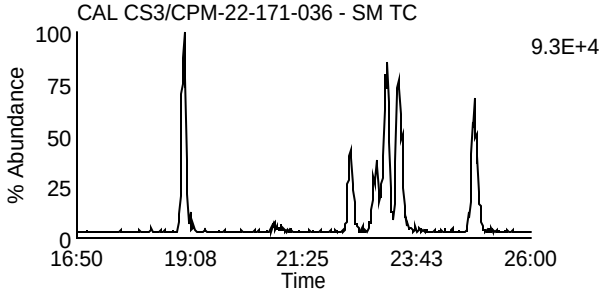
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

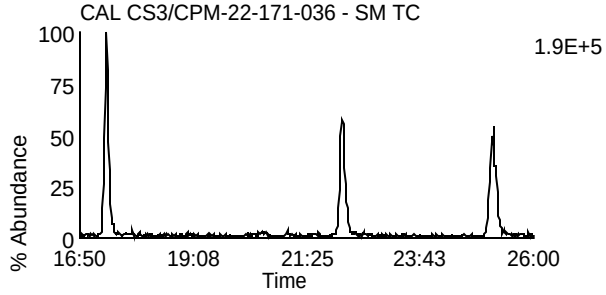
Data File: U230608B_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SM TC



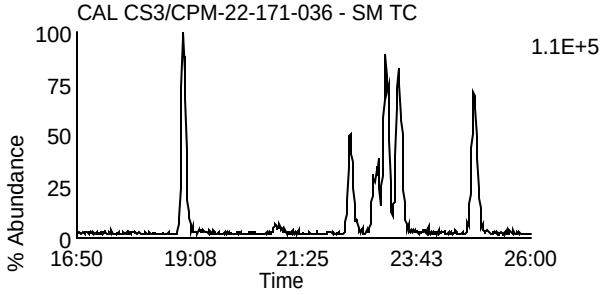
Data File: U230608B_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SM TC



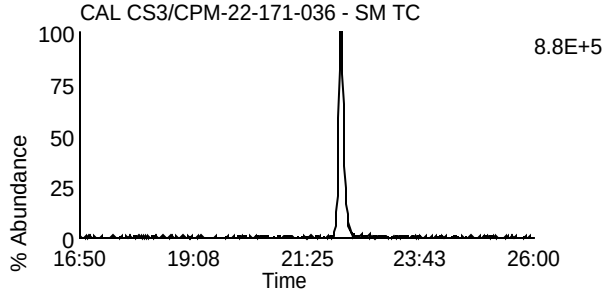
Data File: U230608B_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SM TC



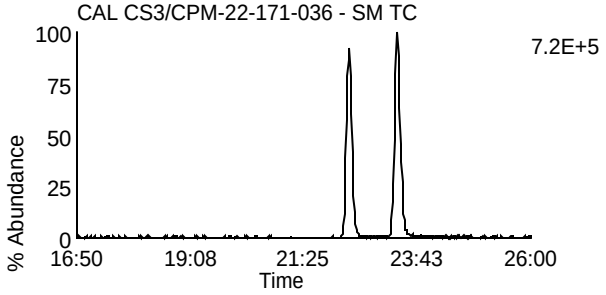
Data File: U230608B_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SM TC



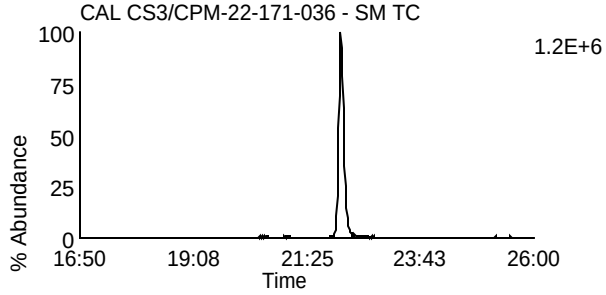
Data File: U230608B_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SM TC



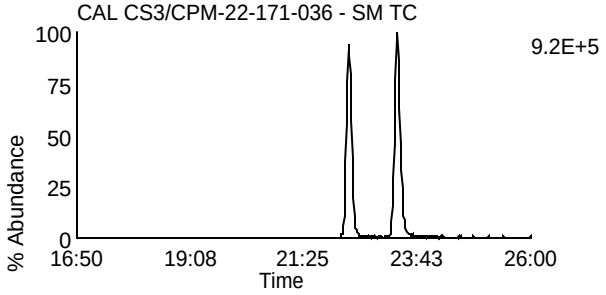
Data File: U230608B_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SM TC



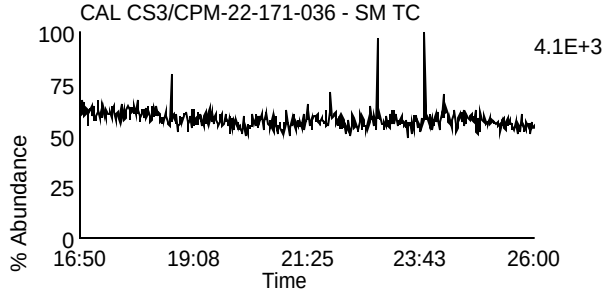
Data File: U230608B_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SM TC



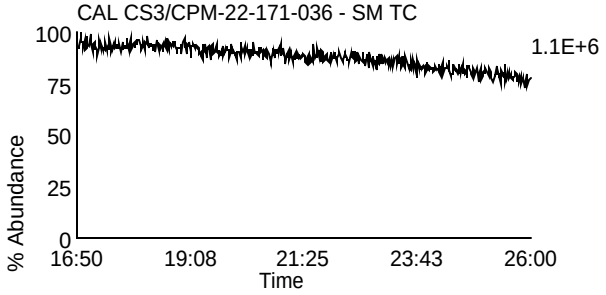
Data File: U230608B_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SM TC



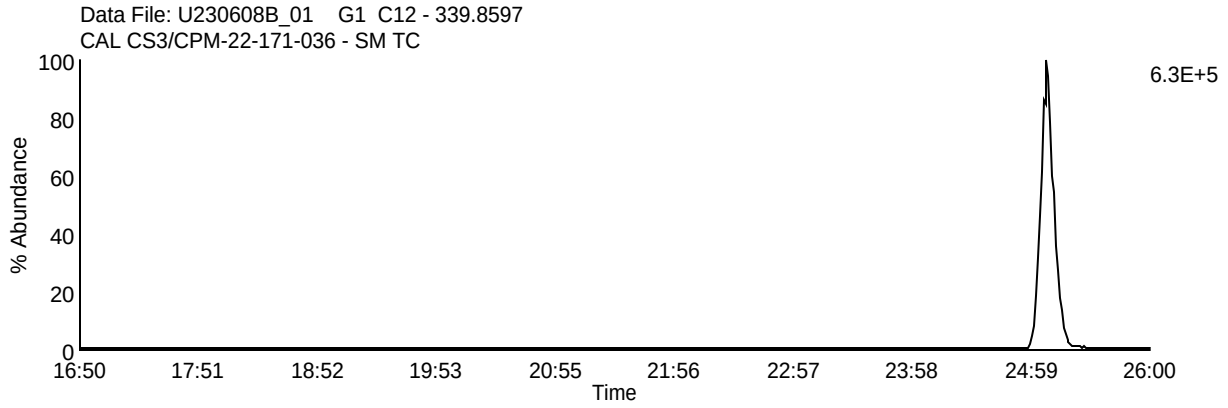
Data File: U230608B_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SM TC

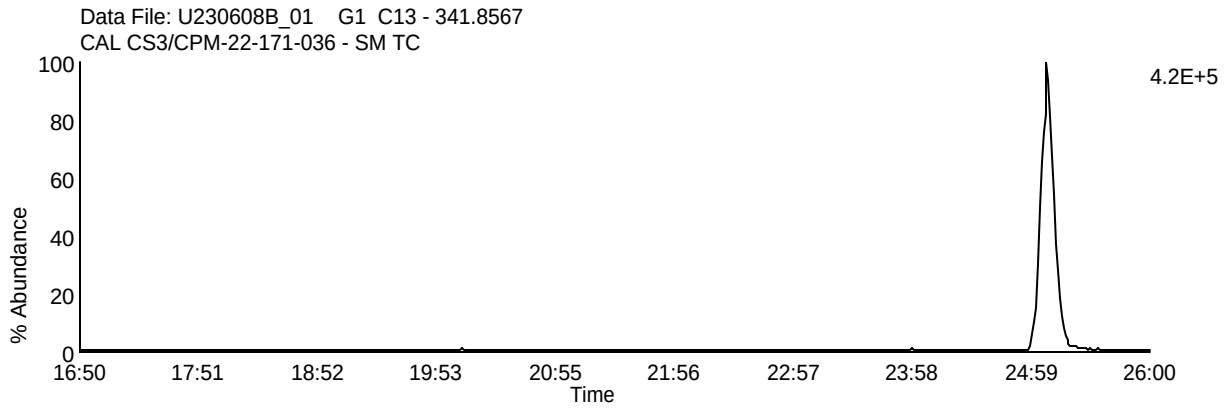


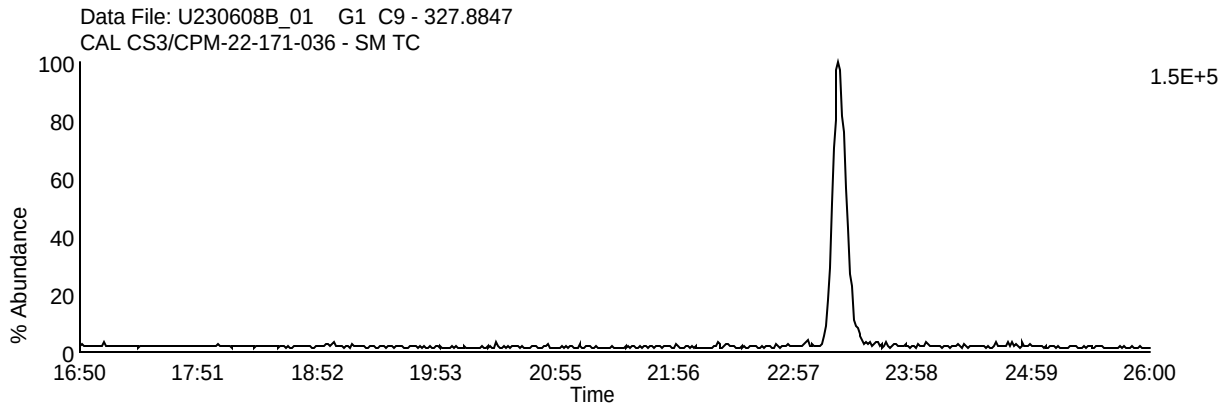
Homologue Group: Penta & Cleanup

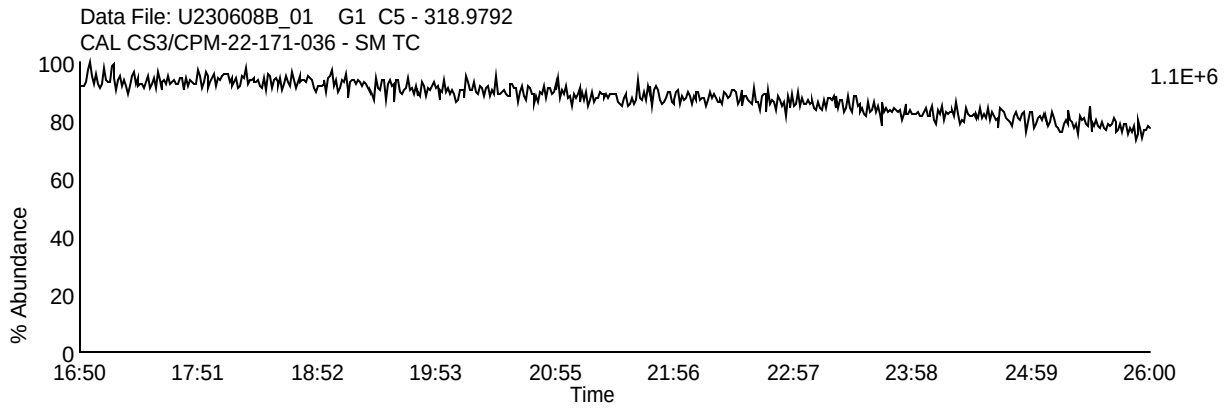
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)







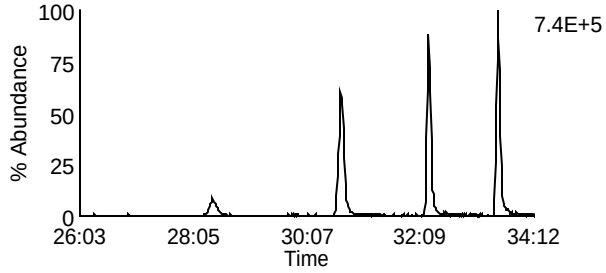


Homologue Group: Pentas

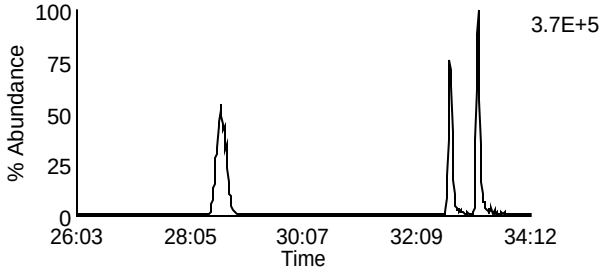
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

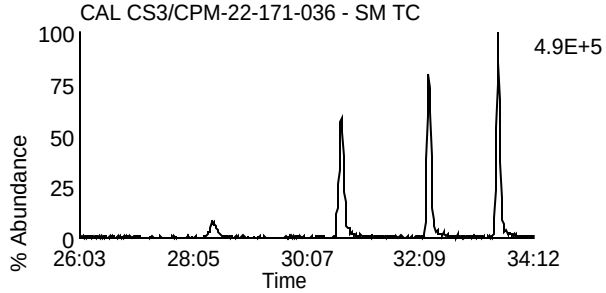
Data File: U230608B_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SM TC



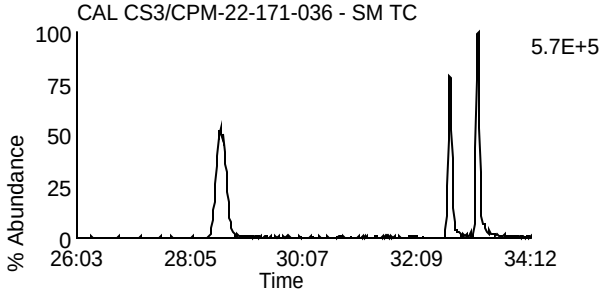
Data File: U230608B_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - SM TC



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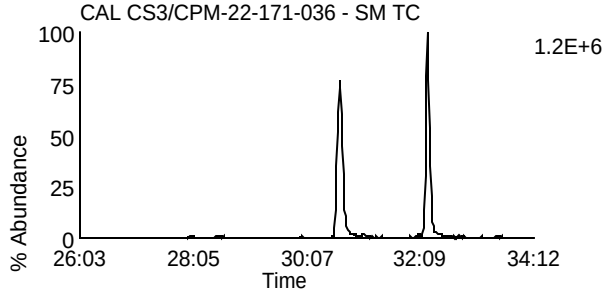
CAL CS3/CPM-22-171-036 - SM TC



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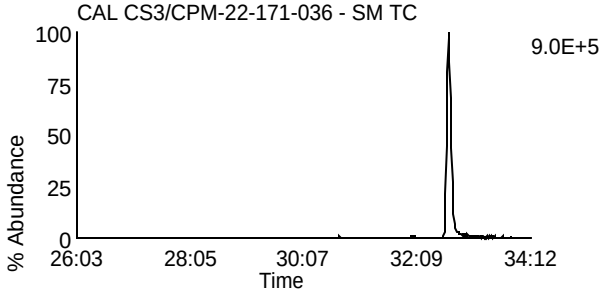
CAL CS3/CPM-22-171-036 - SM TC



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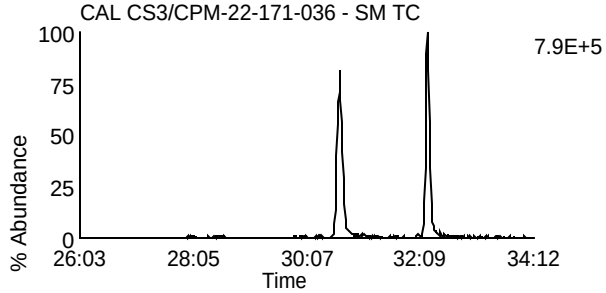
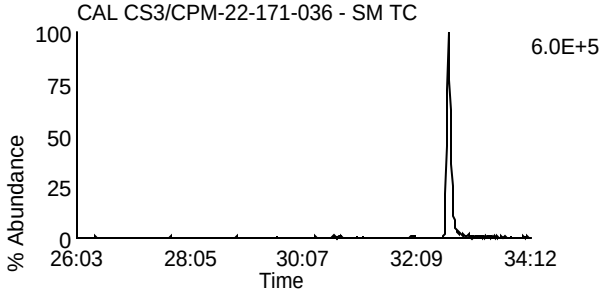
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SM TC



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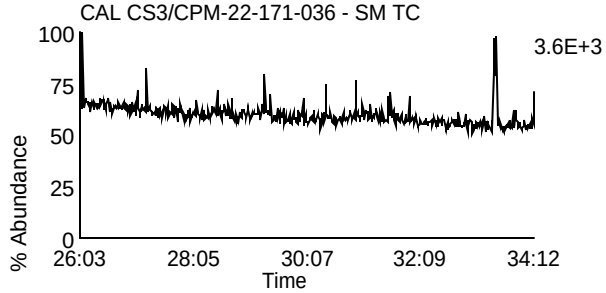
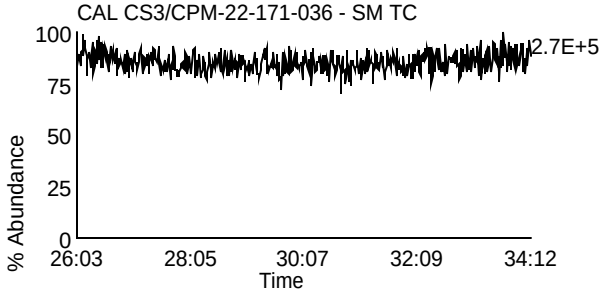
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SM TC

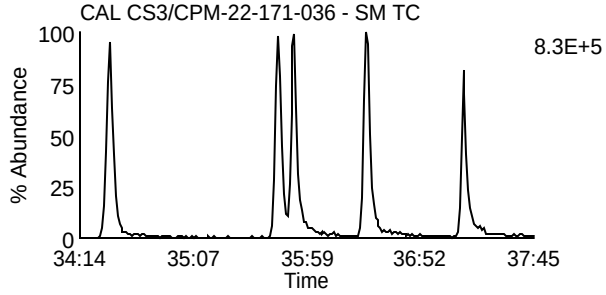


Homologue Group: Hexas

Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U230608B_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SM TC



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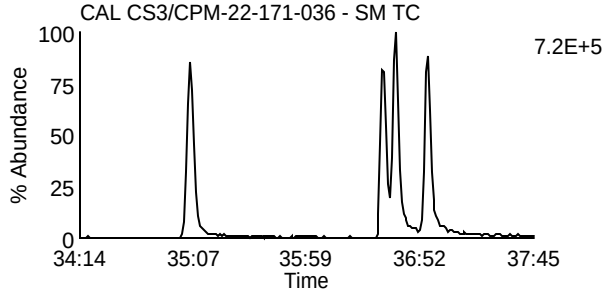
CAL CS3/CPM-22-171-036 - SM TC



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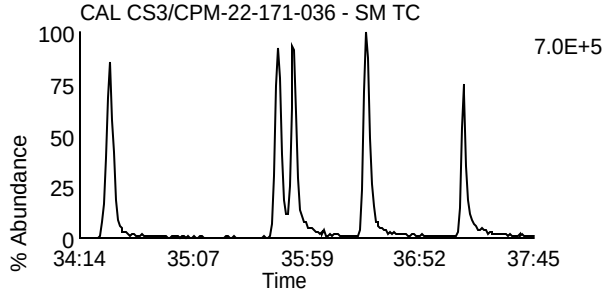
CAL CS3/CPM-22-171-036 - SM TC



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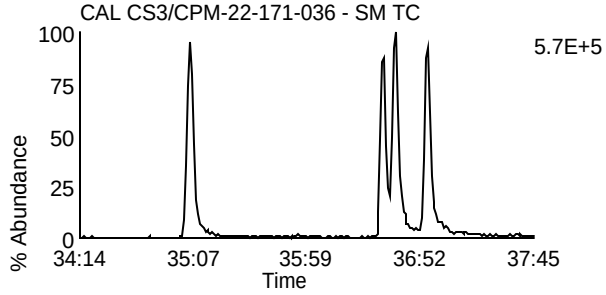
CAL CS3/CPM-22-171-036 - SM TC



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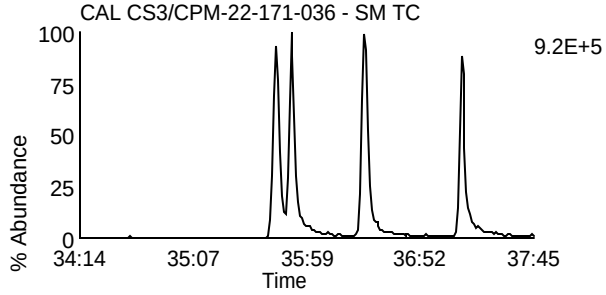
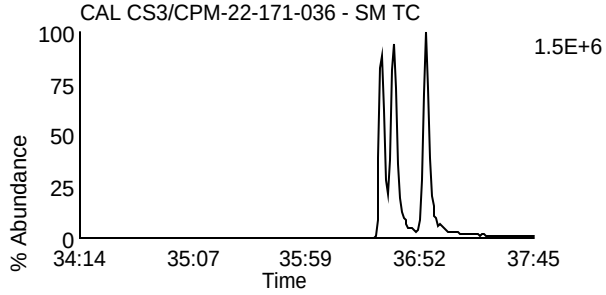
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SM TC



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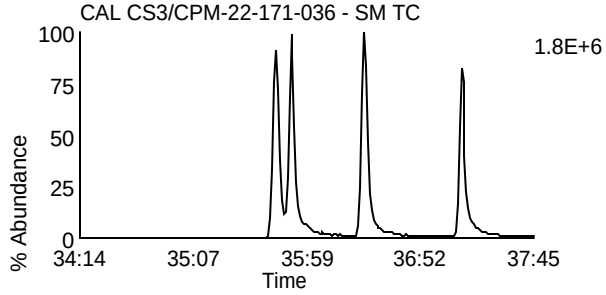
CAL CS3/CPM-22-171-036 - SM TC



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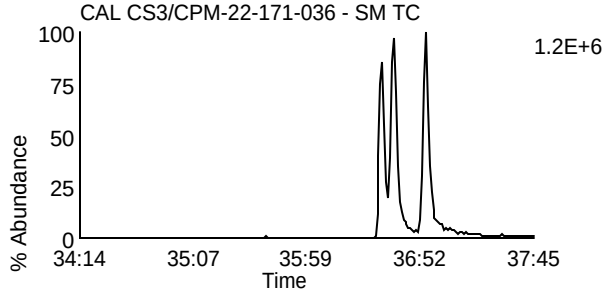
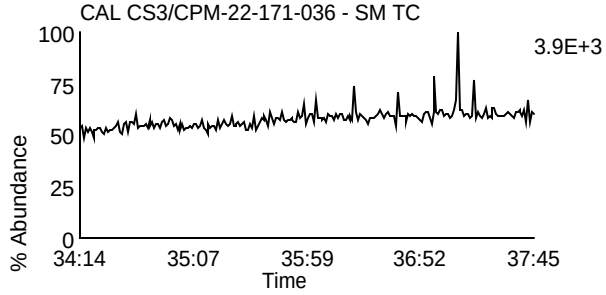
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SM TC



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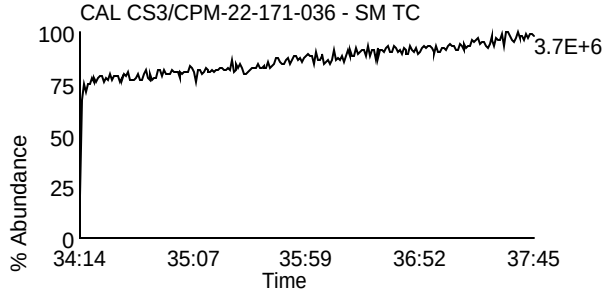
CAL CS3/CPM-22-171-036 - SM TC

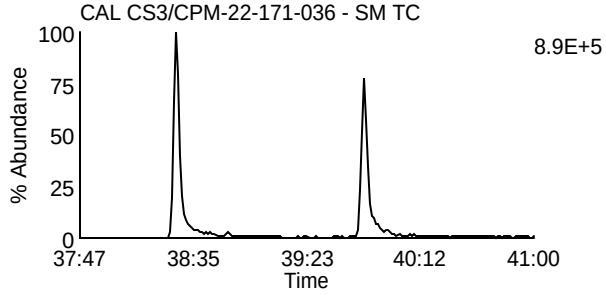


Homologue Group: Heptas

Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U230608B_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SM TC



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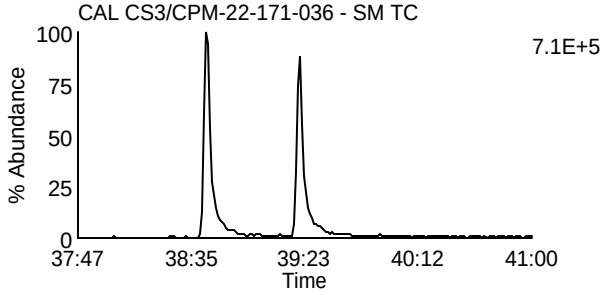
CAL CS3/CPM-22-171-036 - SM TC



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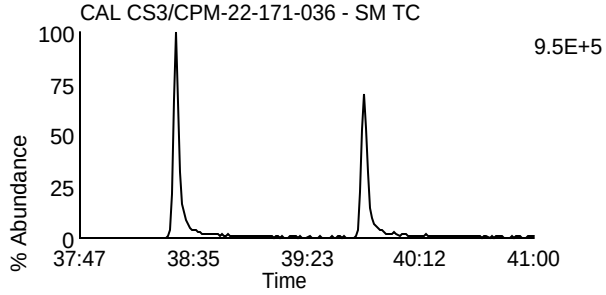
CAL CS3/CPM-22-171-036 - SM TC



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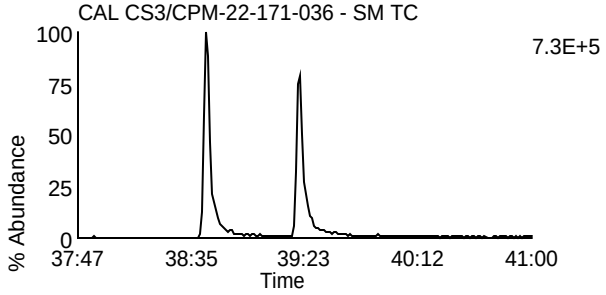
CAL CS3/CPM-22-171-036 - SM TC



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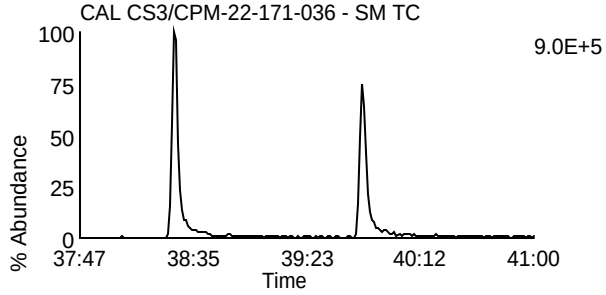
CAL CS3/CPM-22-171-036 - SM TC



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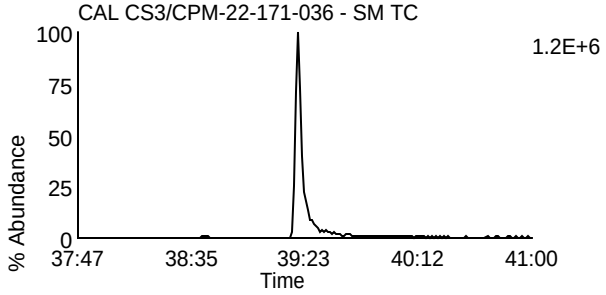
CAL CS3/CPM-22-171-036 - SM TC



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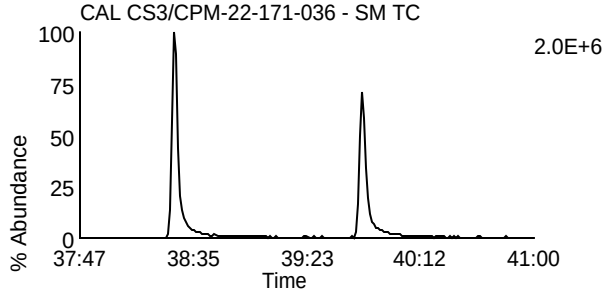
CAL CS3/CPM-22-171-036 - SM TC



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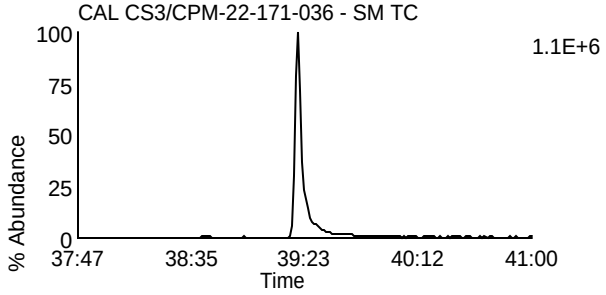
CAL CS3/CPM-22-171-036 - SM TC



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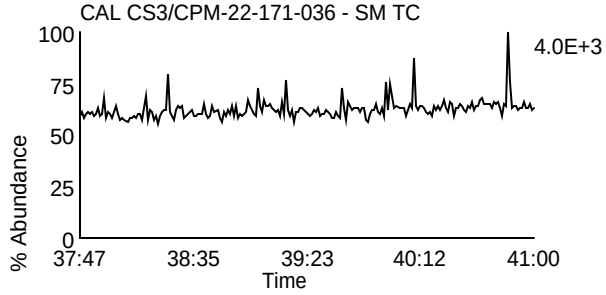
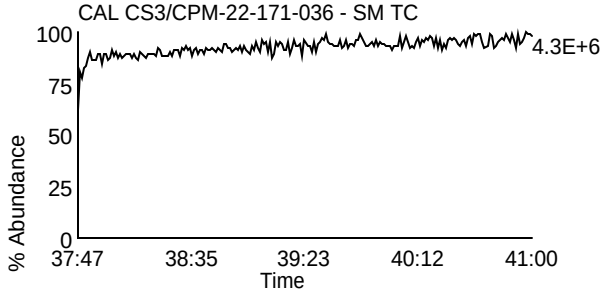
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

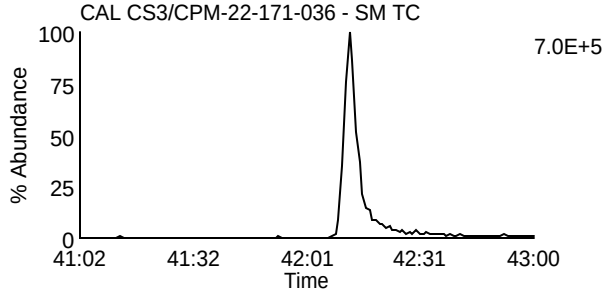


Homologue Group: Octas

Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

Data File: U230608B_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SM TC



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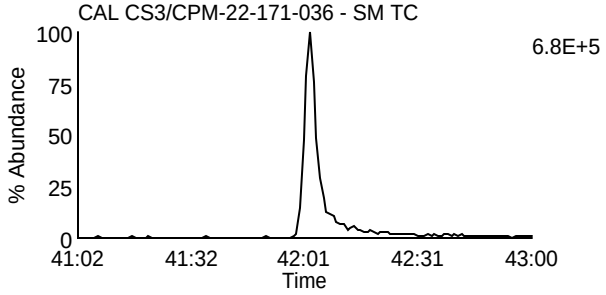

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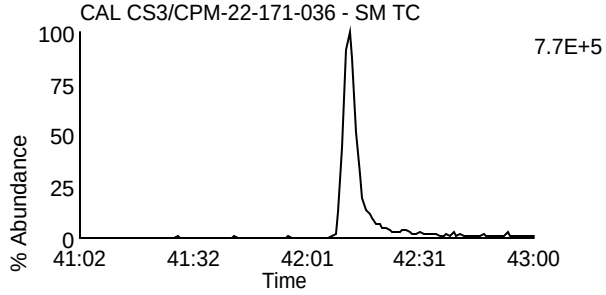
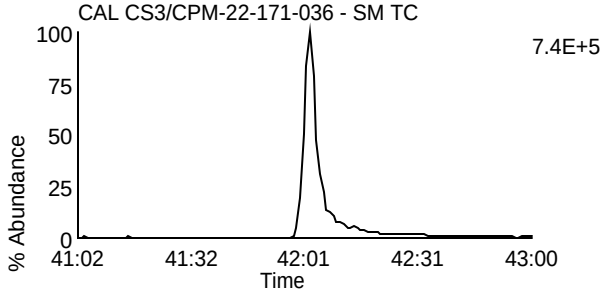
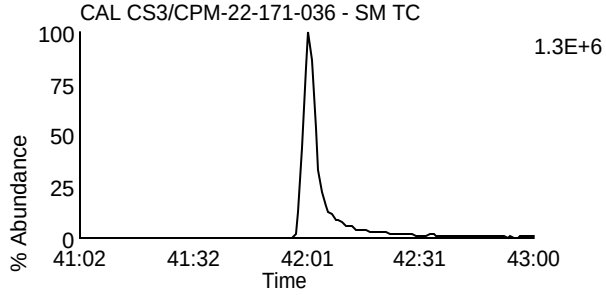


Data File: U230608B_01 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SM TC



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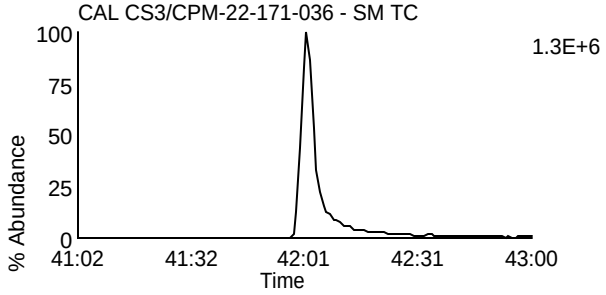

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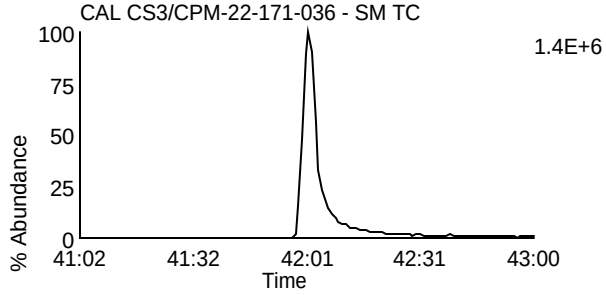
CAL CS3/CPM-22-171-036 - SM TC



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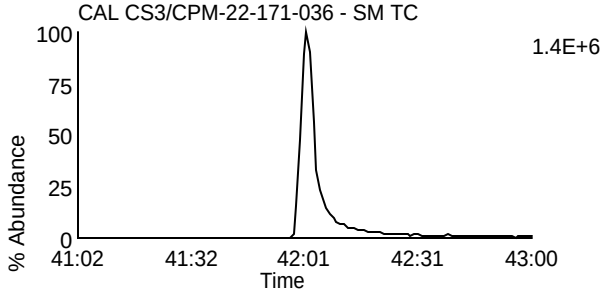
CAL CS3/CPM-22-171-036 - SM TC



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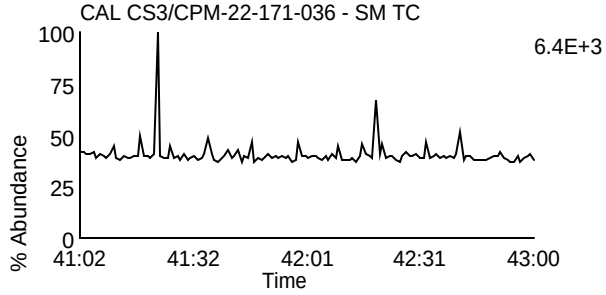
CAL CS3/CPM-22-171-036 - SM TC



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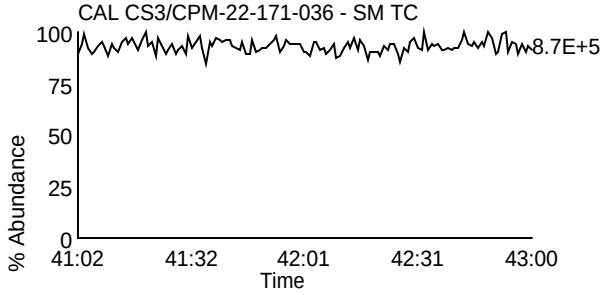

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS1-22-171-033	Instrument ID	10MSHR15 (L)
Filename	L230610A_02	GC Column ID	US3225411H
Analyzed	06/10/2023 11:31	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:49	3.61e7	5.19e7	5.19e6	7.57e6	-----	-----	0.70	
2,3,7,8-TCDF	23:50	9.80e4	1.24e5	1.66e4	1.94e4	-----	-----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:07	4.98e7	6.01e7	6.86e6	8.53e6	-----	-----	0.83	
2,3,7,8-TCDD-13C	25:07	5.54e7	6.91e7	7.56e6	9.45e6	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	25:09	4.33e5		6.32e4		-----	-----		
2,3,7,8-TCDD	25:08	1.64e5	2.35e5	2.19e4	3.33e4	-----	-----	0.70	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:12	3.06e7	2.13e7	8.42e6	6.06e6	-----	-----	1.44	
2,3,4,7,8-PeCDF-13C	31:14	2.98e7	2.10e7	8.98e6	6.45e6	-----	-----	1.42	
1,2,3,7,8-PeCDF	30:12	4.06e5	3.03e5	1.08e5	9.07e4	-----	-----	1.34	
2,3,4,7,8-PeCDF	31:15	4.22e5	3.19e5	1.44e5	1.02e5	-----	-----	1.32	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	3.79e7	2.51e7	1.19e7	7.73e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	31:33	3.27e5	5.75e5	1.06e5	1.83e5	-----	-----	0.57	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:55	9.58e6	2.01e7	3.81e6	7.91e6	-----	-----	0.48	
1,2,3,6,7,8-HxCDF-13C	34:00	1.04e7	2.13e7	3.94e6	8.31e6	-----	-----	0.49	
2,3,4,6,7,8-HxCDF-13C	34:29	1.00e7	2.04e7	4.12e6	8.35e6	-----	-----	0.49	
1,2,3,7,8,9-HxCDF-13C	35:09	7.76e6	1.61e7	3.17e6	6.41e6	-----	-----	0.48	
1,2,3,4,7,8-HxCDF	33:55	2.67e5	2.37e5	1.25e5	9.03e4	-----	-----	1.13	
1,2,3,6,7,8-HxCDF	34:01	2.94e5	2.65e5	1.04e5	1.05e5	-----	-----	1.11	
2,3,4,6,7,8-HxCDF	34:30	2.90e5	2.44e5	1.15e5	1.06e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDF	35:10	2.14e5	1.90e5	8.27e4	7.35e4	-----	-----	1.13	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS1-22-171-033	Instrument ID	10MSHR15 (L)
Filename	L230610A_02	GC Column ID	US3225411H
Analyzed	06/10/2023 11:31	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:36	(M)2.63e7	2.21e7	1.17e7	9.51e6	-----	-----	1.19	
1,2,3,6,7,8-HxCDD-13C	34:41	(M)2.78e7	(M)2.37e7	1.13e7	9.49e6	-----	-----	1.17	
1,2,3,7,8,9-HxCDD-13C	34:53	2.83e7	2.46e7	1.23e7	1.07e7	-----	-----	1.15	
1,2,3,4,7,8-HxCDD	34:37	3.82e5	3.39e5	1.58e5	1.39e5	-----	-----	1.13	
1,2,3,6,7,8-HxCDD	34:41	3.94e5	3.70e5	1.64e5	1.46e5	-----	-----	1.07	
1,2,3,7,8,9-HxCDD	34:54	4.00e5	3.35e5	1.81e5	1.38e5	-----	-----	1.19	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:20	2.28e7	5.13e7	8.73e6	1.91e7	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	37:42	1.63e7	3.64e7	5.99e6	1.37e7	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	36:20	8.83e5	8.85e5	3.21e5	3.56e5	-----	-----	1.00	
1,2,3,4,7,8,9-HpCDF	37:42	6.27e5	6.72e5	2.16e5	2.26e5	-----	-----	0.93	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:13	3.67e7	3.48e7	1.32e7	1.30e7	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	37:14	7.56e5	7.59e5	2.77e5	2.88e5	-----	-----	1.00	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:07	3.91e5	4.74e5	1.25e5	1.45e5	-----	-----	0.83	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:55	4.26e7	5.24e7	1.33e7	1.63e7	-----	-----	0.81	
OCDD	39:56	6.76e5	8.40e5	1.99e5	2.68e5	-----	-----	0.80	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS2-22-171-006	Instrument ID	10MSHR15 (L)
Filename	L230610A_03	GC Column ID	US3225411H
Analyzed	06/10/2023 12:14	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:47	3.34e7	4.77e7	4.47e6	6.44e6	-----	-----	0.70	
2,3,7,8-TCDF	23:50	3.64e5	4.89e5	4.49e4	6.96e4	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:05	4.64e7	5.71e7	5.95e6	7.33e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	25:05	4.88e7	6.08e7	6.33e6	7.79e6	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	25:08	1.60e6		1.97e5		-----	-----		
2,3,7,8-TCDD	25:07	6.12e5	7.95e5	8.70e4	9.83e4	-----	-----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:11	2.66e7	1.87e7	7.06e6	4.96e6	-----	-----	1.42	
2,3,4,7,8-PeCDF-13C	31:13	2.57e7	1.78e7	8.07e6	5.55e6	-----	-----	1.44	
1,2,3,7,8-PeCDF	30:12	1.44e6	1.01e6	3.98e5	2.51e5	-----	-----	1.43	
2,3,4,7,8-PeCDF	31:14	1.45e6	1.05e6	4.76e5	3.09e5	-----	-----	1.37	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	3.32e7	2.13e7	1.04e7	6.75e6	-----	-----	1.56	
1,2,3,7,8-PeCDD	31:32	1.12e6	1.93e6	3.39e5	6.32e5	-----	-----	0.58	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:54	8.05e6	1.70e7	3.11e6	6.40e6	-----	-----	0.47	
1,2,3,6,7,8-HxCDF-13C	33:59	8.58e6	1.79e7	3.32e6	6.92e6	-----	-----	0.48	
2,3,4,6,7,8-HxCDF-13C	34:28	7.45e6	1.57e7	3.30e6	6.73e6	-----	-----	0.47	
1,2,3,7,8,9-HxCDF-13C	35:09	5.23e6	1.11e7	2.21e6	4.61e6	-----	-----	0.47	
1,2,3,4,7,8-HxCDF	33:55	9.20e5	8.16e5	3.54e5	3.06e5	-----	-----	1.13	
1,2,3,6,7,8-HxCDF	34:00	9.87e5	8.44e5	3.89e5	3.37e5	-----	-----	1.17	
2,3,4,6,7,8-HxCDF	34:29	8.73e5	7.31e5	3.75e5	3.05e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDF	35:09	5.83e5	4.94e5	2.33e5	1.94e5	-----	-----	1.18	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS2-22-171-006	Instrument ID	10MSHR15 (L)
Filename	L230610A_03	GC Column ID	US3225411H
Analyzed	06/10/2023 12:14	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:35	2.00e7	1.66e7	8.49e6	6.87e6	-----	-----	1.20	
1,2,3,6,7,8-HxCDD-13C	34:40	2.07e7	1.76e7	8.27e6	6.89e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD-13C	34:52	1.99e7	1.69e7	8.26e6	7.18e6	-----	-----	1.17	
1,2,3,4,7,8-HxCDD	34:36	1.21e6	1.02e6	4.62e5	4.20e5	-----	-----	1.18	
1,2,3,6,7,8-HxCDD	34:40	1.25e6	1.13e6	5.18e5	4.68e5	-----	-----	1.11	
1,2,3,7,8,9-HxCDD	34:53	1.14e6	9.94e5	4.86e5	4.30e5	-----	-----	1.15	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:19	1.62e7	3.72e7	6.25e6	1.41e7	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	37:41	1.04e7	2.37e7	3.82e6	8.47e6	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	36:19	2.71e6	2.69e6	1.05e6	1.08e6	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	37:42	1.74e6	1.74e6	6.33e5	5.76e5	-----	-----	1.00	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:12	2.47e7	2.34e7	8.36e6	8.26e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	37:13	2.23e6	(M)2.09e6	7.84e5	7.54e5	-----	-----	1.07	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:07	9.94e5	1.20e6	3.02e5	3.57e5	-----	-----	0.83	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:54	2.77e7	3.29e7	8.90e6	1.04e7	-----	-----	0.84	
OCDD	39:55	1.75e6	2.14e6	5.92e5	6.58e5	-----	-----	0.82	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR15 (L)
Filename	L230610A_06	GC Column ID	US3225411H
Analyzed	06/10/2023 14:39	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:47	2.98e7	4.16e7	4.19e6	5.81e6	-----	-----	0.72	
2,3,7,8-TCDF	23:50	1.60e6	2.32e6	2.25e5	3.49e5	-----	-----	0.69	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:05	4.06e7	4.93e7	5.75e6	6.91e6	-----	-----	0.82	
2,3,7,8-TCDD-13C	25:05	4.47e7	5.47e7	6.04e6	7.49e6	-----	-----	0.82	
2,3,7,8-TCDD-37Cl4	25:07	7.75e6		1.08e6		-----	-----		
2,3,7,8-TCDD	25:07	2.78e6	3.84e6	3.68e5	5.21e5	-----	-----	0.72	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:11	2.54e7	1.75e7	6.73e6	4.66e6	-----	-----	1.45	
2,3,4,7,8-PeCDF-13C	31:13	2.42e7	1.67e7	7.82e6	5.30e6	-----	-----	1.44	
1,2,3,7,8-PeCDF	30:12	7.04e6	5.09e6	1.96e6	1.41e6	-----	-----	1.38	
2,3,4,7,8-PeCDF	31:14	7.17e6	5.27e6	2.35e6	1.72e6	-----	-----	1.36	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	2.98e7	2.00e7	9.12e6	6.06e6	-----	-----	1.49	
1,2,3,7,8-PeCDD	31:32	5.38e6	9.50e6	1.80e6	3.18e6	-----	-----	0.57	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:53	7.23e6	1.52e7	2.88e6	6.20e6	-----	-----	0.47	
1,2,3,6,7,8-HxCDF-13C	33:59	8.18e6	1.68e7	3.15e6	6.52e6	-----	-----	0.49	
2,3,4,6,7,8-HxCDF-13C	34:28	7.26e6	1.51e7	2.92e6	6.05e6	-----	-----	0.48	
1,2,3,7,8,9-HxCDF-13C	35:09	5.61e6	1.18e7	2.17e6	4.54e6	-----	-----	0.47	
1,2,3,4,7,8-HxCDF	33:54	4.36e6	3.75e6	1.74e6	1.52e6	-----	-----	1.16	
1,2,3,6,7,8-HxCDF	34:00	4.77e6	4.15e6	1.89e6	1.64e6	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	34:29	4.49e6	3.84e6	1.89e6	1.63e6	-----	-----	1.17	
1,2,3,7,8,9-HxCDF	35:09	3.24e6	2.64e6	1.25e6	1.03e6	-----	-----	1.23	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR15 (L)
Filename	L230610A_06	GC Column ID	US3225411H
Analyzed	06/10/2023 14:39	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:34	1.90e7	1.59e7	7.66e6	6.61e6	-----	-----	1.20	
1,2,3,6,7,8-HxCDD-13C	34:39	2.04e7	1.74e7	8.07e6	7.25e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD-13C	34:52	1.99e7	1.66e7	8.49e6	6.94e6	-----	-----	1.20	
1,2,3,4,7,8-HxCDD	34:35	(M)5.74e6	(M)4.96e6	2.55e6	2.19e6	-----	-----	1.16	
1,2,3,6,7,8-HxCDD	34:40	(M)6.25e6	(M)5.47e6	2.64e6	2.35e6	-----	-----	1.14	
1,2,3,7,8,9-HxCDD	34:53	5.94e6	5.34e6	2.45e6	2.13e6	-----	-----	1.11	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:18	1.55e7	3.57e7	5.67e6	1.34e7	-----	-----	0.43	
1,2,3,4,7,8,9-HpCDF-13C	37:41	1.04e7	2.40e7	3.61e6	8.22e6	-----	-----	0.43	
1,2,3,4,6,7,8-HpCDF	36:19	1.27e7	1.28e7	5.11e6	5.15e6	-----	-----	0.99	
1,2,3,4,7,8,9-HpCDF	37:41	9.01e6	8.91e6	3.03e6	3.02e6	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:12	2.37e7	2.26e7	8.63e6	8.31e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	37:13	1.07e7	1.05e7	4.14e6	3.95e6	-----	-----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:06	5.60e6	6.67e6	1.63e6	2.02e6	-----	-----	0.84	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:54	2.47e7	3.06e7	7.62e6	9.32e6	-----	-----	0.81	
OCDD	39:55	8.84e6	1.06e7	2.65e6	3.14e6	-----	-----	0.84	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS4-22-171-007	Instrument ID	10MSHR15 (L)
Filename	L230610A_05	GC Column ID	US3225411H
Analyzed	06/10/2023 13:53	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:46	1.99e7	2.82e7	2.70e6	3.77e6	-----	-----	0.71	
2,3,7,8-TCDF	23:48	4.40e6	5.96e6	5.80e5	8.19e5	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:04	2.63e7	3.27e7	3.33e6	4.15e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	25:04	2.89e7	3.57e7	3.72e6	4.65e6	-----	-----	0.81	
2,3,7,8-TCDD-37Cl4	25:06	2.05e7		2.61e6		-----	-----		
2,3,7,8-TCDD	25:06	7.33e6	1.00e7	9.46e5	1.32e6	-----	-----	0.73	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:10	1.64e7	1.12e7	4.24e6	2.95e6	-----	-----	1.46	
2,3,4,7,8-PeCDF-13C	31:13	1.58e7	1.09e7	4.62e6	3.21e6	-----	-----	1.45	
1,2,3,7,8-PeCDF	30:11	1.85e7	1.34e7	4.77e6	3.42e6	-----	-----	1.38	
2,3,4,7,8-PeCDF	31:14	1.96e7	1.41e7	5.96e6	4.29e6	-----	-----	1.39	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	2.00e7	1.33e7	5.92e6	4.04e6	-----	-----	1.50	
1,2,3,7,8-PeCDD	31:32	1.45e7	2.55e7	4.68e6	7.85e6	-----	-----	0.57	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:53	4.81e6	9.95e6	1.92e6	4.10e6	-----	-----	0.48	
1,2,3,6,7,8-HxCDF-13C	33:59	5.16e6	1.08e7	2.01e6	4.30e6	-----	-----	0.48	
2,3,4,6,7,8-HxCDF-13C	34:28	4.60e6	9.63e6	1.85e6	3.78e6	-----	-----	0.48	
1,2,3,7,8,9-HxCDF-13C	35:08	3.42e6	7.20e6	1.30e6	2.86e6	-----	-----	0.47	
1,2,3,4,7,8-HxCDF	33:54	1.19e7	1.04e7	4.74e6	4.26e6	-----	-----	1.14	
1,2,3,6,7,8-HxCDF	34:00	1.28e7	1.12e7	5.07e6	4.41e6	-----	-----	1.14	
2,3,4,6,7,8-HxCDF	34:29	1.17e7	1.05e7	4.73e6	4.08e6	-----	-----	1.12	
1,2,3,7,8,9-HxCDF	35:09	8.28e6	7.08e6	3.18e6	2.80e6	-----	-----	1.17	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS4-22-171-007	Instrument ID	10MSHR15 (L)
Filename	L230610A_05	GC Column ID	US3225411H
Analyzed	06/10/2023 13:53	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:34	1.23e7	1.01e7	5.28e6	4.34e6	-----	-----	1.22	
1,2,3,6,7,8-HxCDD-13C	34:39	1.32e7	1.12e7	5.71e6	4.83e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD-13C	34:52	(M)1.31e7	(M)1.14e7	5.24e6	4.42e6	-----	-----	1.15	
1,2,3,4,7,8-HxCDD	34:35	1.57e7	1.37e7	6.82e6	6.06e6	-----	-----	1.15	
1,2,3,6,7,8-HxCDD	34:40	1.71e7	1.49e7	7.34e6	6.43e6	-----	-----	1.14	
1,2,3,7,8,9-HxCDD	34:52	1.54e7	1.36e7	5.95e6	5.40e6	-----	-----	1.13	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:18	1.03e7	2.30e7	4.04e6	9.21e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	37:40	6.58e6	1.49e7	2.18e6	4.83e6	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	36:19	3.55e7	3.52e7	1.43e7	1.42e7	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	37:41	2.25e7	2.26e7	8.02e6	8.15e6	-----	-----	1.00	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:12	1.50e7	1.42e7	5.68e6	5.37e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	37:13	(M)2.81e7	2.73e7	1.05e7	9.83e6	-----	-----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:06	1.46e7	1.79e7	4.58e6	5.59e6	-----	-----	0.82	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:53	1.53e7	1.89e7	4.59e6	5.74e6	-----	-----	0.81	
OCDD	39:54	2.25e7	2.67e7	6.92e6	8.16e6	-----	-----	0.84	

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS5-22-171-008	Instrument ID	10MSHR15 (L)
Filename	L230610A_04	GC Column ID	US3225411H
Analyzed	06/10/2023 13:10	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:49	3.31e7	4.68e7	4.66e6	6.46e6	-----	-----	0.71	
2,3,7,8-TCDF	23:51	3.83e7	5.15e7	5.52e6	7.51e6	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:07	4.00e7	4.94e7	5.71e6	7.08e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	25:07	4.88e7	6.06e7	6.87e6	8.41e6	-----	-----	0.81	
2,3,7,8-TCDD-37Cl4	25:09	1.77e8		2.40e7		-----	-----		
2,3,7,8-TCDD	25:09	6.36e7	8.80e7	8.62e6	1.18e7	-----	-----	0.72	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:12	3.07e7	2.10e7	8.30e6	5.83e6	-----	-----	1.46	
2,3,4,7,8-PeCDF-13C	31:15	2.99e7	2.07e7	9.57e6	6.38e6	-----	-----	1.44	
1,2,3,7,8-PeCDF	30:13	1.80e8	1.27e8	4.91e7	3.44e7	-----	-----	1.42	
2,3,4,7,8-PeCDF	31:15	1.96e8	1.38e8	6.28e7	4.35e7	-----	-----	1.42	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	3.82e7	2.51e7	1.25e7	8.28e6	-----	-----	1.52	
1,2,3,7,8-PeCDD	31:33	1.40e8	2.48e8	4.68e7	8.20e7	-----	-----	0.56	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:55	1.02e7	2.15e7	4.31e6	9.00e6	-----	-----	0.47	
1,2,3,6,7,8-HxCDF-13C	34:01	1.14e7	2.34e7	4.49e6	9.04e6	-----	-----	0.49	
2,3,4,6,7,8-HxCDF-13C	34:29	1.06e7	2.18e7	4.32e6	9.25e6	-----	-----	0.48	
1,2,3,7,8,9-HxCDF-13C	35:09	8.46e6	1.76e7	3.69e6	7.58e6	-----	-----	0.48	
1,2,3,4,7,8-HxCDF	33:55	1.30e8	1.13e8	5.68e7	4.91e7	-----	-----	1.14	
1,2,3,6,7,8-HxCDF	34:02	1.38e8	1.20e8	5.52e7	4.71e7	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	34:30	1.33e8	1.16e8	5.69e7	5.01e7	-----	-----	1.15	
1,2,3,7,8,9-HxCDF	35:10	1.01e8	8.84e7	4.43e7	3.92e7	-----	-----	1.14	

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Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS5-22-171-008	Instrument ID	10MSHR15 (L)
Filename	L230610A_04	GC Column ID	US3225411H
Analyzed	06/10/2023 13:10	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:36	2.75e7	2.24e7	1.23e7	9.96e6	-----	-----	1.23	
1,2,3,6,7,8-HxCDD-13C	34:41	2.89e7	2.47e7	1.24e7	1.06e7	-----	-----	1.17	
1,2,3,7,8,9-HxCDD-13C	34:53	2.99e7	2.50e7	1.20e7	1.03e7	-----	-----	1.20	
1,2,3,4,7,8-HxCDD	34:37	1.79e8	1.58e8	7.94e7	6.89e7	-----	-----	1.13	
1,2,3,6,7,8-HxCDD	34:42	1.86e8	1.64e8	7.79e7	6.71e7	-----	-----	1.13	
1,2,3,7,8,9-HxCDD	34:54	1.80e8	1.58e8	7.94e7	7.07e7	-----	-----	1.14	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:20	2.31e7	5.28e7	9.47e6	2.13e7	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	37:42	1.62e7	3.69e7	5.76e6	1.32e7	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	36:21	4.05e8	4.04e8	1.56e8	1.52e8	-----	-----	1.00	
1,2,3,4,7,8,9-HpCDF	37:42	2.82e8	2.78e8	1.09e8	1.06e8	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	3.60e7	3.38e7	1.35e7	1.23e7	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	37:14	3.33e8	3.30e8	1.26e8	1.29e8	-----	-----	1.01	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:08	2.13e8	2.57e8	7.03e7	8.57e7	-----	-----	0.83	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:56	4.40e7	5.32e7	1.31e7	1.56e7	-----	-----	0.83	
OCDD	39:56	3.17e8	3.72e8	9.64e7	1.15e8	-----	-----	0.85	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS1-22-171-033	Instrument ID	10MSHR06 (U)
Filename	U230524B_04	GC Column ID	US1246423H
Analyzed	05/24/2023 12:45	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:16	2.01e7	2.58e7	2.91e6	3.59e6	-----	-----	0.78	
2,3,7,8-TCDF	22:19	(M)1.08e5	(M)1.21e5	1.75e4	2.30e4	-----	-----	0.89	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:31	1.63e7	2.11e7	2.29e6	2.98e6	-----	-----	0.77	
2,3,7,8-TCDD-13C	23:29	1.74e7	2.22e7	2.30e6	3.00e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	23:31	2.22e5		3.21e4		-----	-----		
2,3,7,8-TCDD	23:31	(M)9.57e4	(M)1.17e5	1.68e4	2.32e4	-----	-----	0.82	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.88e7	1.20e7	3.14e6	2.04e6	-----	-----	1.56	
2,3,4,7,8-PeCDF-13C	32:25	1.82e7	1.23e7	4.19e6	2.64e6	-----	-----	1.47	
1,2,3,7,8-PeCDF	30:53	4.27e5	2.89e5	6.83e4	5.04e4	-----	-----	1.48	
2,3,4,7,8-PeCDF	32:25	4.63e5	2.95e5	1.08e5	6.98e4	-----	-----	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	1.38e7	9.15e6	3.26e6	2.09e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	32:51	2.28e5	3.29e5	5.49e4	7.39e4	-----	-----	0.69	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:50	8.23e6	1.59e7	2.88e6	5.47e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:57	9.65e6	1.85e7	2.91e6	5.69e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:31	8.64e6	1.70e7	2.86e6	5.66e6	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:16	7.56e6	(M)1.44e7	2.60e6	5.02e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:51	3.63e5	2.94e5	1.28e5	1.02e5	-----	-----	1.24	
1,2,3,6,7,8-HxCDF	35:58	3.99e5	3.13e5	1.19e5	1.12e5	-----	-----	1.27	
2,3,4,6,7,8-HxCDF	36:31	(M)4.25e5	(M)3.35e5	1.51e5	1.20e5	-----	-----	1.27	
1,2,3,7,8,9-HxCDF	37:16	(M)3.07e5	(M)2.76e5	1.08e5	9.90e4	-----	-----	1.11	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS1-22-171-033	Instrument ID	10MSHR06 (U)
Filename	U230524B_04	GC Column ID	US1246423H
Analyzed	05/24/2023 12:45	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:39	(M)1.22e7	9.65e6	4.28e6	3.28e6	-----	-----	1.26	
1,2,3,6,7,8-HxCDD-13C	36:44	(M)1.38e7	1.13e7	4.57e6	3.60e6	-----	-----	1.22	
1,2,3,7,8,9-HxCDD-13C	36:59	(M)1.45e7	(M)1.19e7	4.70e6	3.69e6	-----	-----	1.22	
1,2,3,4,7,8-HxCDD	36:39	3.23e5	2.45e5	1.20e5	8.74e4	-----	-----	1.32	
1,2,3,6,7,8-HxCDD	36:45	3.34e5	2.86e5	1.03e5	9.88e4	-----	-----	1.17	
1,2,3,7,8,9-HxCDD	36:59	2.83e5	2.64e5	1.10e5	8.29e4	-----	-----	1.07	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:32	(M)9.15e6	(M)2.02e7	3.07e6	6.87e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:52	7.34e6	1.67e7	2.36e6	5.04e6	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	38:32	4.74e5	4.60e5	1.65e5	1.67e5	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:53	(M)3.63e5	3.50e5	1.05e5	1.07e5	-----	-----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	(M)1.27e7	1.23e7	4.17e6	3.95e6	-----	-----	1.03	
1,2,3,4,6,7,8-HpCDD	39:26	3.48e5	(M)3.35e5	1.04e5	1.05e5	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:19	4.56e5	5.33e5	1.17e5	1.39e5	-----	-----	0.86	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:07	(M)1.95e7	(M)2.22e7	5.02e6	5.68e6	-----	-----	0.88	
OCDD	42:07	4.61e5	5.60e5	1.13e5	1.50e5	-----	-----	0.82	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS2-22-171-006	Instrument ID	10MSHR06 (U)
Filename	U230524B_03	GC Column ID	US1246423H
Analyzed	05/24/2023 12:00	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:17	2.21e7	2.89e7	3.17e6	4.14e6	-----	-----	0.76	
2,3,7,8-TCDF	22:19	4.11e5	5.22e5	5.89e4	7.05e4	-----	-----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:32	1.74e7	2.21e7	2.45e6	3.17e6	-----	-----	0.79	
2,3,7,8-TCDD-13C	23:30	1.87e7	2.40e7	2.54e6	3.25e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	23:33	8.59e5		1.12e5		-----	-----		
2,3,7,8-TCDD	23:33	3.60e5	4.82e5	4.95e4	7.55e4	-----	-----	0.75	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.96e7	1.30e7	3.25e6	2.10e6	-----	-----	1.51	
2,3,4,7,8-PeCDF-13C	32:25	(M)2.00e7	(M)1.32e7	4.42e6	2.84e6	-----	-----	1.52	
1,2,3,7,8-PeCDF	30:54	1.81e6	1.16e6	3.00e5	1.97e5	-----	-----	1.57	
2,3,4,7,8-PeCDF	32:26	1.93e6	1.24e6	4.48e5	3.00e5	-----	-----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	(M)1.56e7	(M)1.01e7	3.53e6	2.26e6	-----	-----	1.54	
1,2,3,7,8-PeCDD	32:52	8.88e5	1.48e6	1.86e5	3.38e5	-----	-----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:50	9.00e6	1.76e7	2.99e6	5.98e6	-----	-----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:58	1.00e7	1.92e7	2.94e6	5.67e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:31	(M)9.55e6	(M)1.84e7	3.02e6	6.03e6	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:16	(M)8.02e6	(M)1.49e7	2.46e6	4.97e6	-----	-----	0.54	
1,2,3,4,7,8-HxCDF	35:51	1.67e6	1.31e6	5.43e5	4.49e5	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:59	1.74e6	1.51e6	5.03e5	4.36e5	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	36:31	1.66e6	1.36e6	5.18e5	4.39e5	-----	-----	1.22	
1,2,3,7,8,9-HxCDF	37:16	1.31e6	1.08e6	4.01e5	3.49e5	-----	-----	1.21	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS2-22-171-006	Instrument ID	10MSHR06 (U)
Filename	U230524B_03	GC Column ID	US1246423H
Analyzed	05/24/2023 12:00	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:39	1.29e7	1.05e7	4.83e6	3.86e6	-----	-----	1.23	
1,2,3,6,7,8-HxCDD-13C	36:44	1.54e7	1.25e7	5.03e6	4.13e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDD-13C	36:59	(M)1.52e7	1.23e7	4.97e6	4.00e6	-----	-----	1.24	
1,2,3,4,7,8-HxCDD	36:40	1.24e6	(M)1.02e6	4.62e5	3.67e5	-----	-----	1.21	
1,2,3,6,7,8-HxCDD	36:45	1.46e6	(M)1.15e6	5.00e5	4.07e5	-----	-----	1.27	
1,2,3,7,8,9-HxCDD	37:00	(M)1.33e6	(M)1.03e6	4.45e5	3.64e5	-----	-----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:32	(M)9.79e6	(M)2.19e7	3.43e6	7.73e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:52	7.53e6	(M)1.65e7	2.27e6	5.30e6	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	38:33	2.03e6	(M)1.96e6	7.24e5	6.81e5	-----	-----	1.04	
1,2,3,4,7,8,9-HpCDF	39:53	1.55e6	(M)1.55e6	4.74e5	4.75e5	-----	-----	0.99	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	(M)1.35e7	1.26e7	4.14e6	3.97e6	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	39:26	1.51e6	1.47e6	4.80e5	4.69e5	-----	-----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:19	(M)1.83e6	(M)2.04e6	4.38e5	5.02e5	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:07	(M)1.96e7	(M)2.17e7	4.68e6	5.35e6	-----	-----	0.90	
OCDD	42:08	(M)1.85e6	(M)2.12e6	4.62e5	5.20e5	-----	-----	0.87	

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Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS3/CPM-22-171-034	Instrument ID	10MSHR06 (U)
Filename	U230524B_02	GC Column ID	US1246423H
Analyzed	05/24/2023 11:09	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:18	1.58e7	2.08e7	2.22e6	2.84e6	-----	-----	0.76	
2,3,7,8-TCDF	22:19	1.50e6	1.80e6	2.12e5	2.55e5	-----	-----	0.83	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:33	1.33e7	1.63e7	1.90e6	2.37e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	23:30	1.43e7	1.85e7	1.92e6	2.53e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	23:32	3.10e6		4.20e5		-----	-----		
2,3,7,8-TCDD	23:33	1.43e6	1.90e6	2.18e5	2.75e5	-----	-----	0.75	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:53	1.72e7	(M)1.18e7	2.93e6	1.93e6	-----	-----	1.46	
2,3,4,7,8-PeCDF-13C	32:26	1.68e7	1.09e7	3.68e6	2.41e6	-----	-----	1.55	
1,2,3,7,8-PeCDF	30:55	7.44e6	4.94e6	1.19e6	7.85e5	-----	-----	1.51	
2,3,4,7,8-PeCDF	32:27	7.53e6	5.18e6	1.60e6	1.08e6	-----	-----	1.45	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:51	1.31e7	8.63e6	2.92e6	1.92e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	32:52	3.67e6	6.06e6	8.47e5	1.40e6	-----	-----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:51	8.36e6	1.59e7	2.60e6	5.26e6	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:58	9.34e6	1.87e7	2.79e6	5.45e6	-----	-----	0.50	
2,3,4,6,7,8-HxCDF-13C	36:31	8.79e6	1.69e7	2.94e6	5.72e6	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:16	(M)7.52e6	(M)1.47e7	2.48e6	4.94e6	-----	-----	0.51	
1,2,3,4,7,8-HxCDF	35:52	7.09e6	5.72e6	2.22e6	1.91e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDF	35:59	7.83e6	6.14e6	2.35e6	1.80e6	-----	-----	1.28	
2,3,4,6,7,8-HxCDF	36:32	7.64e6	6.23e6	2.52e6	2.05e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDF	37:17	6.05e6	4.70e6	2.00e6	1.56e6	-----	-----	1.29	

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Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS3/CPM-22-171-034	Instrument ID	10MSHR06 (U)
Filename	U230524B_02	GC Column ID	US1246423H
Analyzed	05/24/2023 11:09	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:40	(M)1.27e7	1.00e7	4.61e6	3.68e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:45	(M)1.49e7	1.18e7	4.83e6	3.91e6	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	37:00	(M)1.56e7	(M)1.25e7	4.70e6	3.80e6	-----	-----	1.25	
1,2,3,4,7,8-HxCDD	36:41	5.79e6	4.72e6	1.95e6	1.55e6	-----	-----	1.23	
1,2,3,6,7,8-HxCDD	36:46	6.79e6	5.44e6	2.10e6	1.69e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD	37:01	6.73e6	5.51e6	1.97e6	1.60e6	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:33	9.66e6	2.11e7	3.28e6	7.12e6	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:53	7.67e6	1.62e7	2.25e6	4.92e6	-----	-----	0.47	
1,2,3,4,6,7,8-HpCDF	38:34	9.20e6	9.06e6	2.87e6	2.95e6	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	39:54	6.89e6	6.84e6	2.01e6	1.97e6	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	(M)1.33e7	1.27e7	4.15e6	3.90e6	-----	-----	1.04	
1,2,3,4,6,7,8-HpCDD	39:27	6.59e6	6.26e6	2.08e6	1.97e6	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:20	8.25e6	9.09e6	1.95e6	2.14e6	-----	-----	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:08	1.88e7	2.02e7	4.52e6	5.18e6	-----	-----	0.93	
OCDD	42:09	8.43e6	9.54e6	2.10e6	2.32e6	-----	-----	0.88	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS4-22-171-007	Instrument ID	10MSHR06 (U)
Filename	U230524B_06	GC Column ID	US1246423H
Analyzed	05/24/2023 14:27	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:16	1.45e7	1.90e7	2.02e6	2.78e6	-----	-----	0.77	
2,3,7,8-TCDF	22:18	5.13e6	6.70e6	7.17e5	9.17e5	-----	-----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:31	1.13e7	1.41e7	1.67e6	2.06e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	23:29	1.22e7	1.58e7	1.66e6	2.13e6	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	23:31	1.05e7		1.40e6		-----	-----		
2,3,7,8-TCDD	23:30	4.65e6	5.95e6	6.07e5	8.16e5	-----	-----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.40e7	9.32e6	2.33e6	1.61e6	-----	-----	1.50	
2,3,4,7,8-PeCDF-13C	32:25	1.38e7	9.25e6	2.83e6	1.95e6	-----	-----	1.49	
1,2,3,7,8-PeCDF	30:52	2.37e7	1.53e7	3.88e6	2.55e6	-----	-----	1.55	
2,3,4,7,8-PeCDF	32:26	2.52e7	1.66e7	5.59e6	3.55e6	-----	-----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	1.06e7	6.77e6	2.56e6	1.71e6	-----	-----	1.57	
1,2,3,7,8-PeCDD	32:51	1.18e7	1.91e7	2.78e6	4.37e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:50	6.07e6	1.15e7	2.09e6	3.86e6	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:57	6.90e6	1.34e7	2.21e6	4.43e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:31	6.40e6	1.21e7	2.10e6	4.08e6	-----	-----	0.53	
1,2,3,7,8,9-HxCDF-13C	37:16	5.52e6	1.06e7	1.75e6	3.39e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:51	2.09e7	1.69e7	7.13e6	5.79e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDF	35:58	2.25e7	1.85e7	6.90e6	5.68e6	-----	-----	1.21	
2,3,4,6,7,8-HxCDF	36:31	2.15e7	1.73e7	7.66e6	6.14e6	-----	-----	1.24	
1,2,3,7,8,9-HxCDF	37:16	1.74e7	1.38e7	5.67e6	4.50e6	-----	-----	1.26	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS4-22-171-007	Instrument ID	10MSHR06 (U)
Filename	U230524B_06	GC Column ID	US1246423H
Analyzed	05/24/2023 14:27	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:39	8.83e6	7.06e6	3.30e6	2.50e6	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:44	9.87e6	8.09e6	3.38e6	2.75e6	-----	-----	1.22	
1,2,3,7,8,9-HxCDD-13C	36:59	9.47e6	7.99e6	3.30e6	2.66e6	-----	-----	1.19	
1,2,3,4,7,8-HxCDD	36:39	1.61e7	1.33e7	5.48e6	4.57e6	-----	-----	1.21	
1,2,3,6,7,8-HxCDD	36:45	1.79e7	1.47e7	5.92e6	4.89e6	-----	-----	1.21	
1,2,3,7,8,9-HxCDD	37:00	1.64e7	1.38e7	5.25e6	4.37e6	-----	-----	1.19	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:32	6.36e6	1.43e7	2.44e6	5.17e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:52	5.21e6	1.11e7	1.60e6	3.66e6	-----	-----	0.47	
1,2,3,4,6,7,8-HpCDF	38:33	2.60e7	2.56e7	8.83e6	8.79e6	-----	-----	1.02	
1,2,3,4,7,8,9-HpCDF	39:53	2.03e7	1.90e7	6.25e6	5.91e6	-----	-----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	8.46e6	8.27e6	2.79e6	2.72e6	-----	-----	1.02	
1,2,3,4,6,7,8-HpCDD	39:26	1.80e7	(M)1.72e7	6.22e6	6.00e6	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:18	2.58e7	3.04e7	6.64e6	7.71e6	-----	-----	0.85	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:07	1.41e7	1.60e7	3.61e6	4.04e6	-----	-----	0.88	
OCDD	42:08	(M)2.56e7	(M)2.88e7	6.68e6	7.60e6	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS5-22-171-008	Instrument ID	10MSHR06 (U)
Filename	U230524B_05	GC Column ID	US1246423H
Analyzed	05/24/2023 13:43	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:18	1.66e7	2.16e7	2.36e6	3.03e6	-----	-----	0.77	
2,3,7,8-TCDF	22:19	2.73e7	3.75e7	3.94e6	5.17e6	-----	-----	0.73	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:33	1.26e7	1.59e7	1.74e6	2.25e6	-----	-----	0.79	
2,3,7,8-TCDD-13C	23:30	1.44e7	1.87e7	2.00e6	2.57e6	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	23:32	5.91e7		7.99e6		-----	-----		
2,3,7,8-TCDD	23:33	2.61e7	3.44e7	3.51e6	4.54e6	-----	-----	0.76	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:52	1.89e7	1.24e7	3.10e6	1.97e6	-----	-----	1.52	
2,3,4,7,8-PeCDF-13C	32:26	1.71e7	1.11e7	3.99e6	2.55e6	-----	-----	1.53	
1,2,3,7,8-PeCDF	30:54	1.63e8	1.08e8	2.81e7	1.85e7	-----	-----	1.51	
2,3,4,7,8-PeCDF	32:26	1.60e8	1.07e8	3.93e7	2.60e7	-----	-----	1.50	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	1.29e7	8.42e6	3.02e6	1.97e6	-----	-----	1.53	
1,2,3,7,8-PeCDD	32:52	7.17e7	1.15e8	1.78e7	2.96e7	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:51	7.90e6	1.53e7	2.88e6	5.68e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:58	8.66e6	1.74e7	2.71e6	5.34e6	-----	-----	0.50	
2,3,4,6,7,8-HxCDF-13C	36:31	(M)7.97e6	1.54e7	2.63e6	5.40e6	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:16	7.02e6	1.35e7	2.35e6	4.56e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:52	1.35e8	(M)1.06e8	4.56e7	3.72e7	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:59	1.45e8	1.15e8	4.63e7	3.71e7	-----	-----	1.26	
2,3,4,6,7,8-HxCDF	36:32	(M)1.35e8	(M)1.12e8	4.92e7	3.99e7	-----	-----	1.20	
1,2,3,7,8,9-HxCDF	37:17	1.09e8	8.66e7	3.88e7	3.11e7	-----	-----	1.26	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS5-22-171-008	Instrument ID	10MSHR06 (U)
Filename	U230524B_05	GC Column ID	US1246423H
Analyzed	05/24/2023 13:43	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:40	1.13e7	9.09e6	4.33e6	3.38e6	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:45	1.25e7	1.02e7	4.29e6	3.45e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDD-13C	37:00	1.24e7	1.01e7	4.22e6	3.34e6	-----	-----	1.22	
1,2,3,4,7,8-HxCDD	36:41	1.02e8	8.39e7	3.70e7	2.96e7	-----	-----	1.22	
1,2,3,6,7,8-HxCDD	36:46	1.16e8	9.53e7	3.89e7	3.17e7	-----	-----	1.22	
1,2,3,7,8,9-HxCDD	37:01	1.09e8	9.02e7	3.52e7	2.84e7	-----	-----	1.21	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:33	8.12e6	(M)1.79e7	2.94e6	6.50e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:53	(M)6.56e6	1.47e7	2.07e6	4.50e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	38:33	1.66e8	1.62e8	5.56e7	5.56e7	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:54	1.30e8	1.23e8	3.80e7	3.65e7	-----	-----	1.05	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	1.12e7	1.06e7	3.61e6	3.47e6	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	39:27	(M)1.15e8	(M)1.09e8	3.84e7	3.69e7	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:20	1.83e8	2.04e8	4.84e7	5.46e7	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:08	(M)1.78e7	2.12e7	4.87e6	5.59e6	-----	-----	0.84	
OCDD	42:09	1.75e8	1.92e8	4.76e7	5.25e7	-----	-----	0.91	

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Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID		Injected By	SMT
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608A_01	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:06	1.01e8	1.33e8	1.40e7	1.84e7	-----	-----	0.76	
2,3,7,8-TCDF	22:08	9.59e6	1.23e7	1.32e6	1.71e6	-----	-----	0.78	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:20	7.95e7	1.02e8	1.17e7	1.49e7	-----	-----	0.78	
2,3,7,8-TCDD-13C	23:18	8.59e7	1.13e8	1.22e7	1.56e7	-----	-----	0.76	
2,3,7,8-TCDD-37Cl4	23:20	1.85e7		2.47e6		-----	-----		
2,3,7,8-TCDD	23:20	8.77e6	1.11e7	1.15e6	1.45e6	-----	-----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:43	1.08e8	6.88e7	1.74e7	1.11e7	-----	-----	1.57	
2,3,4,7,8-PeCDF-13C	32:17	1.16e8	7.46e7	2.54e7	1.65e7	-----	-----	1.55	
1,2,3,7,8-PeCDF	30:44	4.84e7	3.09e7	7.72e6	4.98e6	-----	-----	1.56	
2,3,4,7,8-PeCDF	32:19	5.51e7	3.68e7	1.19e7	7.71e6	-----	-----	1.50	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	8.87e7	5.68e7	2.10e7	1.35e7	-----	-----	1.56	
1,2,3,7,8-PeCDD	32:45	2.49e7	4.07e7	5.85e6	9.98e6	-----	-----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	5.88e7	1.10e8	1.95e7	3.73e7	-----	-----	0.54	
1,2,3,6,7,8-HxCDF-13C	35:53	6.68e7	1.26e8	1.89e7	3.71e7	-----	-----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:26	5.65e7	1.09e8	1.88e7	3.59e7	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:12	4.89e7	9.58e7	1.56e7	2.97e7	-----	-----	0.51	
1,2,3,4,7,8-HxCDF	35:46	(M)5.19e7	4.23e7	1.66e7	1.35e7	-----	-----	1.23	
1,2,3,6,7,8-HxCDF	35:54	5.49e7	4.55e7	1.66e7	1.30e7	-----	-----	1.21	
2,3,4,6,7,8-HxCDF	36:27	5.10e7	4.22e7	1.67e7	1.38e7	-----	-----	1.21	
1,2,3,7,8,9-HxCDF	37:12	4.08e7	3.35e7	1.30e7	1.05e7	-----	-----	1.22	

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608A_01	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	(M)8.13e7	(M)6.34e7	2.92e7	2.30e7	-----	-----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:40	(M)9.45e7	7.49e7	3.02e7	2.49e7	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:54	(M)9.32e7	7.47e7	3.07e7	2.52e7	-----	-----	1.25	
1,2,3,4,7,8-HxCDD	36:35	3.64e7	(M)3.00e7	1.33e7	1.10e7	-----	-----	1.22	
1,2,3,6,7,8-HxCDD	36:41	4.32e7	(M)3.52e7	1.40e7	1.18e7	-----	-----	1.23	
1,2,3,7,8,9-HxCDD	36:55	4.22e7	(M)3.35e7	1.39e7	1.11e7	-----	-----	1.26	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	4.90e7	1.09e8	1.66e7	3.69e7	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:47	3.90e7	8.45e7	1.19e7	2.61e7	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	38:28	4.89e7	4.76e7	1.61e7	1.59e7	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:48	3.83e7	3.61e7	1.20e7	1.13e7	-----	-----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	(M)6.97e7	(M)6.60e7	2.29e7	2.19e7	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	39:22	3.39e7	3.20e7	1.12e7	1.07e7	-----	-----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	4.73e7	5.25e7	1.25e7	1.38e7	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	1.02e8	1.18e8	2.67e7	3.04e7	-----	-----	0.87	
OCDD	42:03	4.83e7	5.26e7	1.21e7	1.39e7	-----	-----	0.92	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID		Injected By	SM
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608B_01	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:06	6.76e6	8.77e6	8.78e5	1.19e6	-----	-----	0.77	
2,3,7,8-TCDF	22:08	6.52e5	7.96e5	8.88e4	1.03e5	-----	-----	0.82	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:21	5.06e6	6.40e6	6.60e5	8.61e5	-----	-----	0.79	
2,3,7,8-TCDD-13C	23:18	5.65e6	7.03e6	7.16e5	9.16e5	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	23:20	1.22e6		1.44e5		-----	-----		
2,3,7,8-TCDD	23:19	5.75e5	7.46e5	6.78e4	8.88e4	-----	-----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:43	6.58e6	4.16e6	9.58e5	6.41e5	-----	-----	1.58	
2,3,4,7,8-PeCDF-13C	32:17	6.12e6	4.19e6	1.24e6	7.88e5	-----	-----	1.46	
1,2,3,7,8-PeCDF	30:44	2.85e6	1.83e6	4.38e5	2.80e5	-----	-----	1.56	
2,3,4,7,8-PeCDF	32:19	3.20e6	2.07e6	6.54e5	3.84e5	-----	-----	1.54	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	(M)4.66e6	2.94e6	8.92e5	5.99e5	-----	-----	1.58	
1,2,3,7,8-PeCDD	32:44	1.37e6	2.19e6	2.79e5	4.49e5	-----	-----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	2.83e6	5.32e6	8.54e5	1.64e6	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:52	3.54e6	6.77e6	9.11e5	1.76e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:26	3.22e6	(M)6.30e6	8.94e5	1.78e6	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:11	2.88e6	(M)5.55e6	8.05e5	1.47e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:46	(M)2.57e6	2.09e6	8.07e5	6.43e5	-----	-----	1.23	
1,2,3,6,7,8-HxCDF	35:54	3.09e6	2.62e6	8.11e5	6.47e5	-----	-----	1.18	
2,3,4,6,7,8-HxCDF	36:27	2.89e6	(M)2.50e6	8.27e5	6.99e5	-----	-----	1.16	
1,2,3,7,8,9-HxCDF	37:12	2.44e6	(M)1.90e6	6.78e5	5.22e5	-----	-----	1.29	

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Client ID		Injected By	SM
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608B_01	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	(M)4.12e6	3.15e6	1.31e6	1.02e6	-----	-----	1.31	
1,2,3,6,7,8-HxCDD-13C	36:40	(M)5.28e6	4.22e6	1.40e6	1.16e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:54	(M)5.45e6	(M)4.23e6	1.48e6	1.19e6	-----	-----	1.29	
1,2,3,4,7,8-HxCDD	36:34	1.88e6	1.52e6	5.76e5	4.96e5	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:40	2.45e6	2.06e6	7.11e5	5.66e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDD	36:55	2.41e6	1.98e6	6.29e5	5.19e5	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	3.00e6	6.79e6	8.93e5	2.02e6	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	39:47	(M)2.46e6	5.12e6	6.71e5	1.42e6	-----	-----	0.48	
1,2,3,4,6,7,8-HpCDF	38:28	2.96e6	2.93e6	8.87e5	9.45e5	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	39:48	2.36e6	2.33e6	6.83e5	6.59e5	-----	-----	1.02	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	(M)4.27e6	(M)3.95e6	1.23e6	1.09e6	-----	-----	1.08	
1,2,3,4,6,7,8-HpCDD	39:22	2.12e6	2.07e6	6.14e5	5.69e5	-----	-----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	2.99e6	3.33e6	6.95e5	7.65e5	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	(M)6.09e6	(M)6.98e6	1.31e6	1.42e6	-----	-----	0.87	
OCDD	42:03	2.83e6	3.26e6	6.75e5	7.31e5	-----	-----	0.87	

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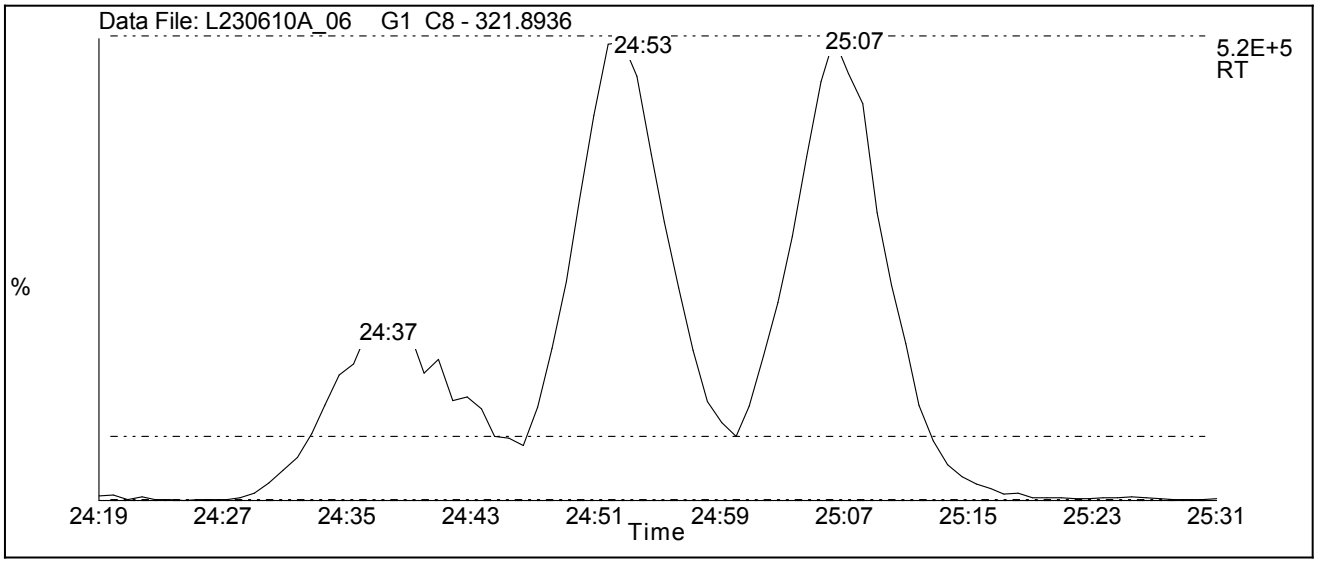
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-036	Injected By:	CVS
Raw Data File:	L230610A_06	Instrument ID:	10MSHR15 (L)
Date Analyzed:	6/10/2023	GC Column	DB-5MS
Time Analyzed:	14:39	GC Column S/N:	US3225411H

Resolution: 13.6%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	18:41	27:00
PeCDF	341.8567	26:52	32:10
HxCDF	373.8207	32:50	35:09
HpCDF	407.7818	36:19	37:41
OCDF	441.7428	40:06	0:00
TCDD	321.8936	20:27	26:43
PeCDD	357.8517	29:05	31:55
HxCDD	391.8127	33:20	34:53
HpCDD	425.7737	36:33	37:13
OCDD	459.7347	39:54	0:00
1234-TCDD-13	331.9367	24:05	0:00
123789-HxCD	401.8559	34:52	0:00

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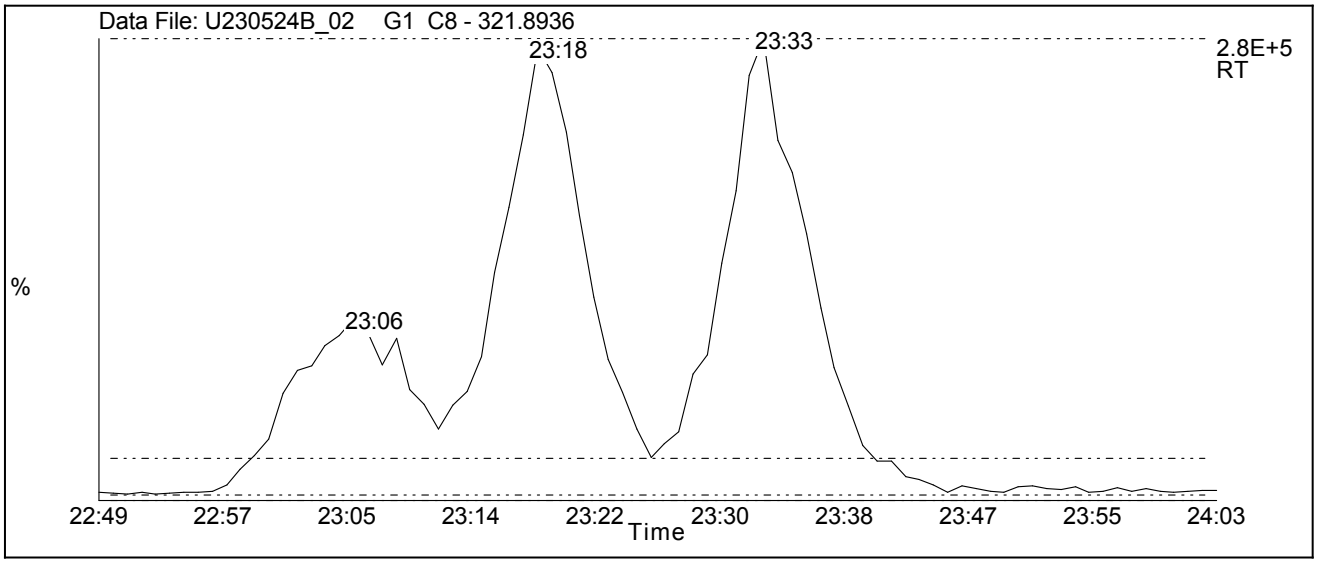
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-034	Injected By:	CVS
Raw Data File:	U230524B_02	Instrument ID:	10MSHR06 (U)
Date Analyzed:	5/24/2023	GC Column	DB-5MS
Time Analyzed:	11:09	GC Column S/N:	US1246423H

Resolution: 7.9%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	17:31	25:25
PeCDF	341.8567	25:21	33:41
HxCDF	373.8207	34:35	37:17
HpCDF	407.7818	38:34	39:54
OCDF	441.7428	42:20	0:00
TCDD	321.8936	19:10	25:06
PeCDD	357.8517	28:54	33:22
HxCDD	391.8127	35:12	37:00
HpCDD	425.7737	38:47	39:27
OCDD	459.7347	42:09	0:00
1234-TCDD-13	331.9367	22:33	0:00
123789-HxCD	401.8559	37:00	0:00

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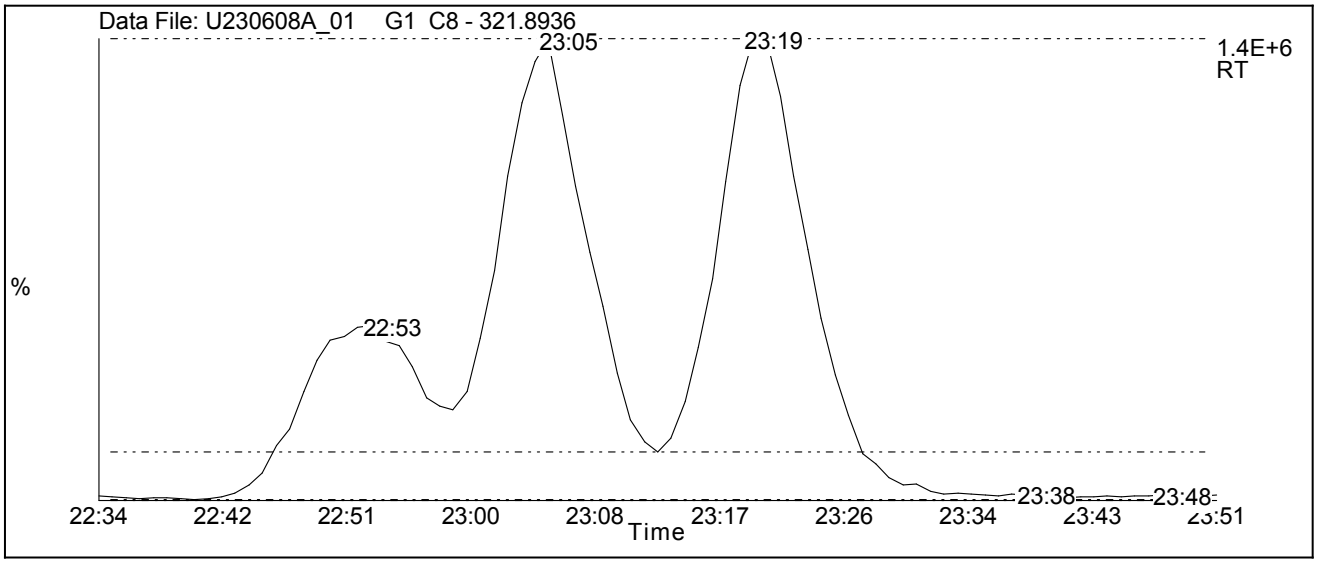
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-036	Injected By:	SMT
Raw Data File:	U230608A_01	Instrument ID:	10MSHR06 (U)
Date Analyzed:	6/8/2023	GC Column	DB-5MS
Time Analyzed:	02:39	GC Column S/N:	US1246423H

Resolution: 10.4%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	17:22	25:10
PeCDF	341.8567	25:07	33:33
HxCDF	373.8207	34:28	37:12
HpCDF	407.7818	38:28	39:48
OCDF	441.7428	42:12	0:00
TCDD	321.8936	19:00	24:51
PeCDD	357.8517	28:37	33:15
HxCDD	391.8127	35:05	36:55
HpCDD	425.7737	38:42	39:22
OCDD	459.7347	42:03	0:00
1234-TCDD-13	331.9367	22:20	0:00
123789-HxCD	401.8559	36:54	0:00

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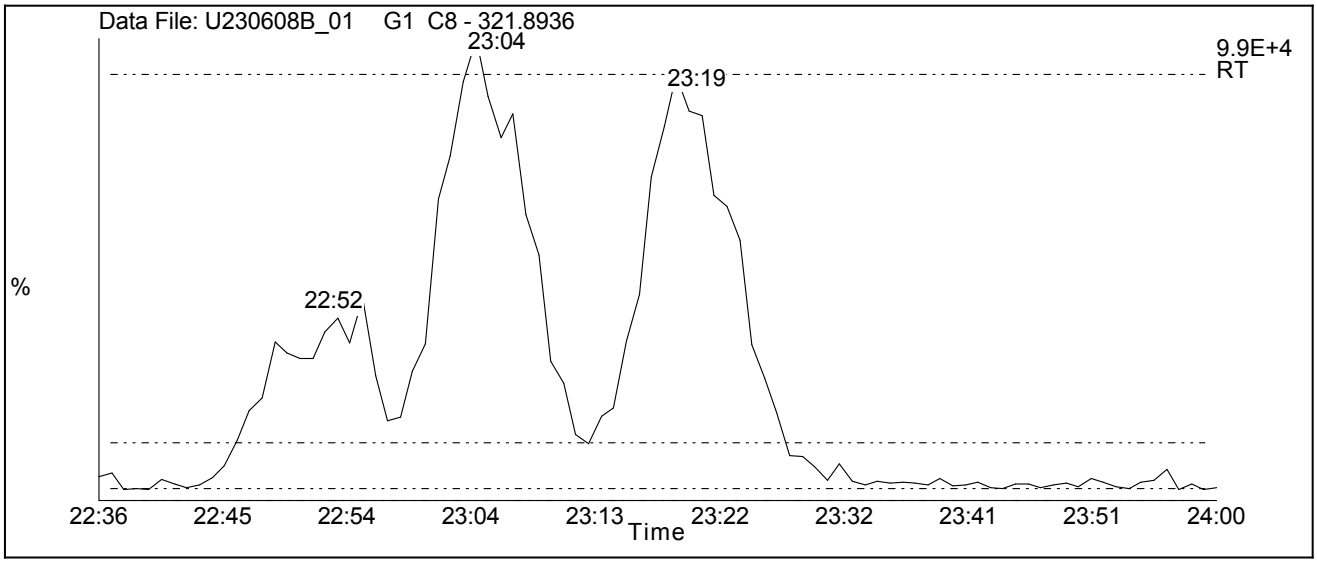
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-036	Injected By:	SM
Raw Data File:	U230608B_01	Instrument ID:	10MSHR06 (U)
Date Analyzed:	6/8/2023	GC Column	DB-5MS
Time Analyzed:	22:04	GC Column S/N:	US1246423H

Resolution: 11.1%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	17:22	25:10
PeCDF	341.8567	25:07	33:33
HxCDF	373.8207	34:28	37:12
HpCDF	407.7818	38:28	39:48
OCDF	441.7428	42:12	0:00
TCDD	321.8936	18:58	24:52
PeCDD	357.8517	28:37	33:15
HxCDD	391.8127	35:05	36:55
HpCDD	425.7737	38:42	39:22
OCDD	459.7347	42:03	0:00
1234-TCDD-13	331.9367	22:20	0:00
123789-HxCD	401.8559	36:54	0:00

REPORT OF LABORATORY ANALYSIS

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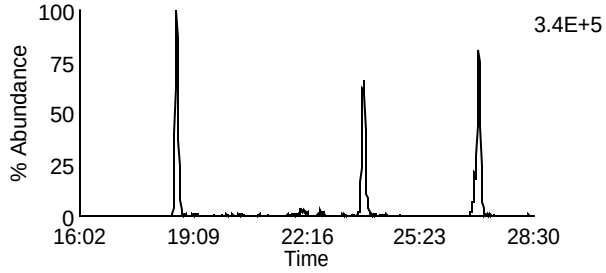
Homologue Group: Tetras

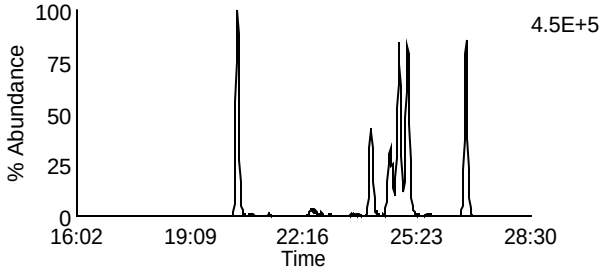
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

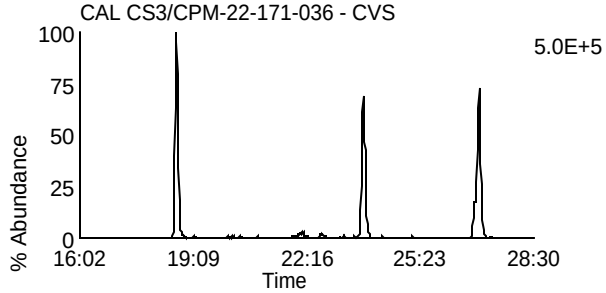
Data File: L230610A_06 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - CVS



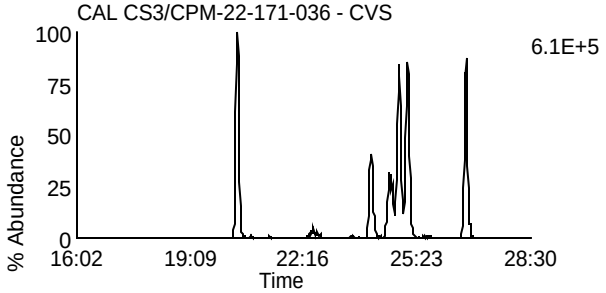
Data File: L230610A_06 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - CVS



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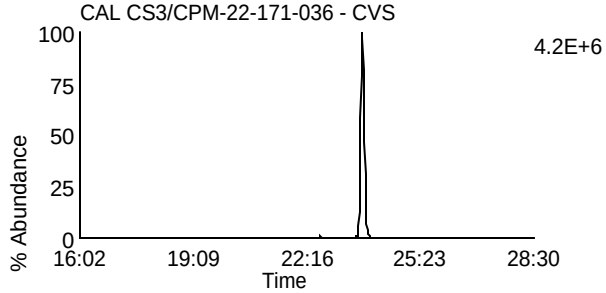
CAL CS3/CPM-22-171-036 - CVS



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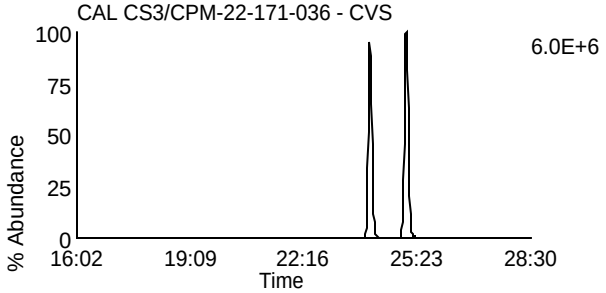
CAL CS3/CPM-22-171-036 - CVS



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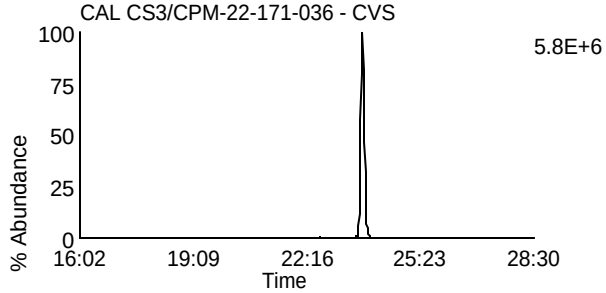
CAL CS3/CPM-22-171-036 - CVS



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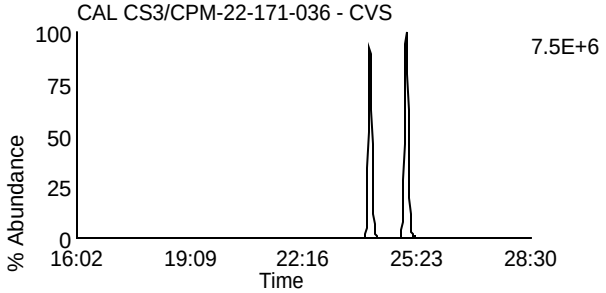
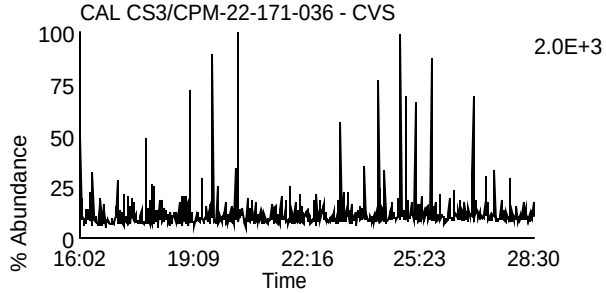
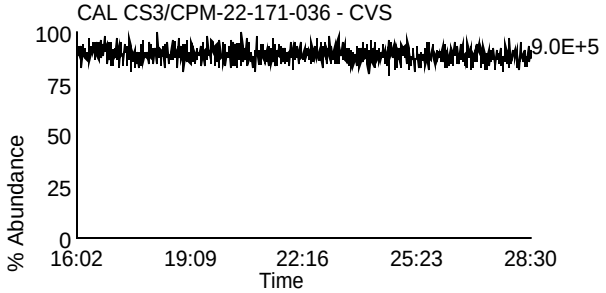
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - CVS



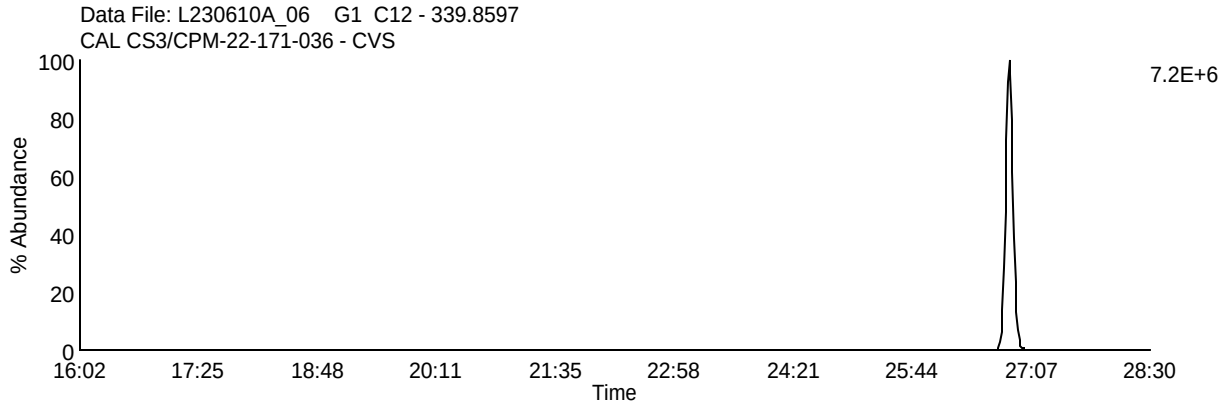
Data File: L230610A_06 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - CVS

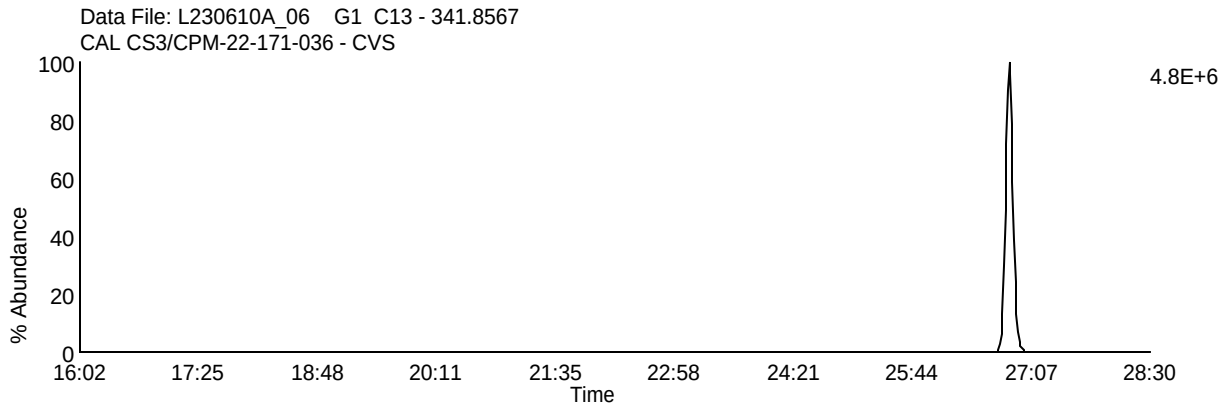


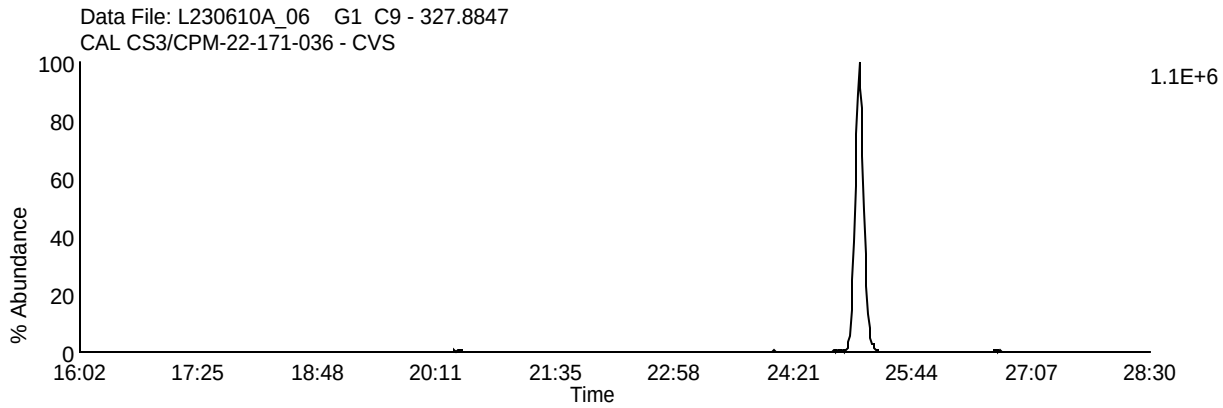
Homologue Group: Penta & Cleanup

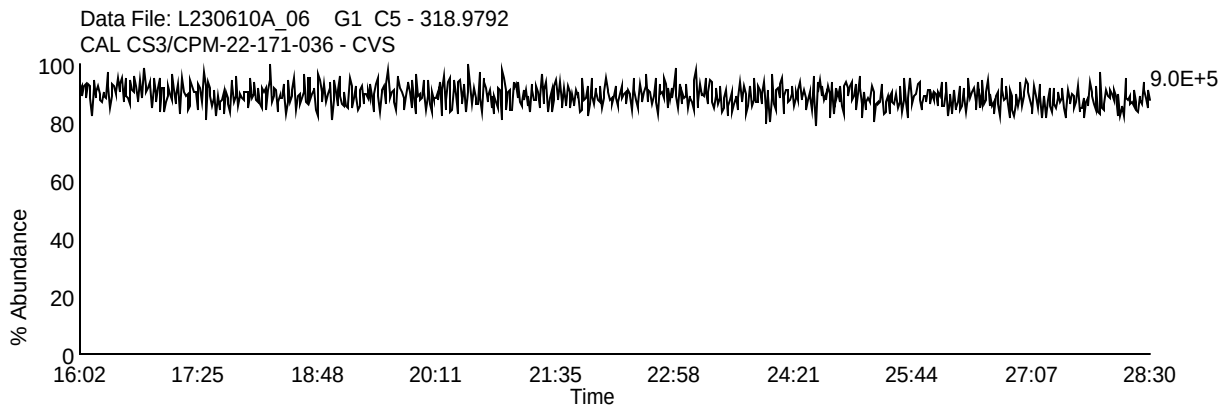
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)







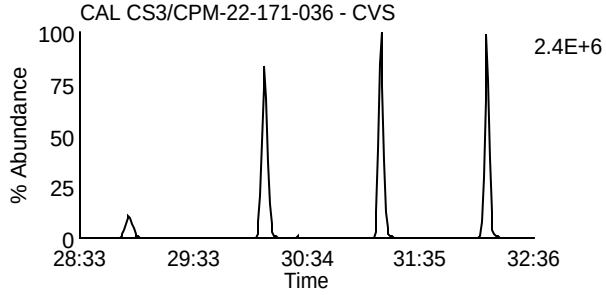


Homologue Group: Pentas

Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

Data File: L230610A_06 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - CVS



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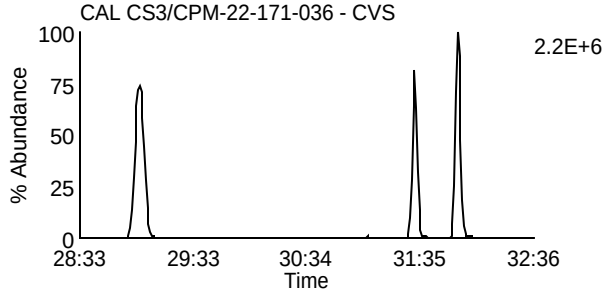
CAL CS3/CPM-22-171-036 - CVS



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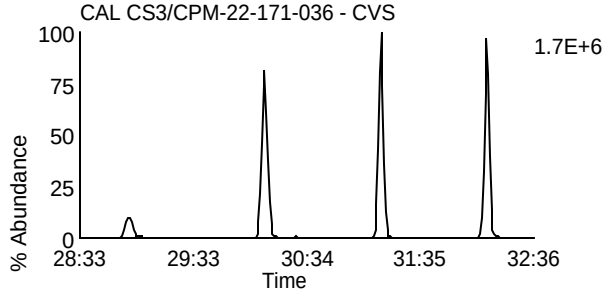
CAL CS3/CPM-22-171-036 - CVS



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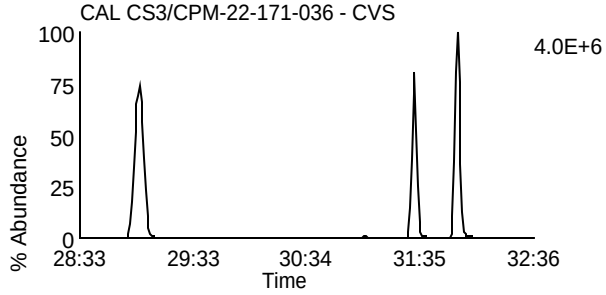
CAL CS3/CPM-22-171-036 - CVS



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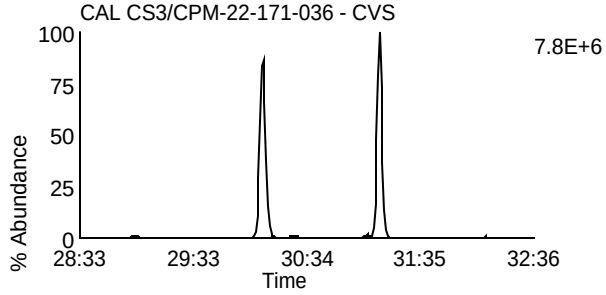
CAL CS3/CPM-22-171-036 - CVS



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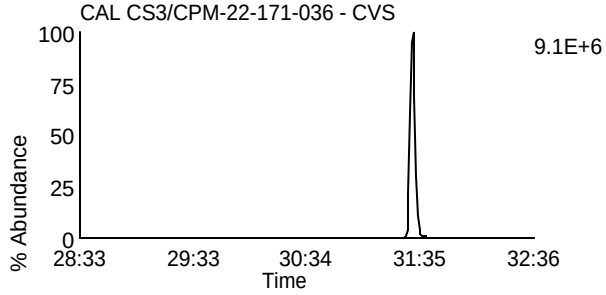
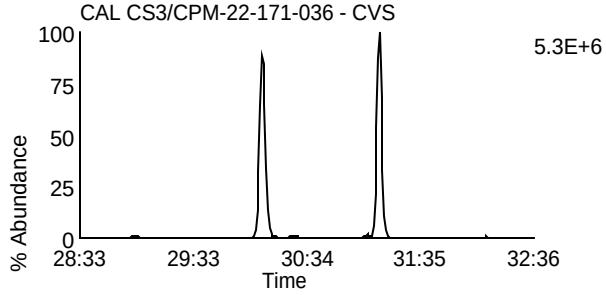
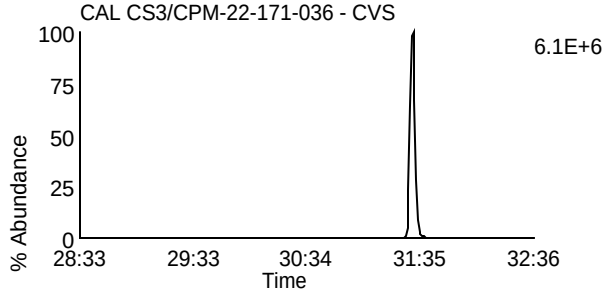
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - CVS



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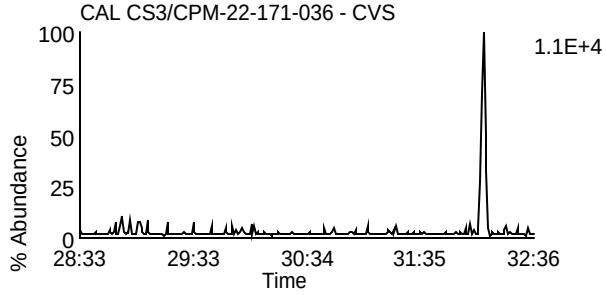
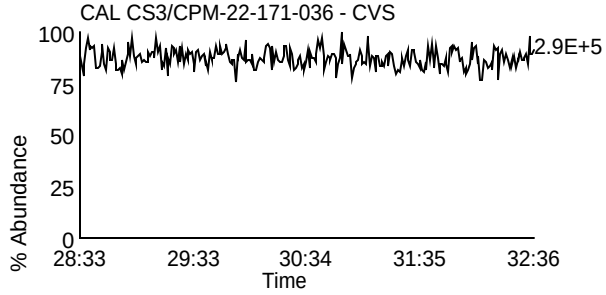
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - CVS

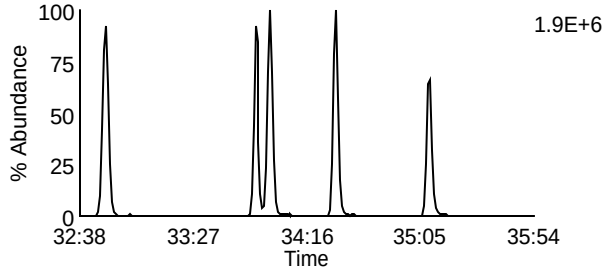


Homologue Group: Hexas

Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

Data File: L230610A_06 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - CVS



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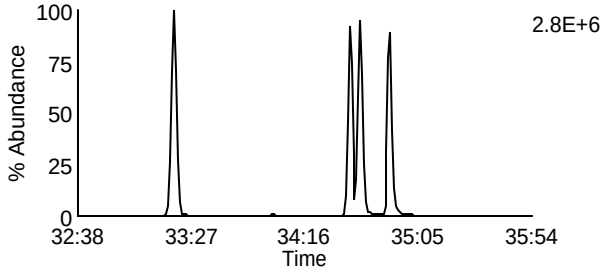
CAL CS3/CPM-22-171-036 - CVS



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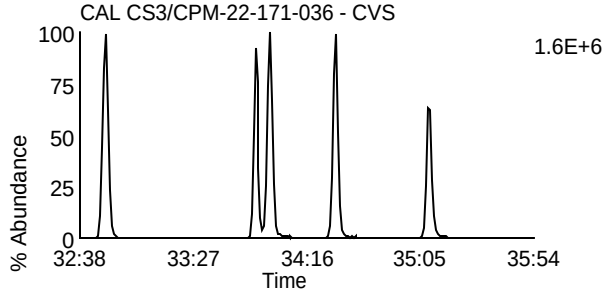
CAL CS3/CPM-22-171-036 - CVS



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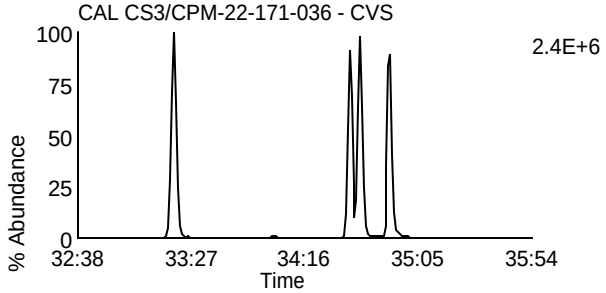
CAL CS3/CPM-22-171-036 - CVS



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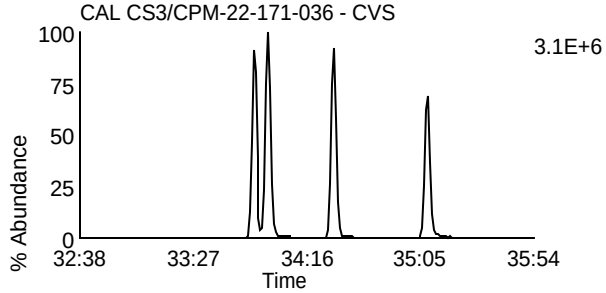
CAL CS3/CPM-22-171-036 - CVS



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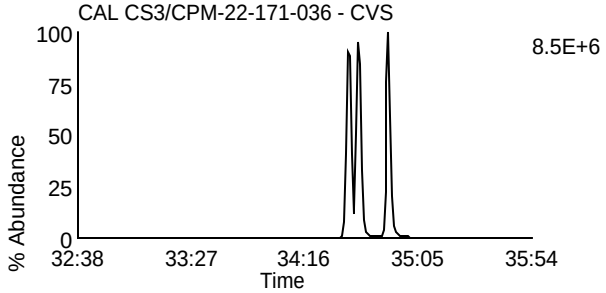
CAL CS3/CPM-22-171-036 - CVS



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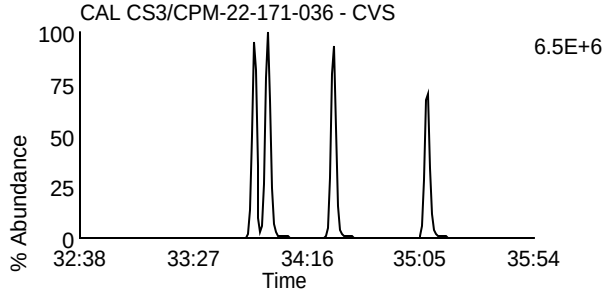
CAL CS3/CPM-22-171-036 - CVS



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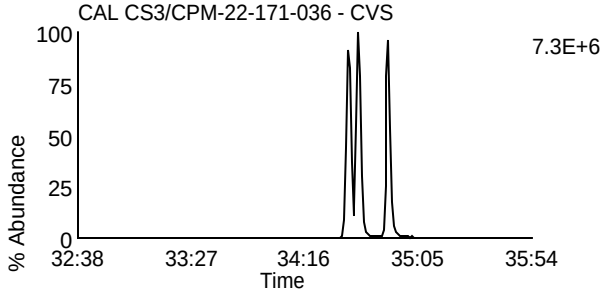
CAL CS3/CPM-22-171-036 - CVS



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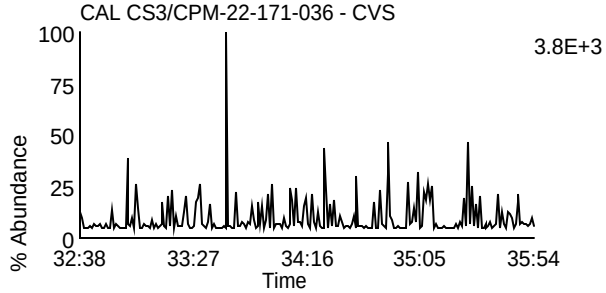
CAL CS3/CPM-22-171-036 - CVS



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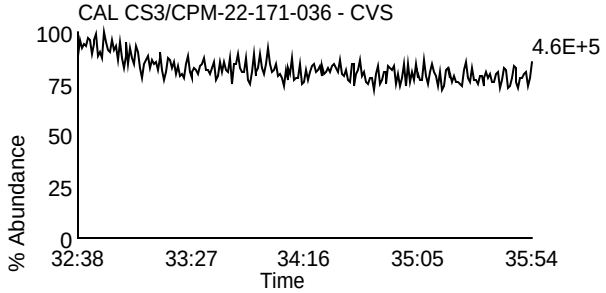
CAL CS3/CPM-22-171-036 - CVS

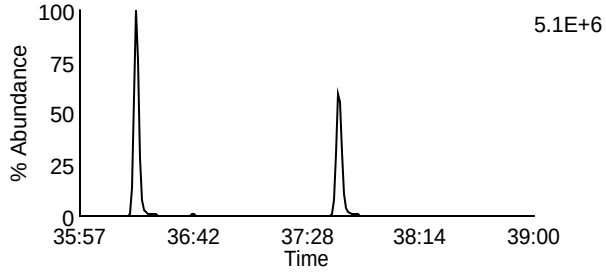


Homologue Group: Heptas

Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

Data File: L230610A_06 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - CVS



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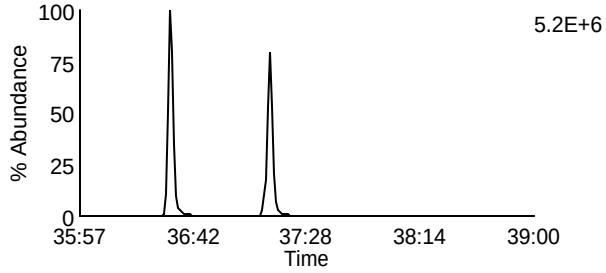
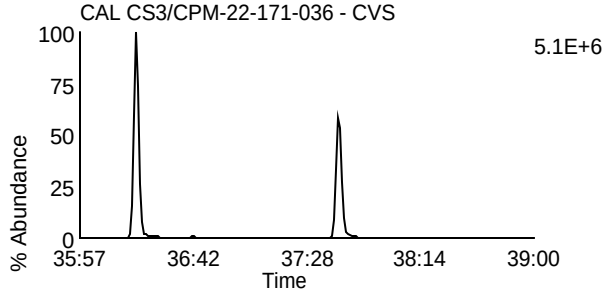
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - CVS



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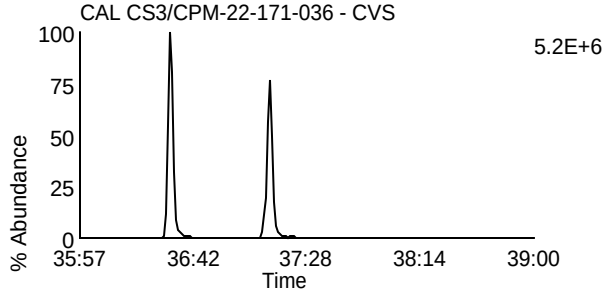
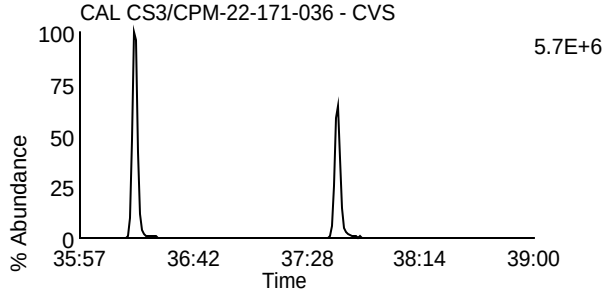
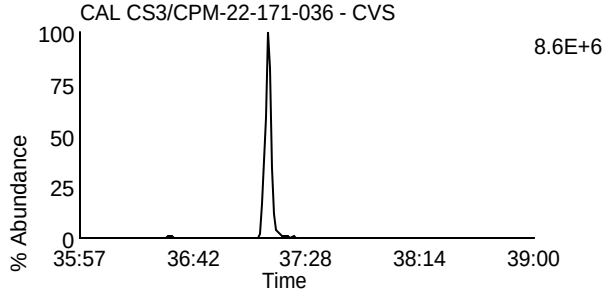
CAL CS3/CPM-22-171-036 - CVS



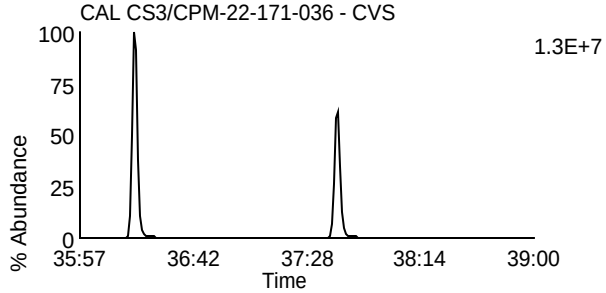
Data File: L230610A_06 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C12 - 437.814
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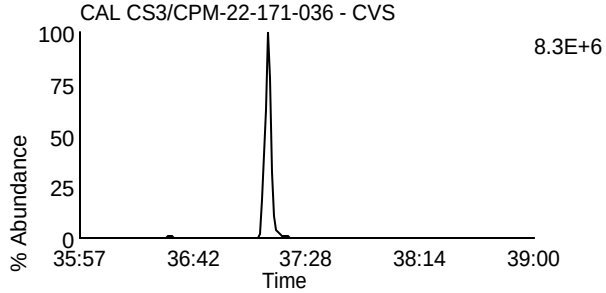
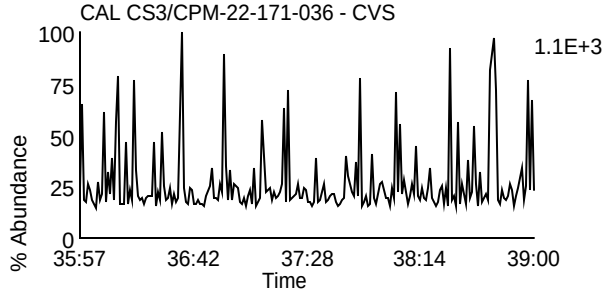
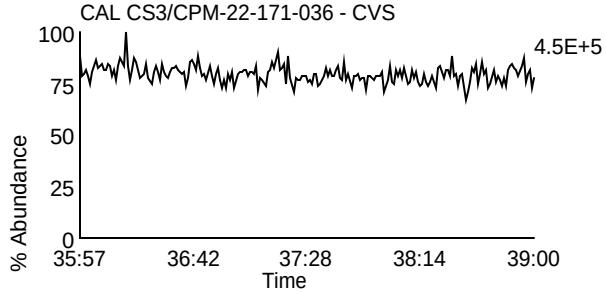


Data File: L230610A_06 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - CVS

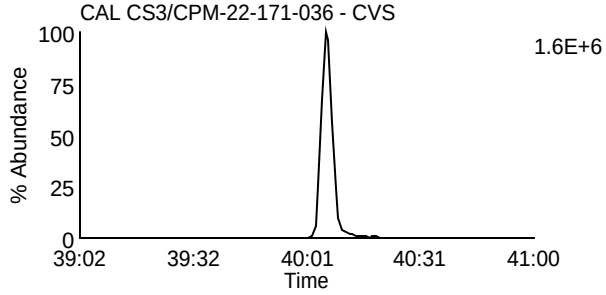


Homologue Group: Octas

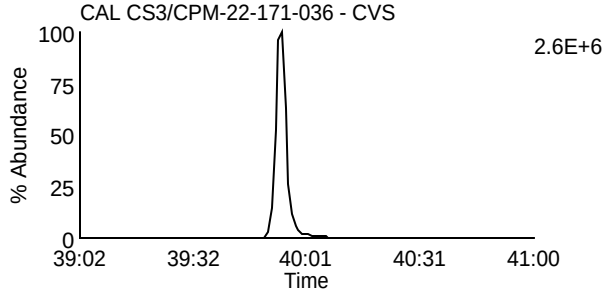
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

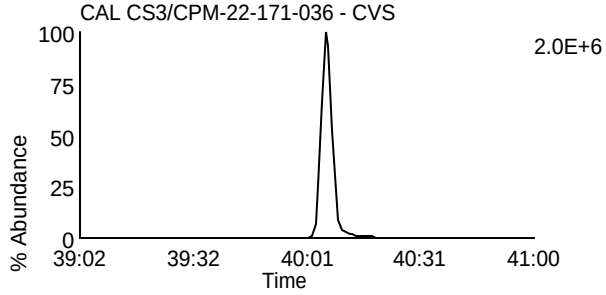
Data File: L230610A_06 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - CVS



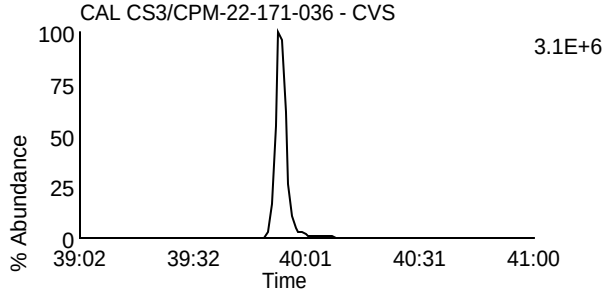
Data File: L230610A_06 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - CVS



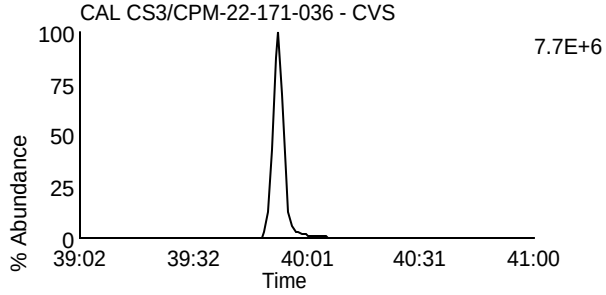
Data File: L230610A_06 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - CVS



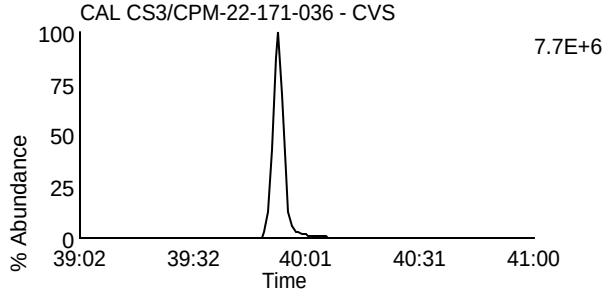
Data File: L230610A_06 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - CVS



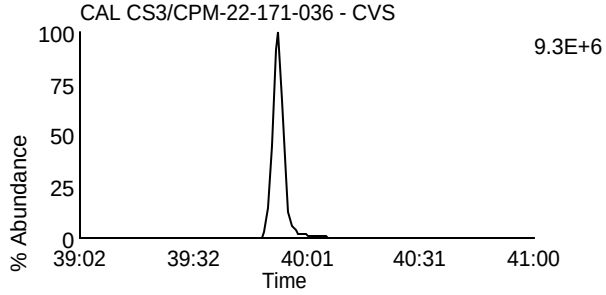
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



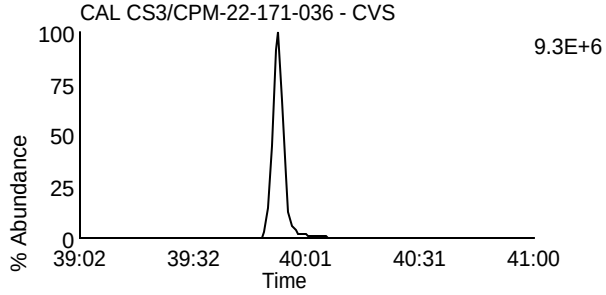
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



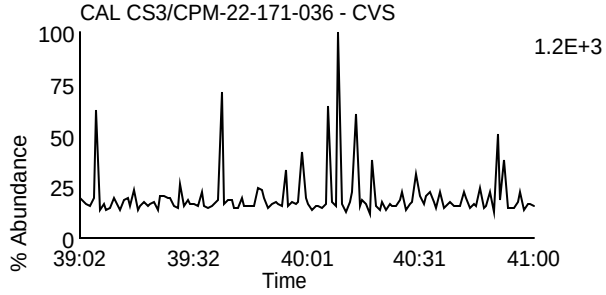
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



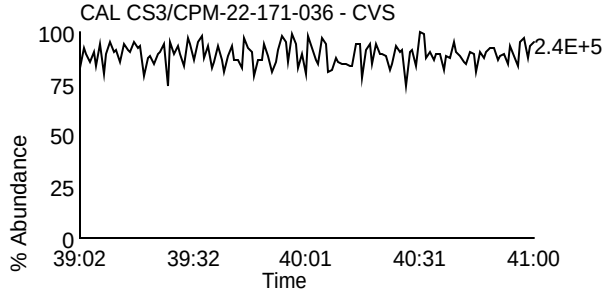
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - CVS

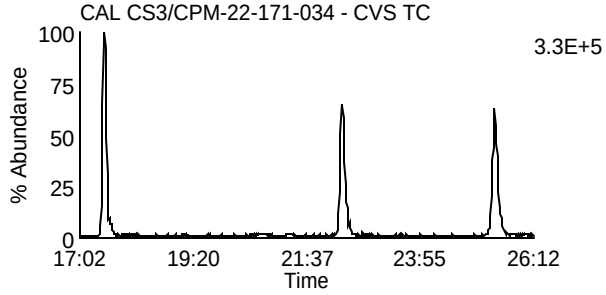


Homologue Group: Tetras

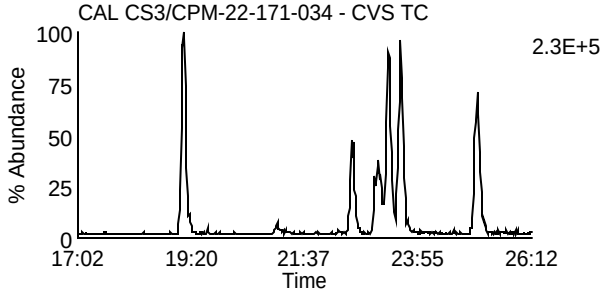
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

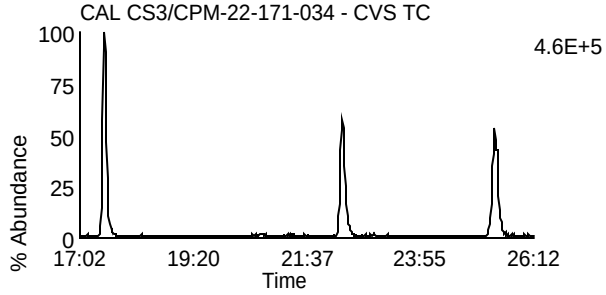
Data File: U230524B_02 G1 C1 - 303.9016
CAL CS3/CPM-22-171-034 - CVS TC



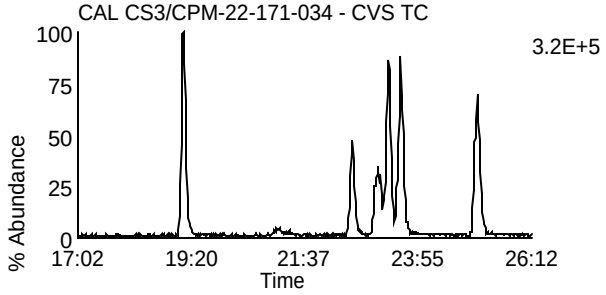
Data File: U230524B_02 G1 C7 - 319.8965
CAL CS3/CPM-22-171-034 - CVS TC



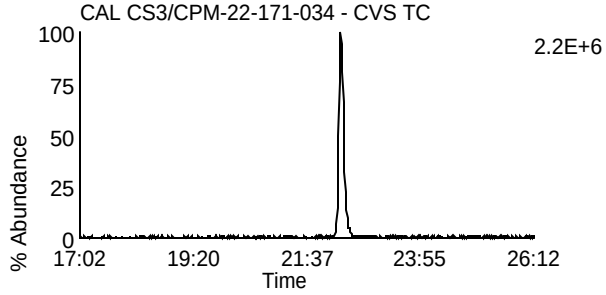
Data File: U230524B_02 G1 C2 - 305.8987
CAL CS3/CPM-22-171-034 - CVS TC



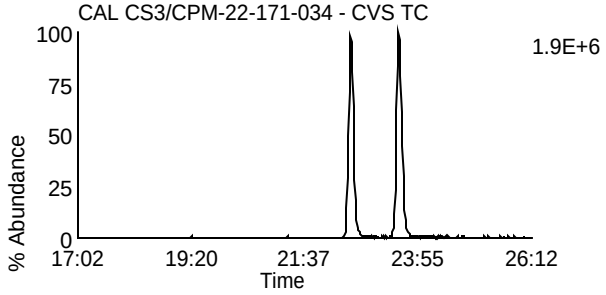
Data File: U230524B_02 G1 C8 - 321.8936
CAL CS3/CPM-22-171-034 - CVS TC



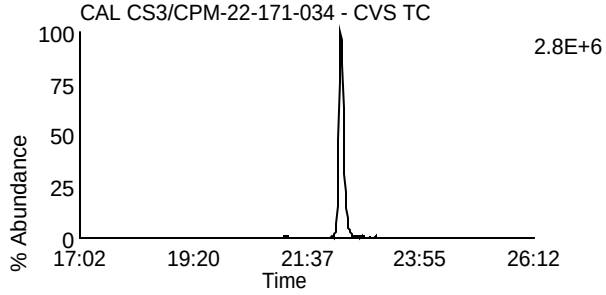
Data File: U230524B_02 G1 C3 - 315.9418
CAL CS3/CPM-22-171-034 - CVS TC



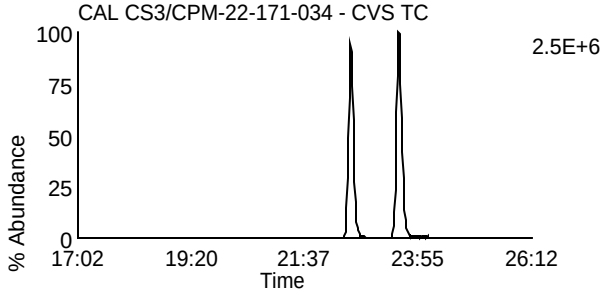
Data File: U230524B_02 G1 C10 - 331.9367
CAL CS3/CPM-22-171-034 - CVS TC



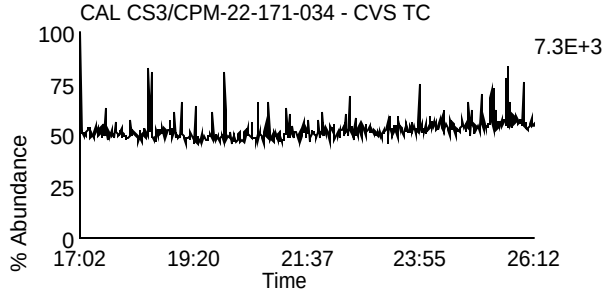
Data File: U230524B_02 G1 C4 - 317.9389
CAL CS3/CPM-22-171-034 - CVS TC



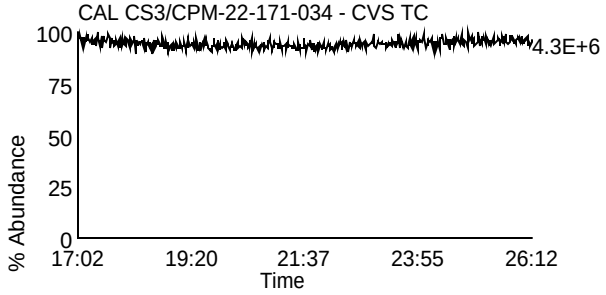
Data File: U230524B_02 G1 C11 - 333.9338
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G1 C14 - 375.8364
CAL CS3/CPM-22-171-034 - CVS TC



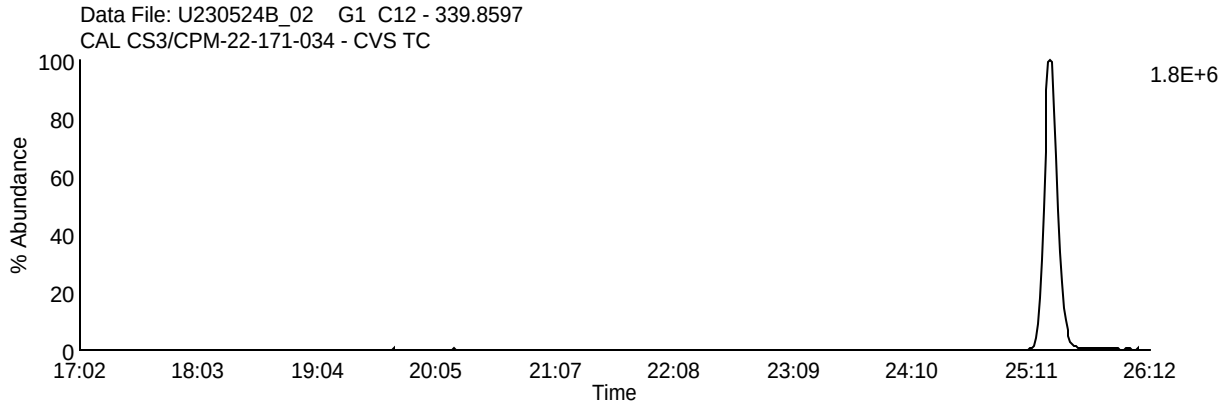
Data File: U230524B_02 G1 C5 - 318.9792
CAL CS3/CPM-22-171-034 - CVS TC

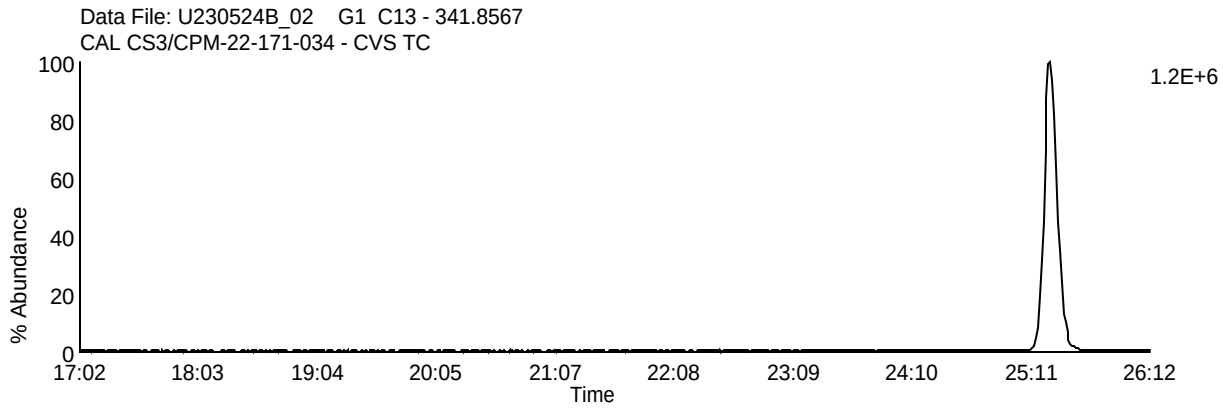


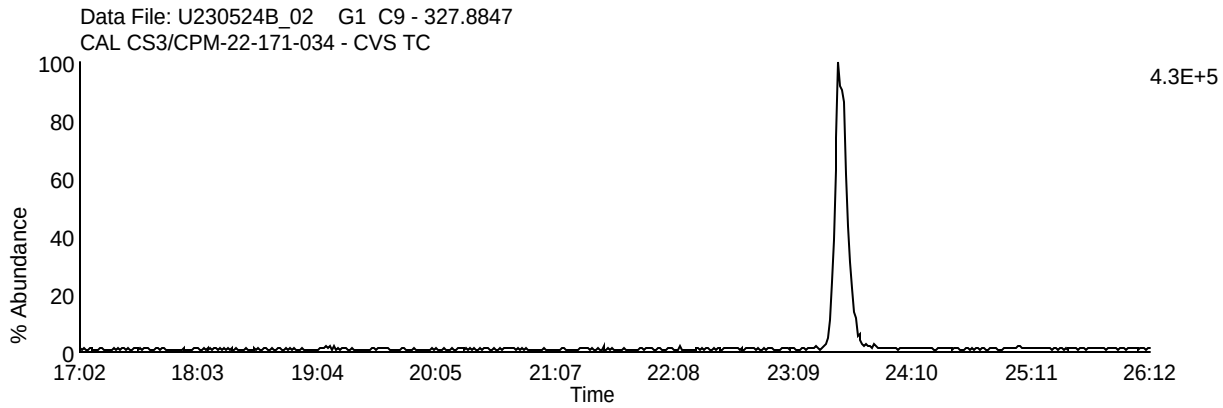
Homologue Group: Penta & Cleanup

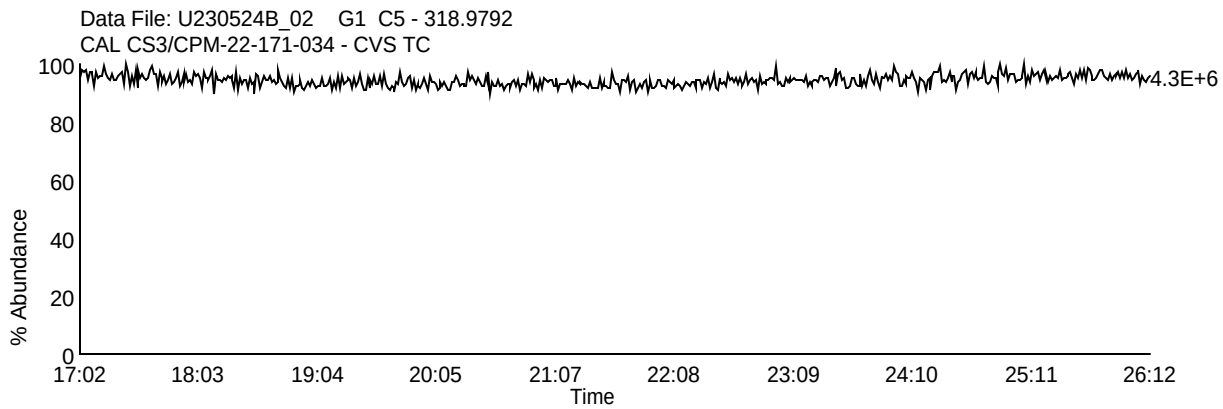
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)







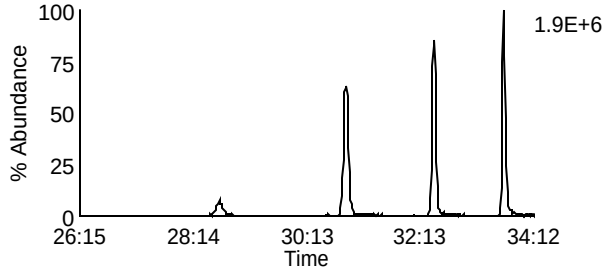


Homologue Group: Pentas

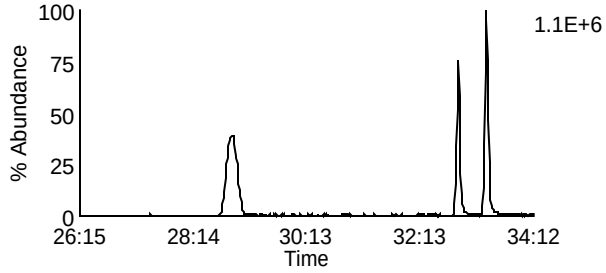
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

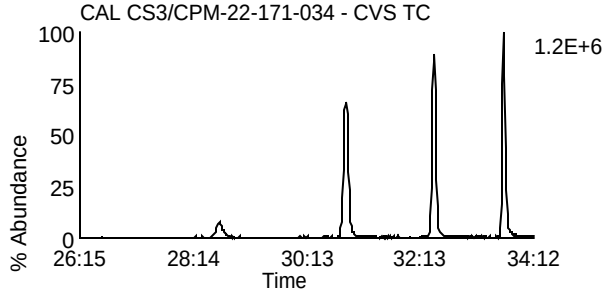
Data File: U230524B_02 G2 C1 - 339.8597
CAL CS3/CPM-22-171-034 - CVS TC



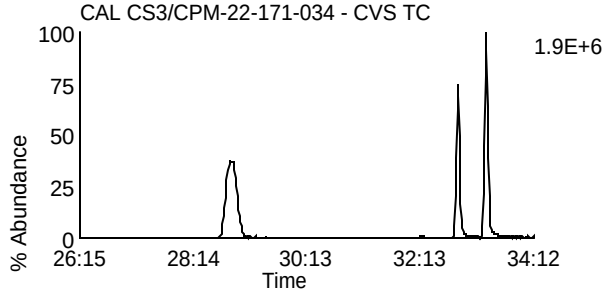
Data File: U230524B_02 G2 C4 - 353.8576
CAL CS3/CPM-22-171-034 - CVS TC



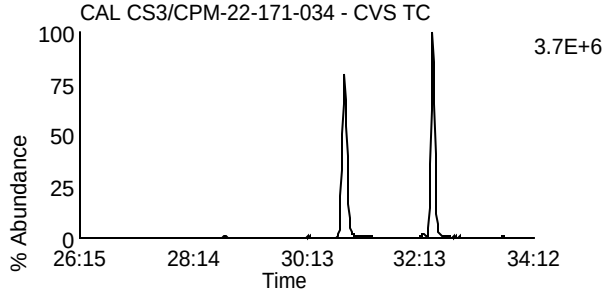
Data File: U230524B_02 G2 C2 - 341.8567
CAL CS3/CPM-22-171-034 - CVS TC



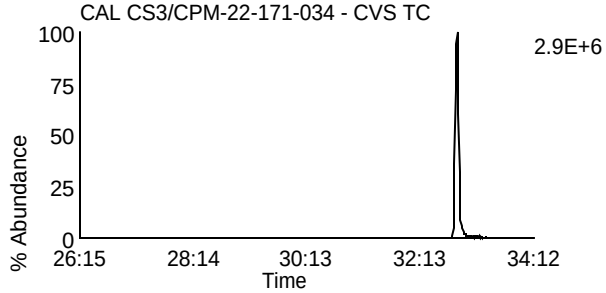
Data File: U230524B_02 G2 C8 - 355.8546
CAL CS3/CPM-22-171-034 - CVS TC



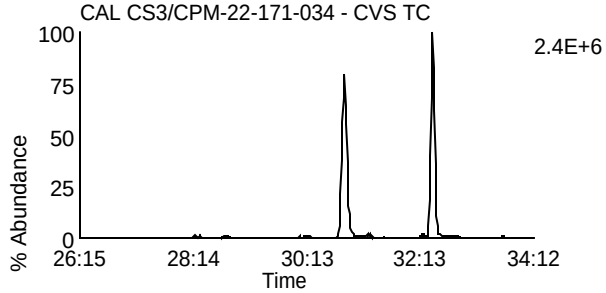
Data File: U230524B_02 G2 C3 - 351.8999
CAL CS3/CPM-22-171-034 - CVS TC



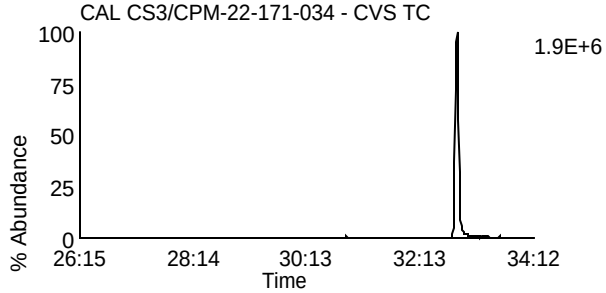
Data File: U230524B_02 G2 C10 - 367.8948
CAL CS3/CPM-22-171-034 - CVS TC



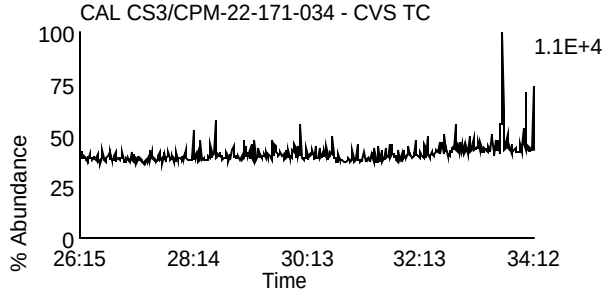
Data File: U230524B_02 G2 C5 - 353.8969
CAL CS3/CPM-22-171-034 - CVS TC



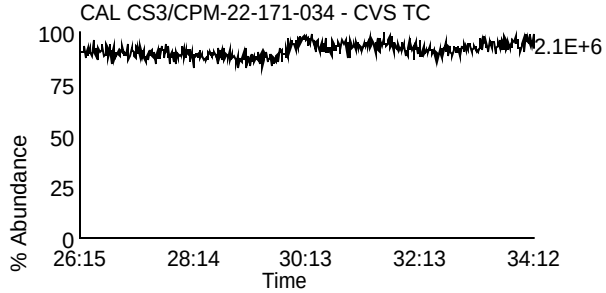
Data File: U230524B_02 G2 C11 - 369.8918
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C12 - 409.7974
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C6 - 354.9792
CAL CS3/CPM-22-171-034 - CVS TC

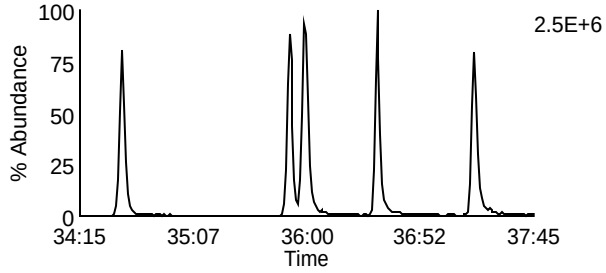


Homologue Group: Hexas

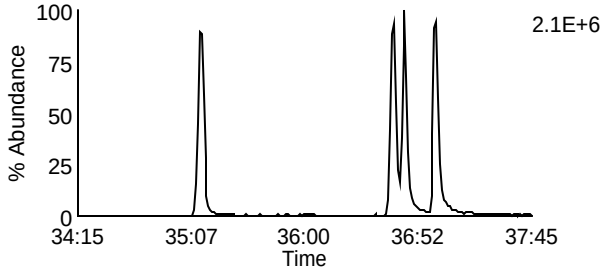
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

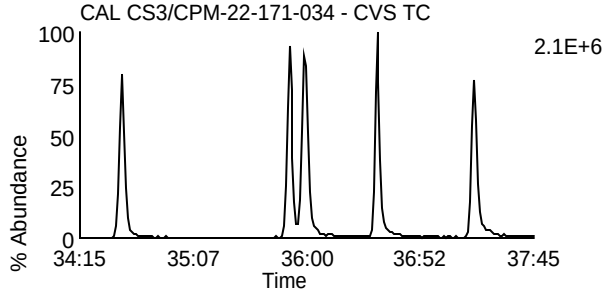
Data File: U230524B_02 G3 C1 - 373.8207
CAL CS3/CPM-22-171-034 - CVS TC



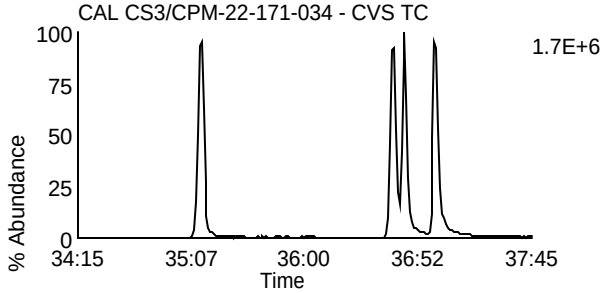
Data File: U230524B_02 G3 C7 - 389.8156
CAL CS3/CPM-22-171-034 - CVS TC



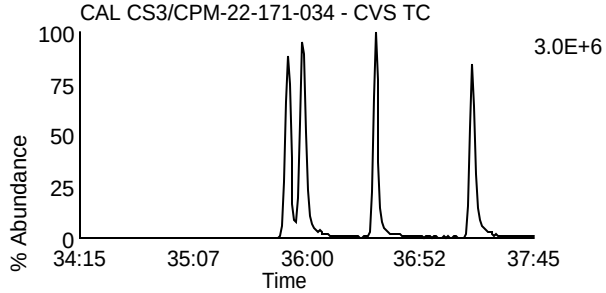
Data File: U230524B_02 G3 C2 - 375.8178
CAL CS3/CPM-22-171-034 - CVS TC



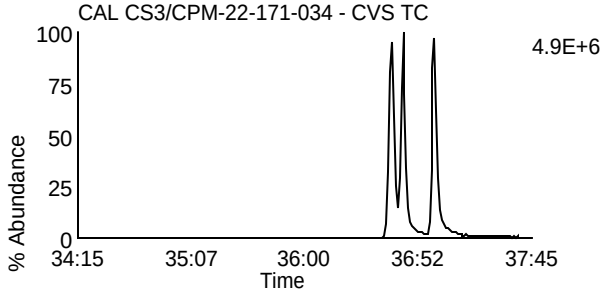
Data File: U230524B_02 G3 C8 - 391.8127
CAL CS3/CPM-22-171-034 - CVS TC



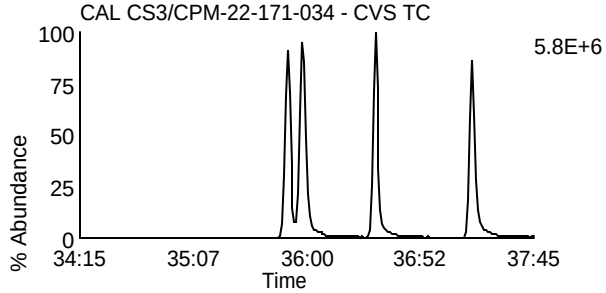
Data File: U230524B_02 G3 C5 - 383.8639
CAL CS3/CPM-22-171-034 - CVS TC



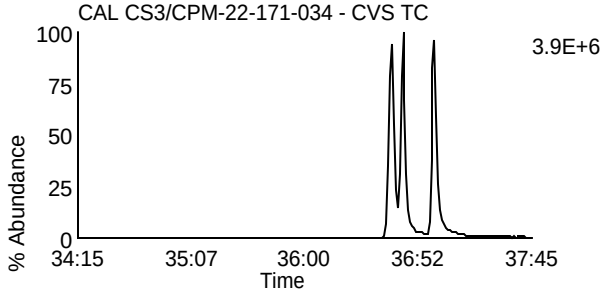
Data File: U230524B_02 G3 C9 - 401.8559
CAL CS3/CPM-22-171-034 - CVS TC



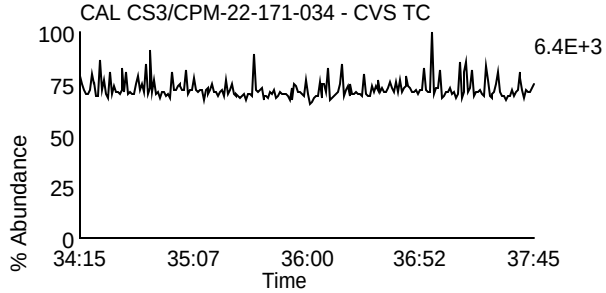
Data File: U230524B_02 G3 C6 - 385.861
CAL CS3/CPM-22-171-034 - CVS TC



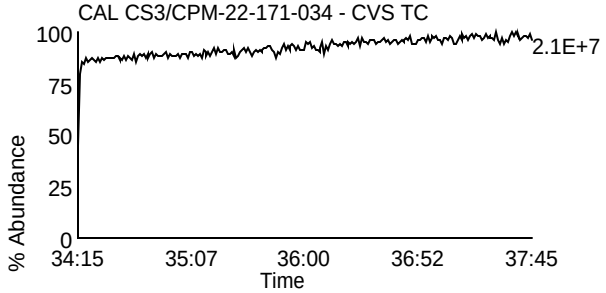
Data File: U230524B_02 G3 C10 - 403.8529
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C11 - 445.7555
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C3 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

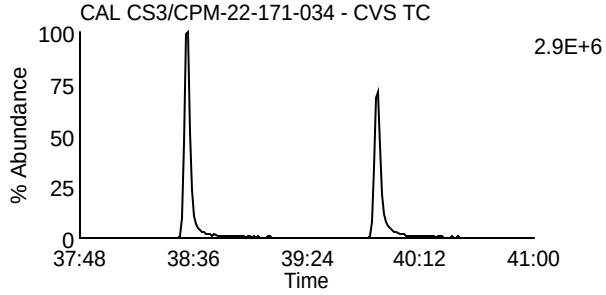


Homologue Group: Heptas

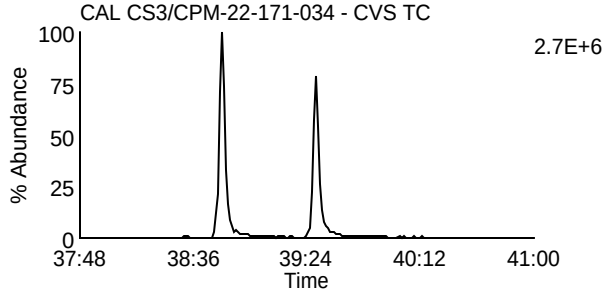
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

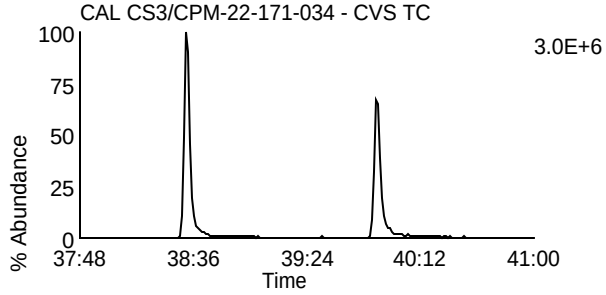
Data File: U230524B_02 G4 C3 - 407.7818
CAL CS3/CPM-22-171-034 - CVS TC



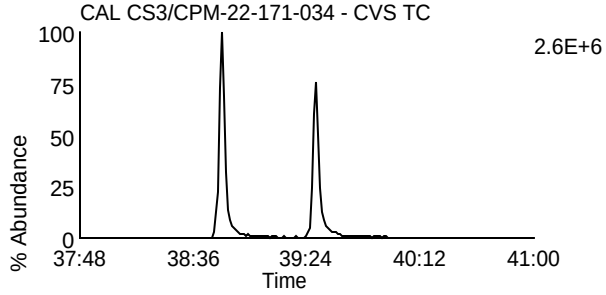
Data File: U230524B_02 G4 C8 - 423.7767
CAL CS3/CPM-22-171-034 - CVS TC



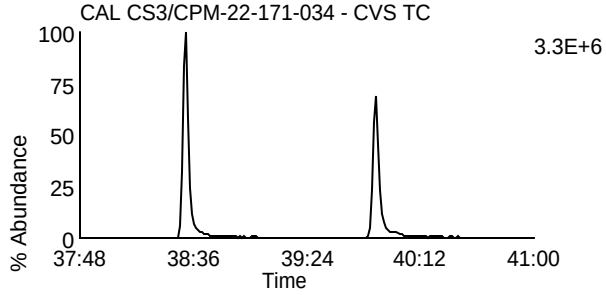
Data File: U230524B_02 G4 C4 - 409.7788
CAL CS3/CPM-22-171-034 - CVS TC



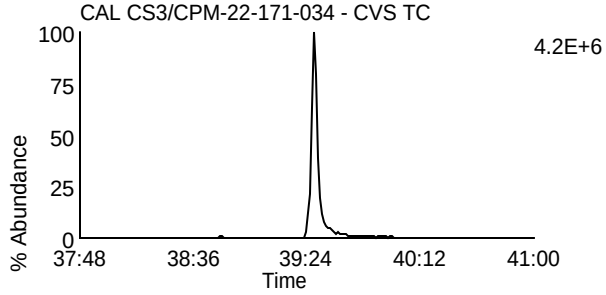
Data File: U230524B_02 G4 C9 - 425.7737
CAL CS3/CPM-22-171-034 - CVS TC



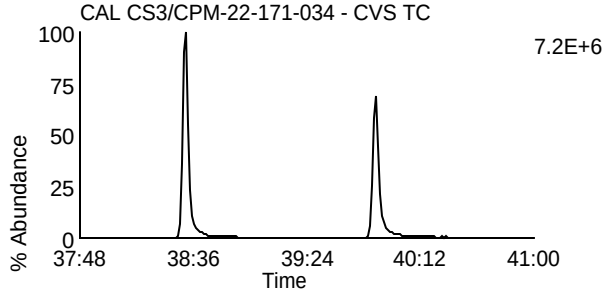
Data File: U230524B_02 G4 C6 - 417.825
CAL CS3/CPM-22-171-034 - CVS TC



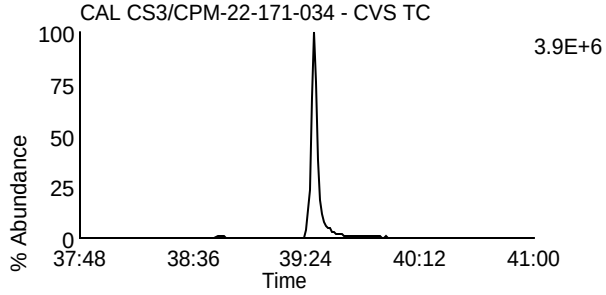
Data File: U230524B_02 G4 C11 - 435.8169
CAL CS3/CPM-22-171-034 - CVS TC



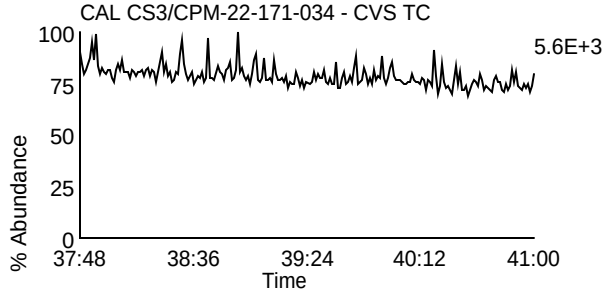
Data File: U230524B_02 G4 C7 - 419.822
CAL CS3/CPM-22-171-034 - CVS TC



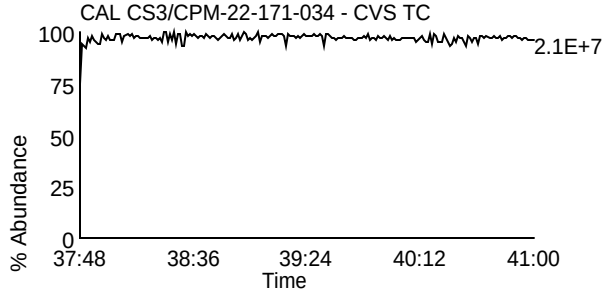
Data File: U230524B_02 G4 C12 - 437.814
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C13 - 479.7165
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C1 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

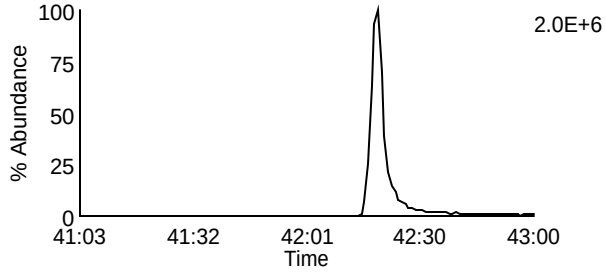


Homologue Group: Octas

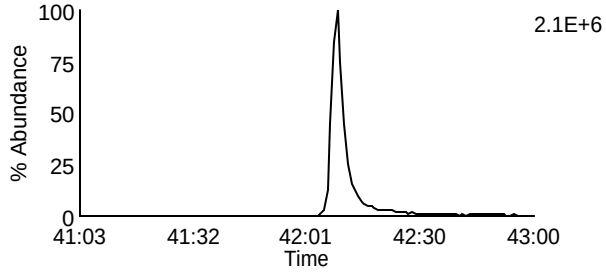
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

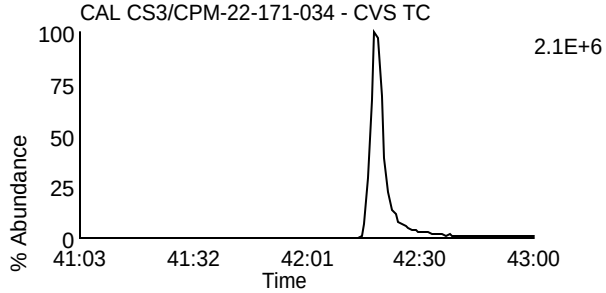
Data File: U230524B_02 G5 C4 - 441.7428
CAL CS3/CPM-22-171-034 - CVS TC



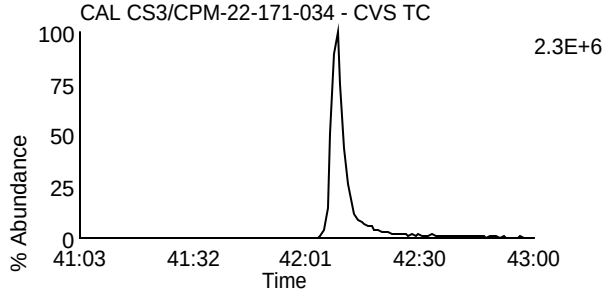
Data File: U230524B_02 G5 C8 - 457.7377
CAL CS3/CPM-22-171-034 - CVS TC



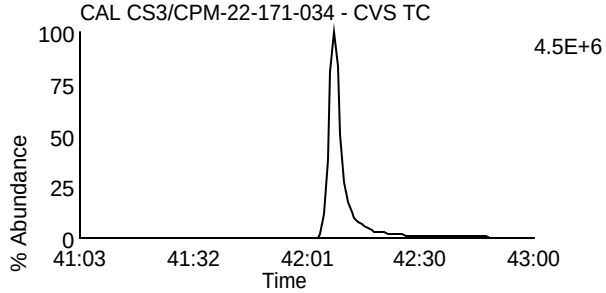
Data File: U230524B_02 G5 C5 - 443.7398
CAL CS3/CPM-22-171-034 - CVS TC



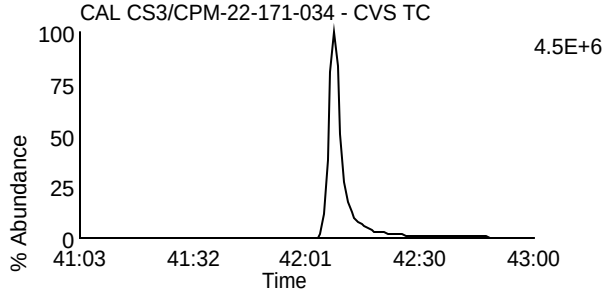
Data File: U230524B_02 G5 C9 - 459.7347
CAL CS3/CPM-22-171-034 - CVS TC



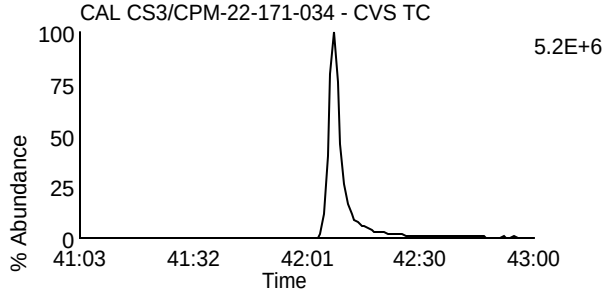
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



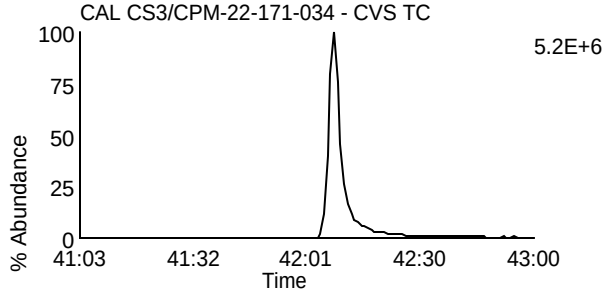
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



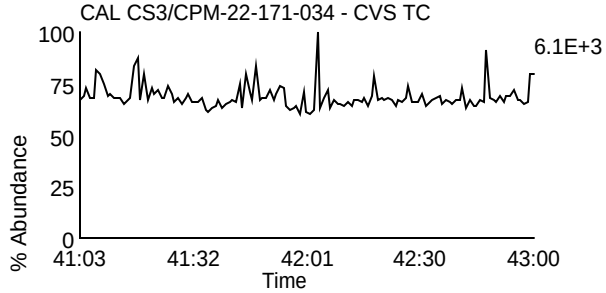
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



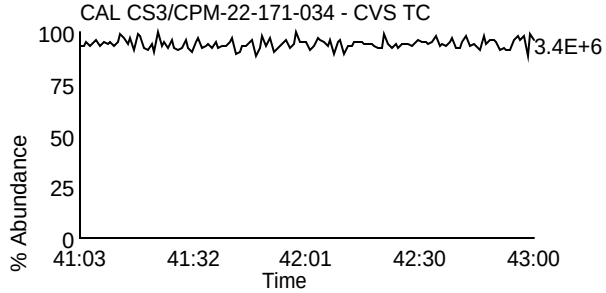
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C13 - 513.6775
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C2 - 430.9728
CAL CS3/CPM-22-171-034 - CVS TC

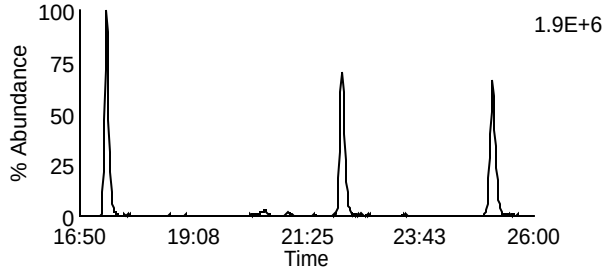


Homologue Group: Tetras

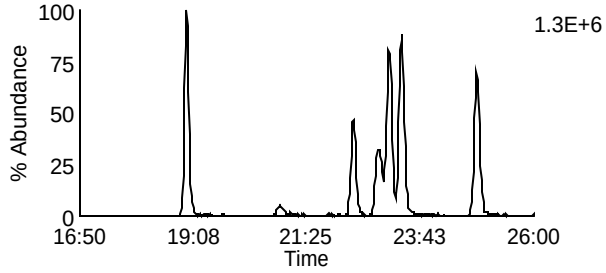
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

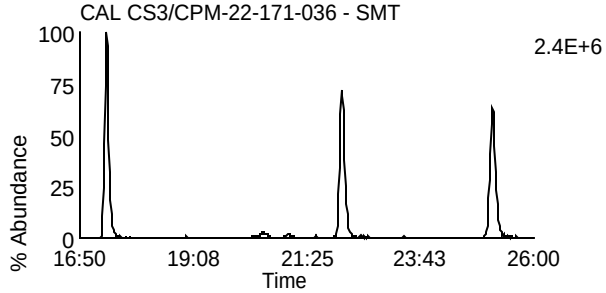
Data File: U230608A_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SMT



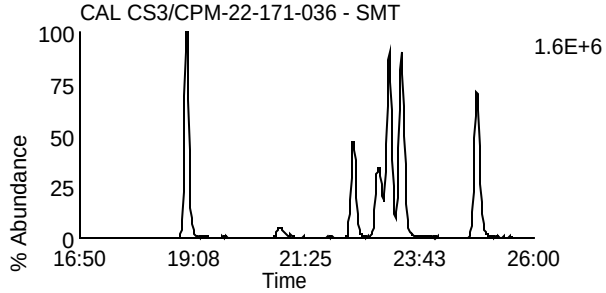
Data File: U230608A_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SMT



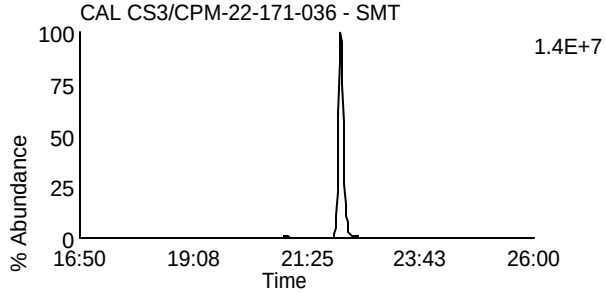
Data File: U230608A_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SMT



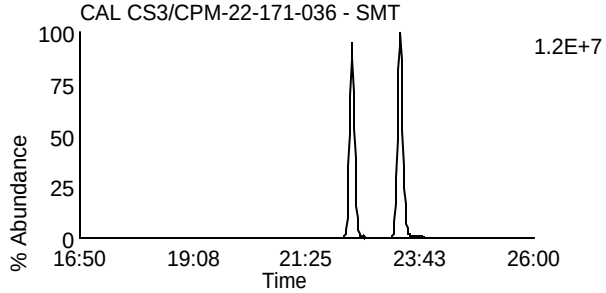
Data File: U230608A_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SMT



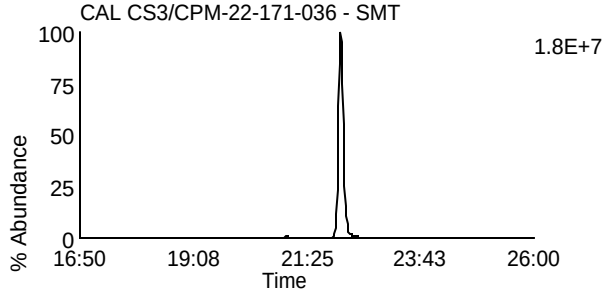
Data File: U230608A_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SMT



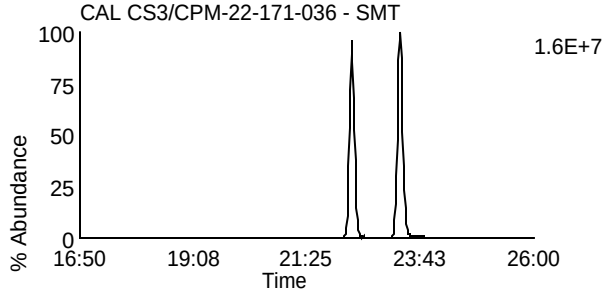
Data File: U230608A_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SMT



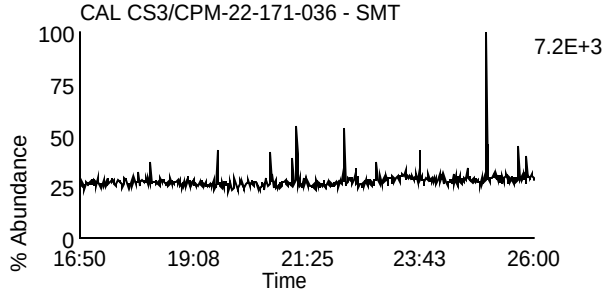
Data File: U230608A_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SMT



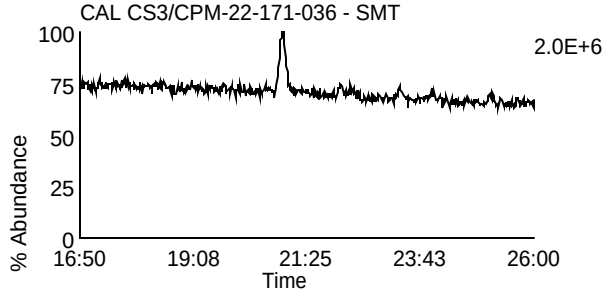
Data File: U230608A_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SMT



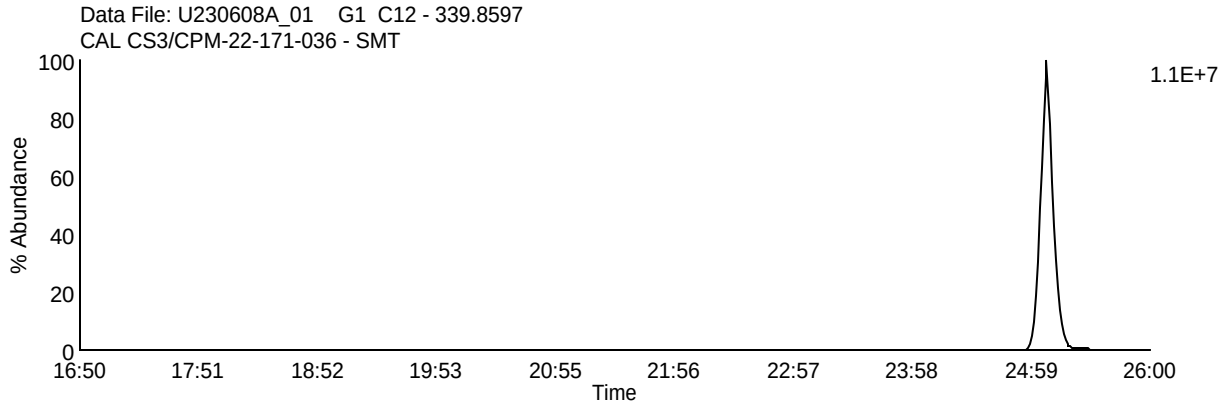
Data File: U230608A_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SMT

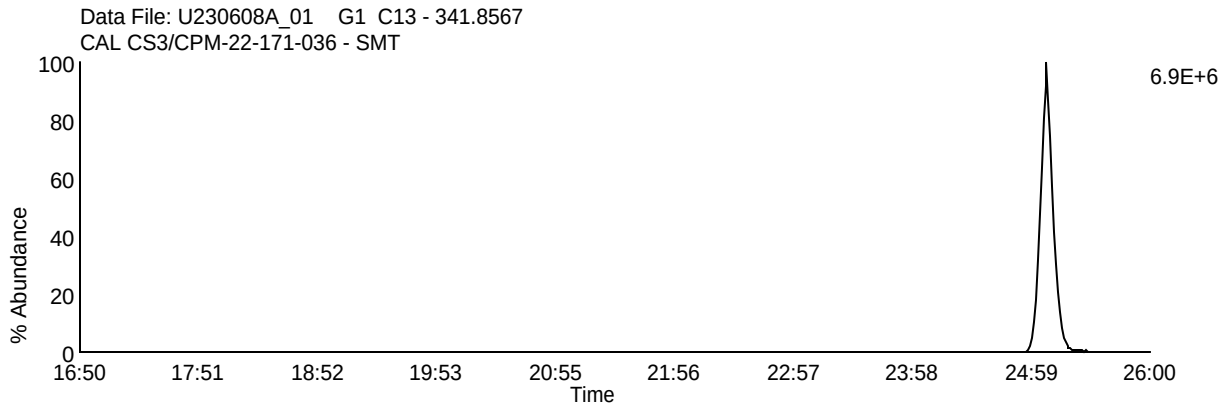


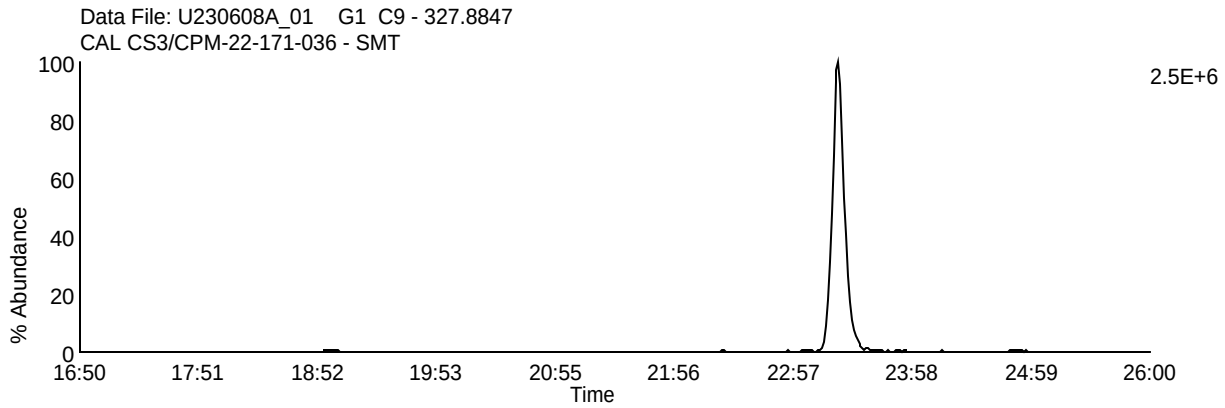
Homologue Group: Penta & Cleanup

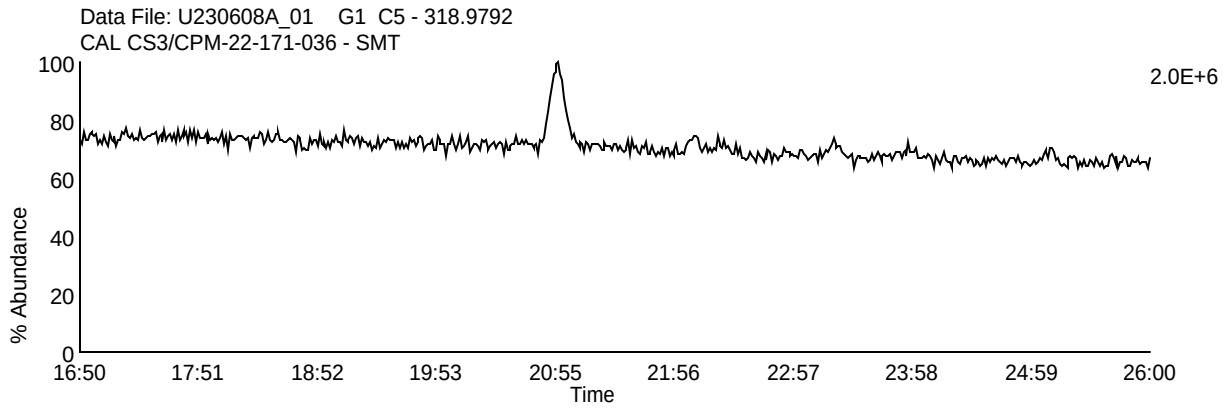
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)







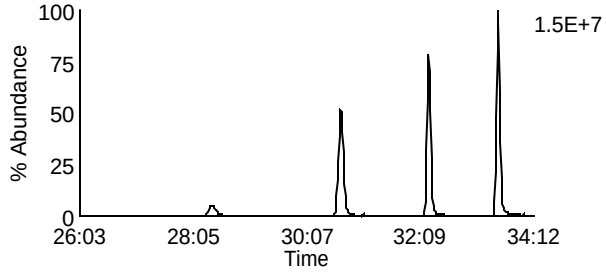


Homologue Group: Pentas

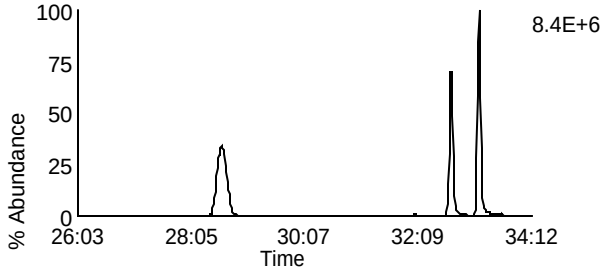
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

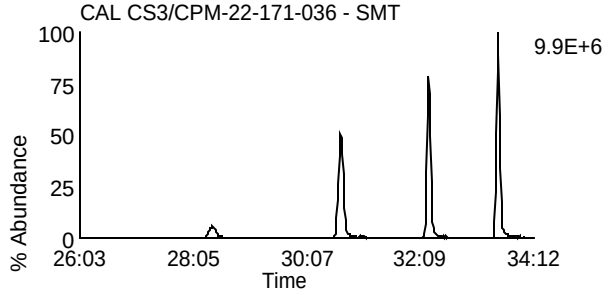
Data File: U230608A_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SMT



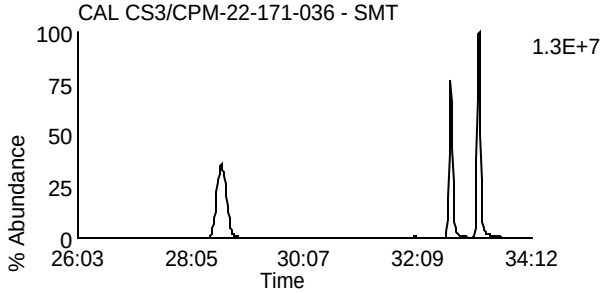
Data File: U230608A_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SMT



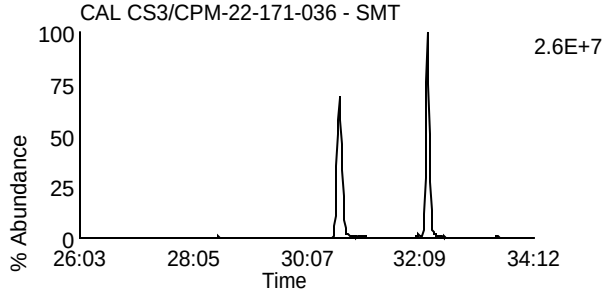
Data File: U230608A_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SMT



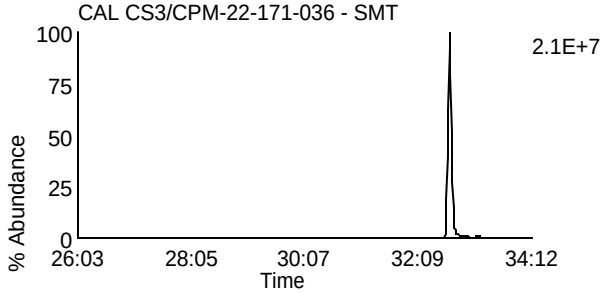
Data File: U230608A_01 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - SMT



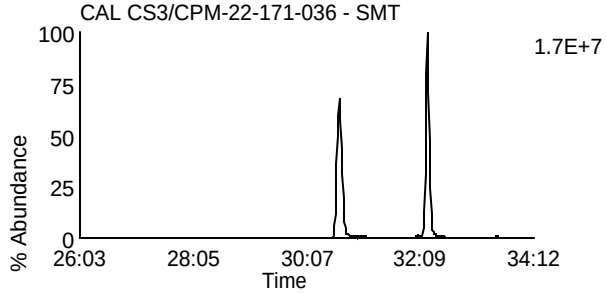
Data File: U230608A_01 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - SMT



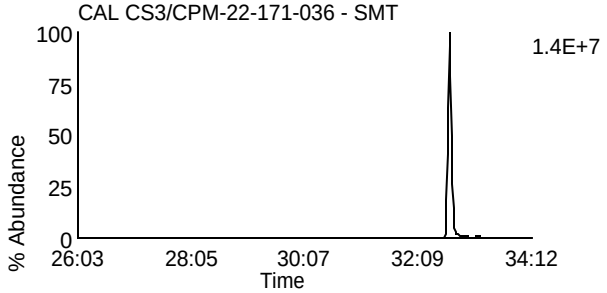
Data File: U230608A_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SMT



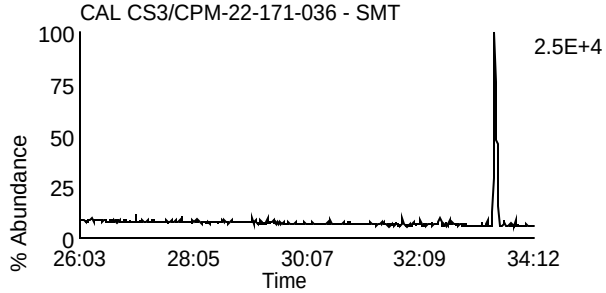
Data File: U230608A_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SMT



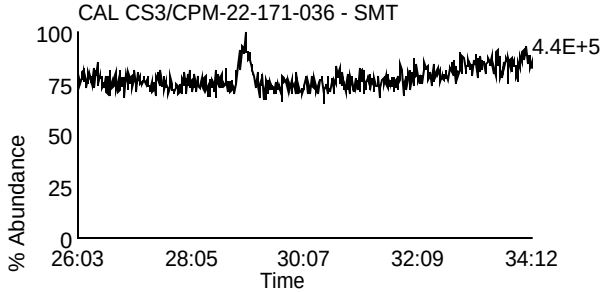
Data File: U230608A_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SMT

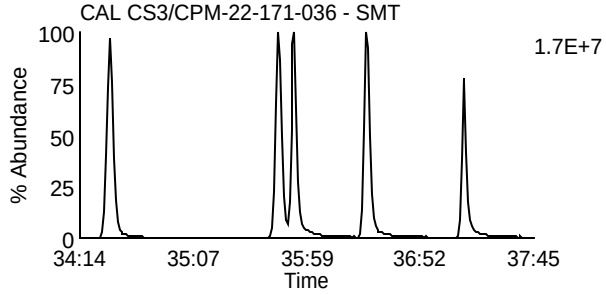


Homologue Group: Hexas

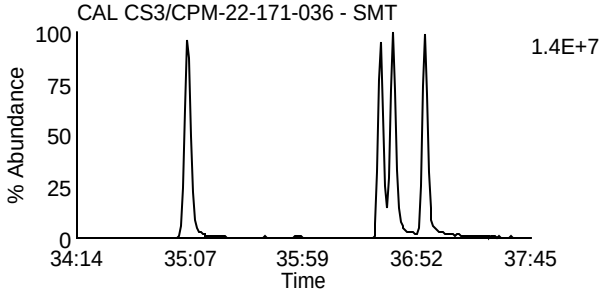
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

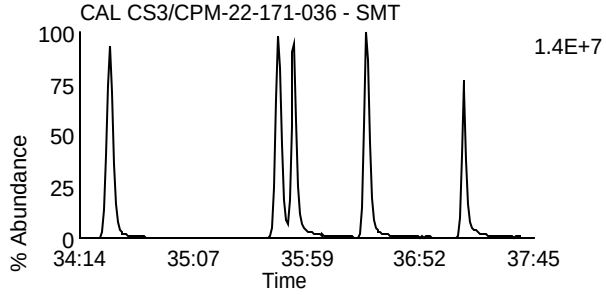
Data File: U230608A_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SMT



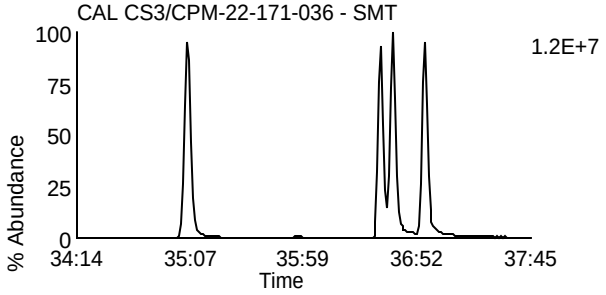
Data File: U230608A_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SMT



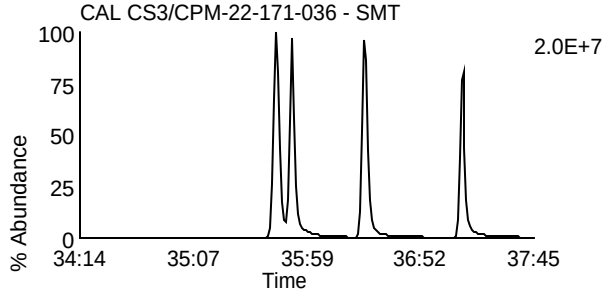
Data File: U230608A_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SMT



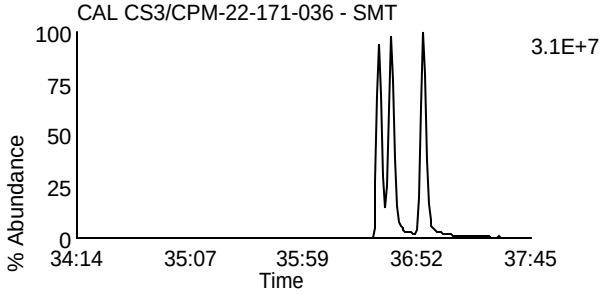
Data File: U230608A_01 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - SMT



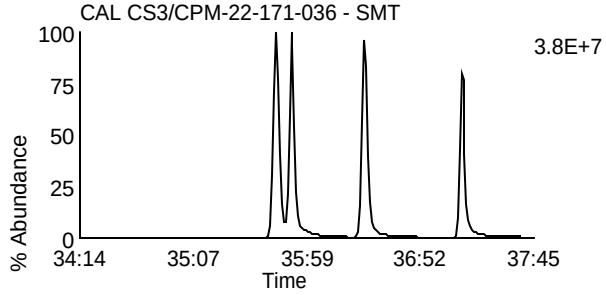
Data File: U230608A_01 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - SMT



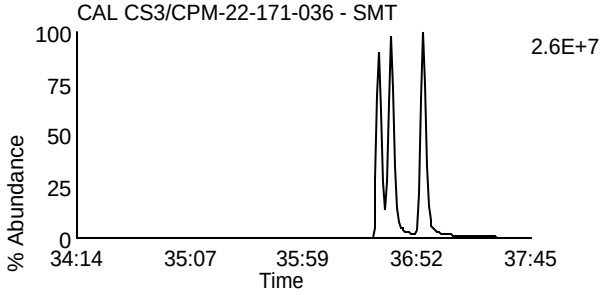
Data File: U230608A_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SMT



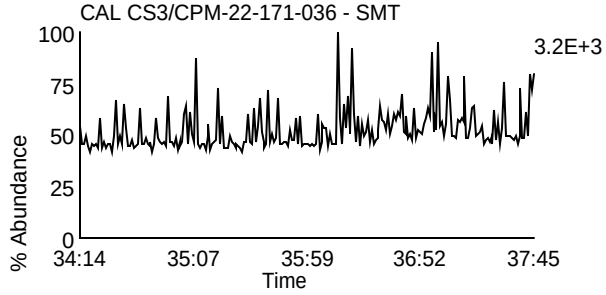
Data File: U230608A_01 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - SMT



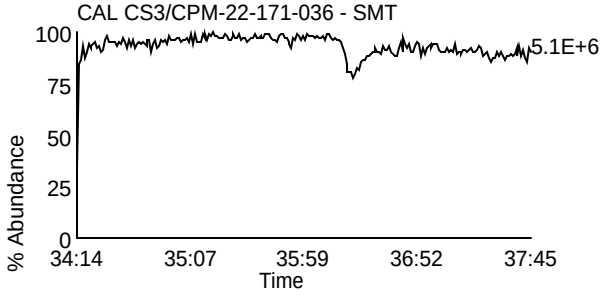
Data File: U230608A_01 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SMT

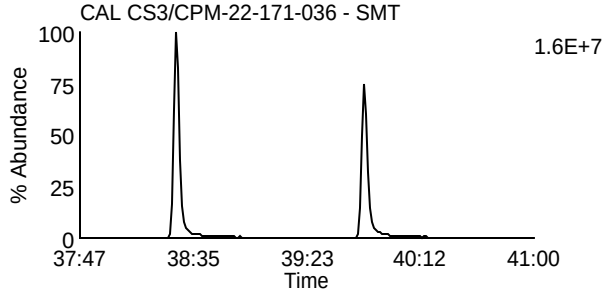


Homologue Group: Heptas

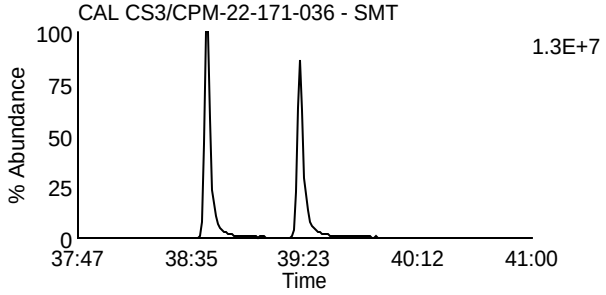
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

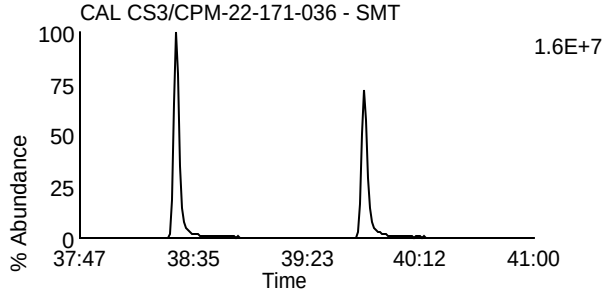
Data File: U230608A_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SMT



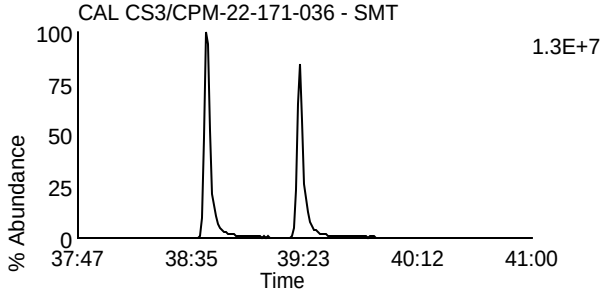
Data File: U230608A_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SMT



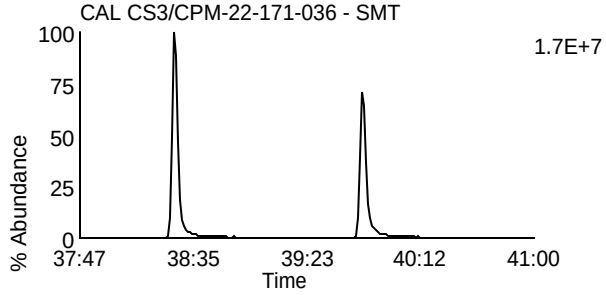
Data File: U230608A_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SMT



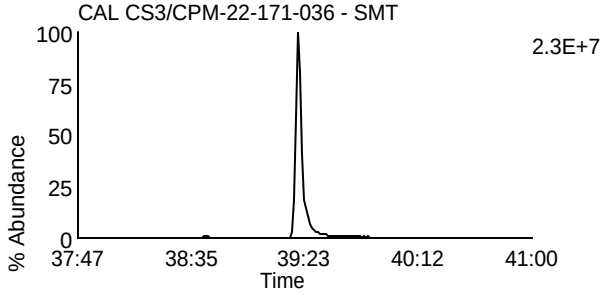
Data File: U230608A_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SMT



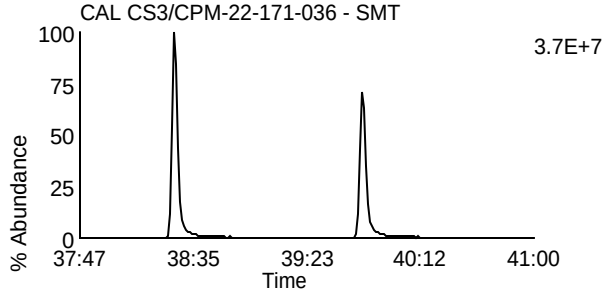
Data File: U230608A_01 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - SMT



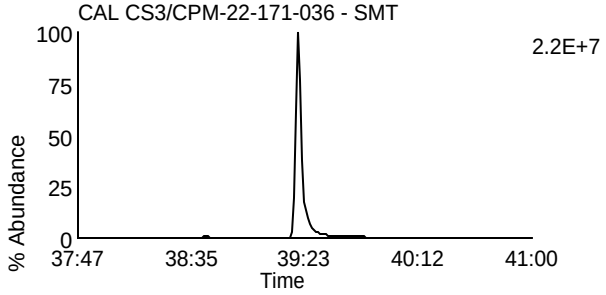
Data File: U230608A_01 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - SMT



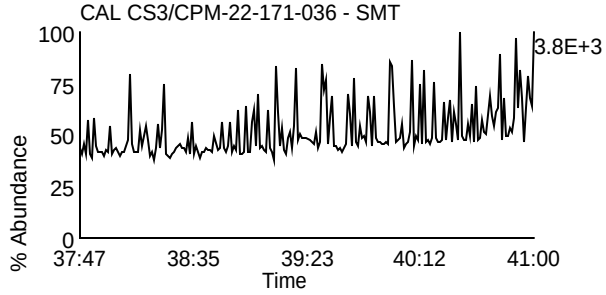
Data File: U230608A_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SMT



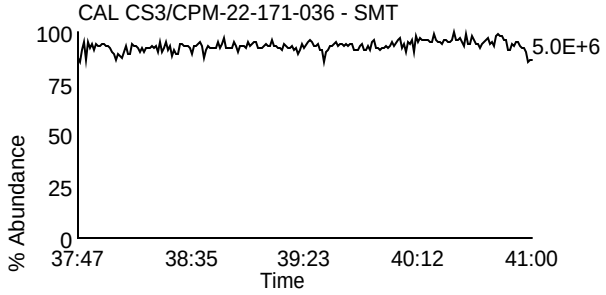
Data File: U230608A_01 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SMT

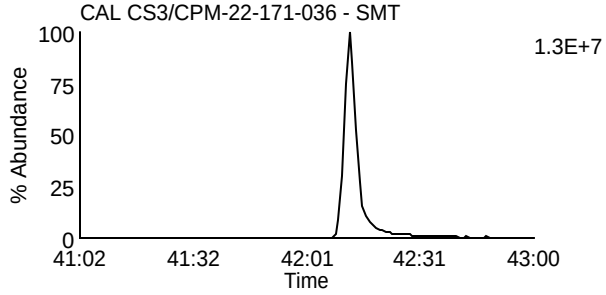


Homologue Group: Octas

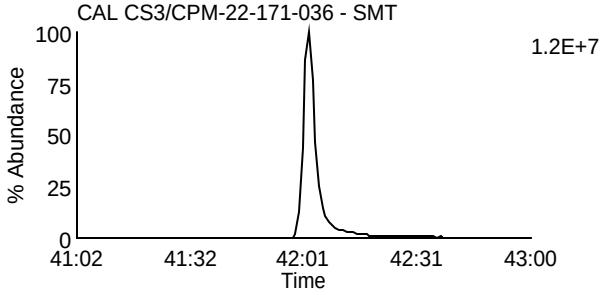
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

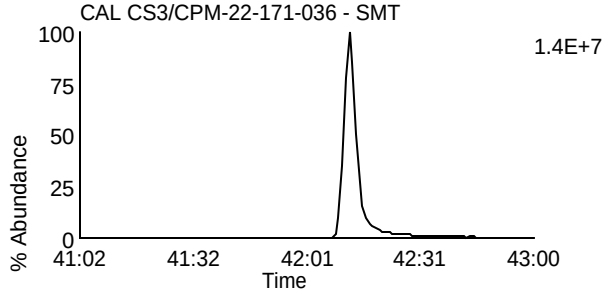
Data File: U230608A_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SMT



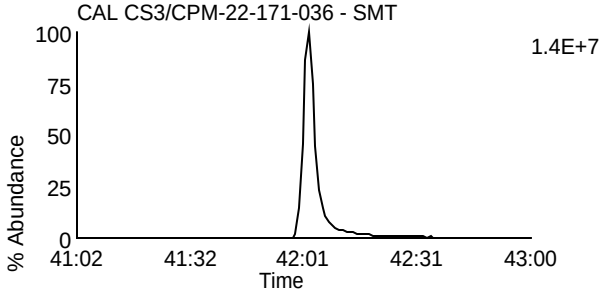
Data File: U230608A_01 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - SMT



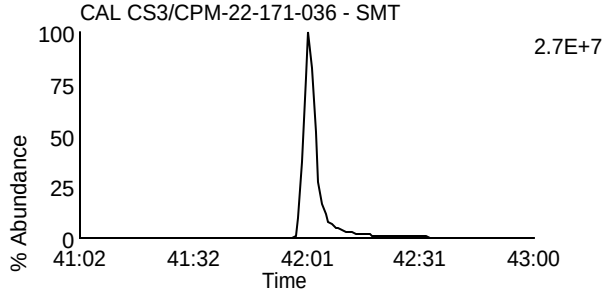
Data File: U230608A_01 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - SMT



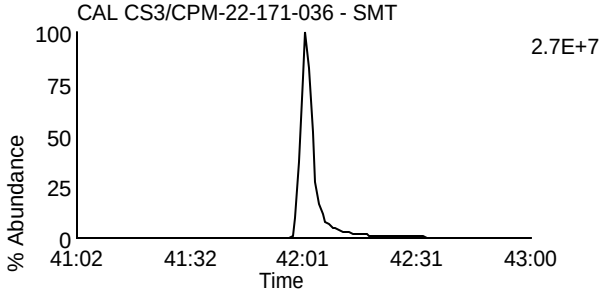
Data File: U230608A_01 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - SMT



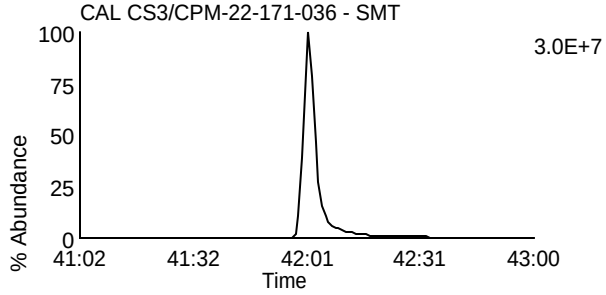
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



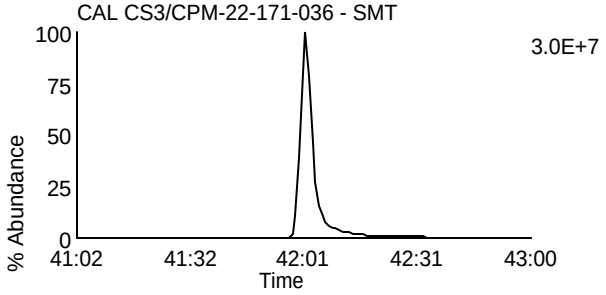
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



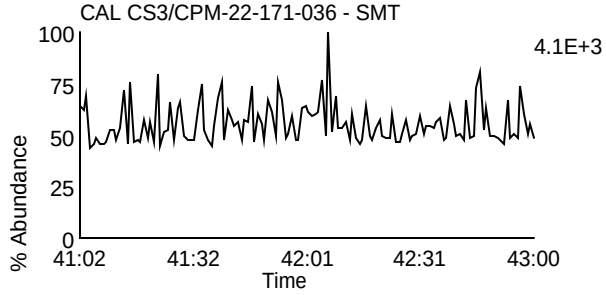
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



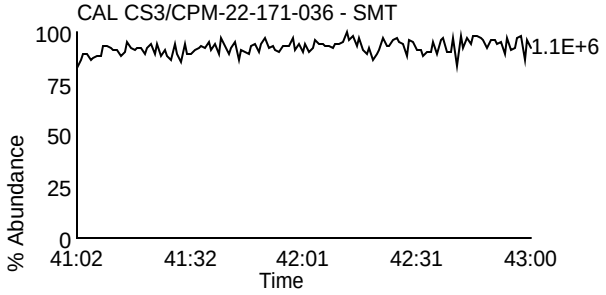
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - SMT

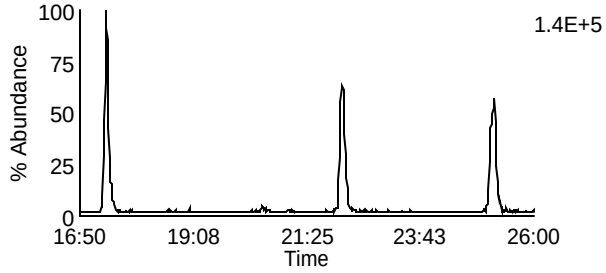


Homologue Group: Tetras

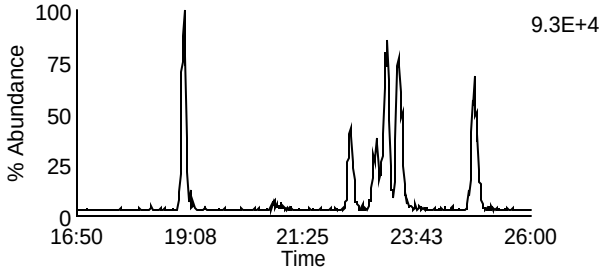
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

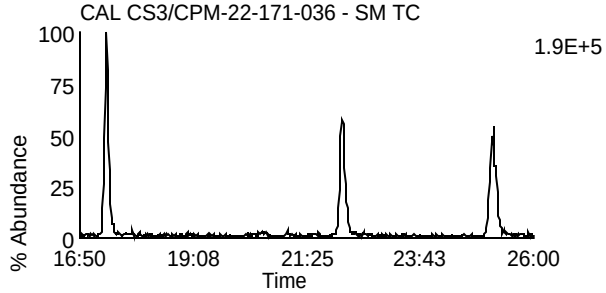
Data File: U230608B_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SM TC



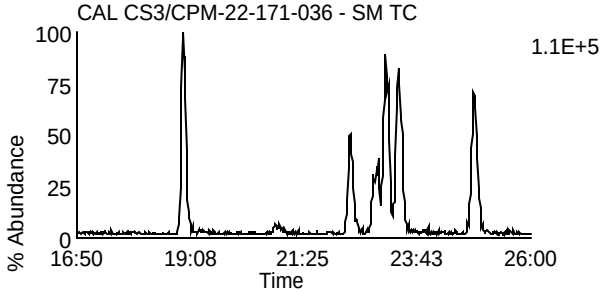
Data File: U230608B_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SM TC



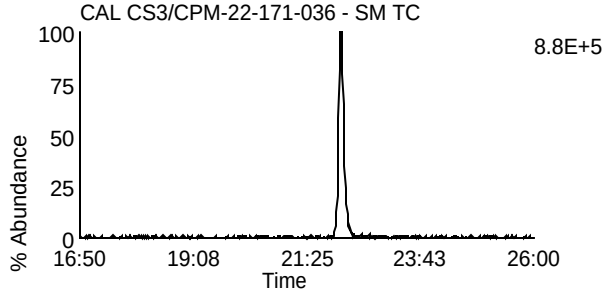
Data File: U230608B_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SM TC



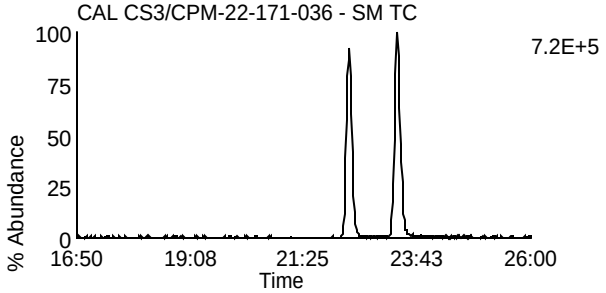
Data File: U230608B_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SM TC



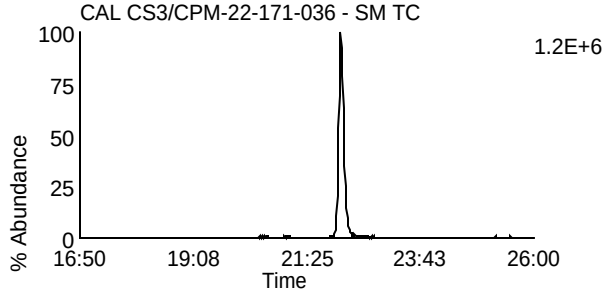
Data File: U230608B_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SM TC



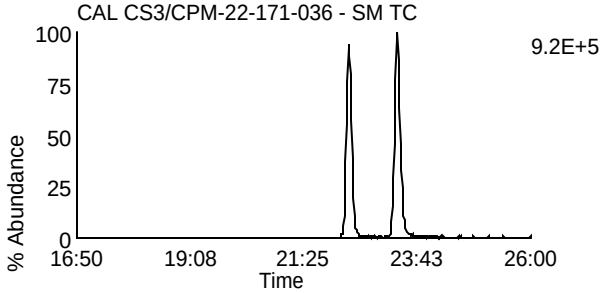
Data File: U230608B_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SM TC



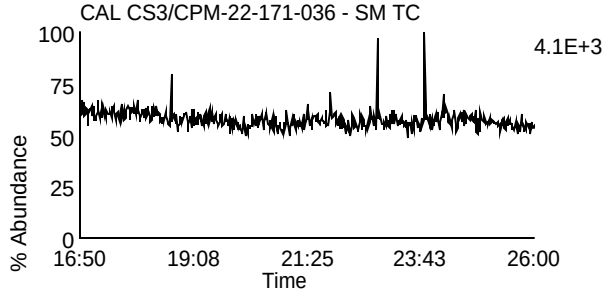
Data File: U230608B_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SM TC



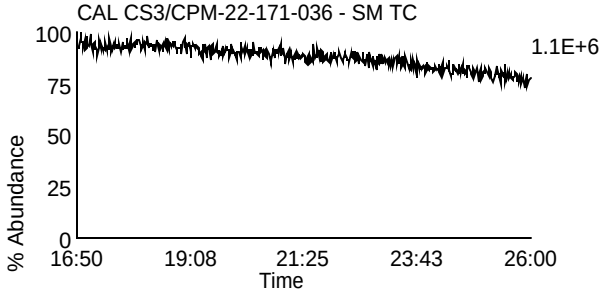
Data File: U230608B_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SM TC



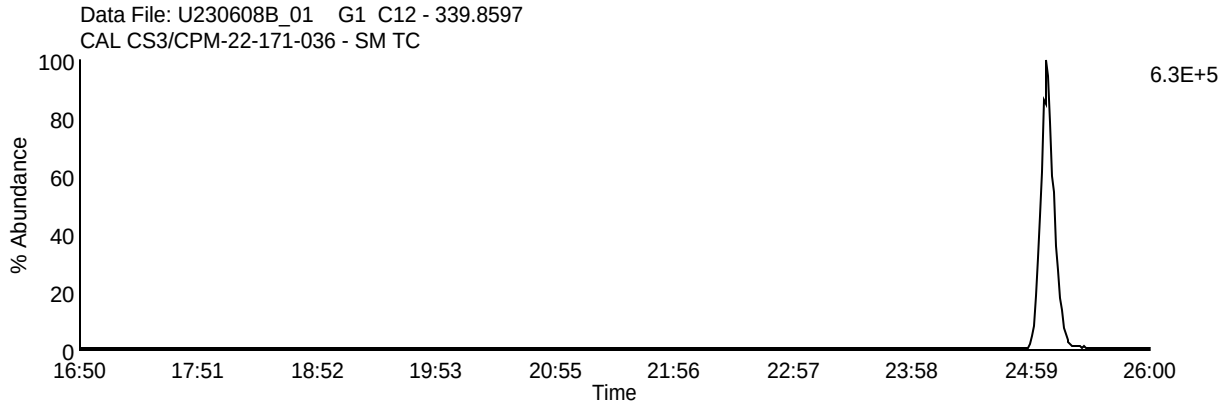
Data File: U230608B_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SM TC

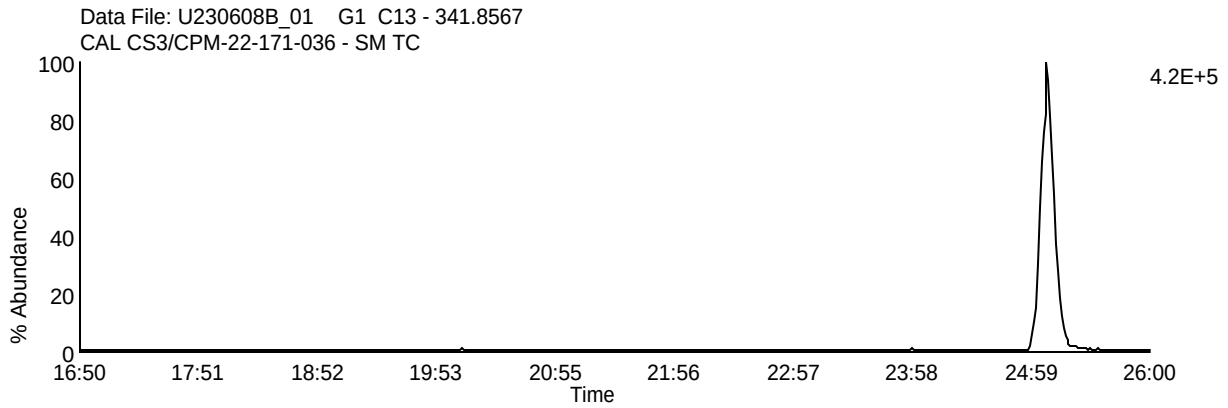


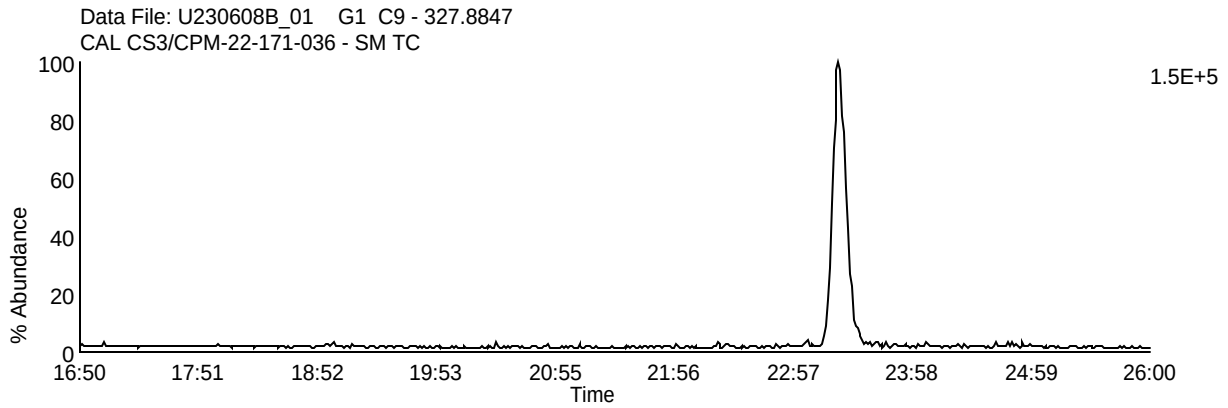
Homologue Group: Penta & Cleanup

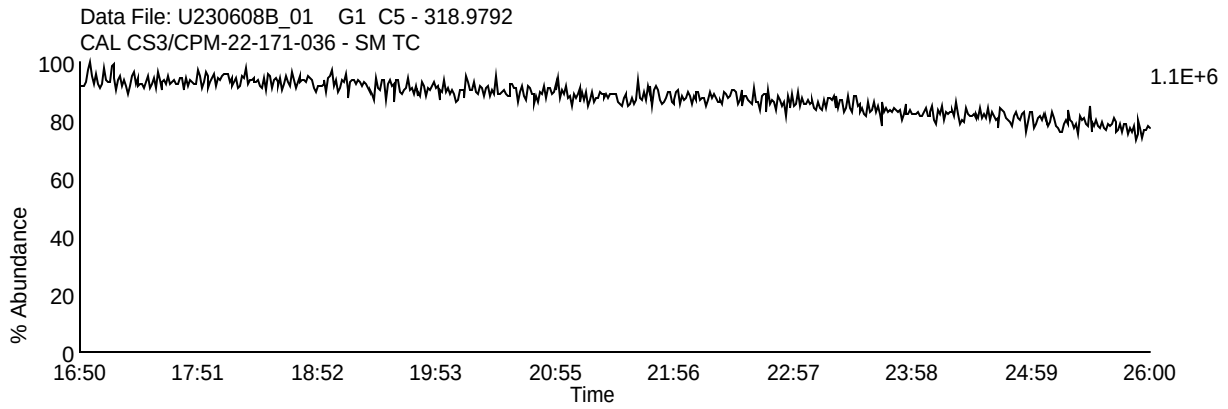
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)







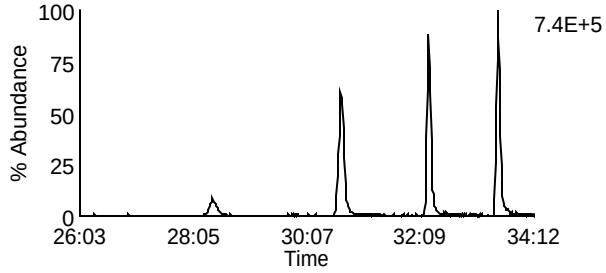


Homologue Group: Pentas

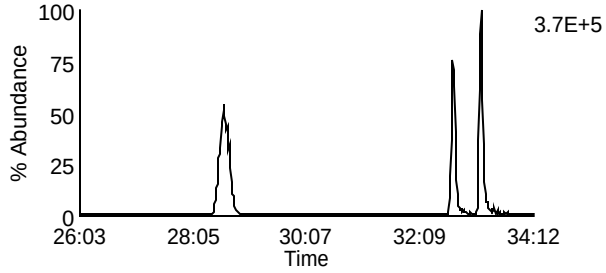
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

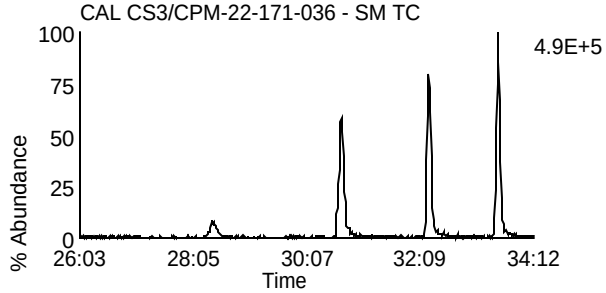
Data File: U230608B_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SM TC



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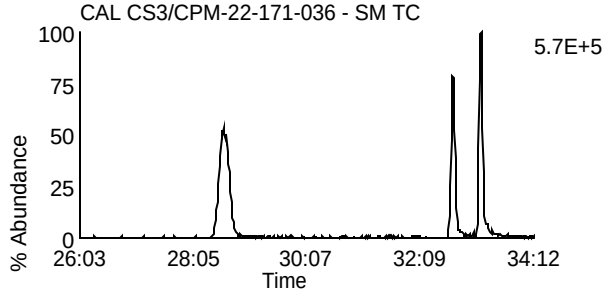
CAL CS3/CPM-22-171-036 - SM TC



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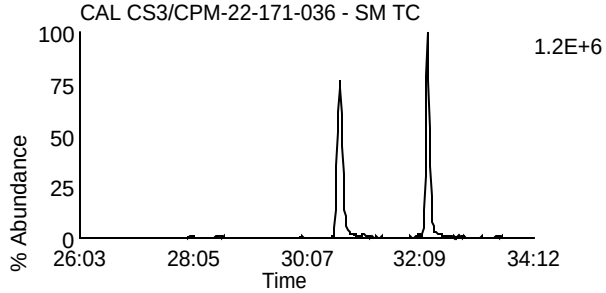
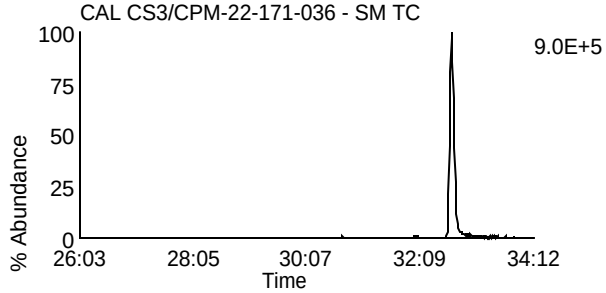
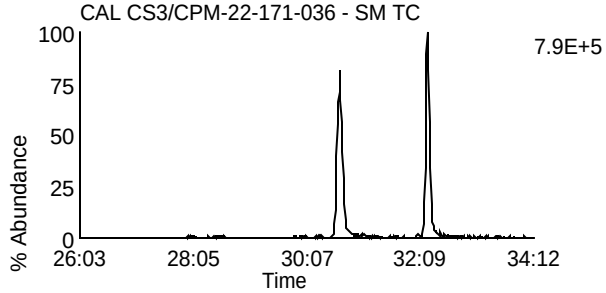
CAL CS3/CPM-22-171-036 - SM TC



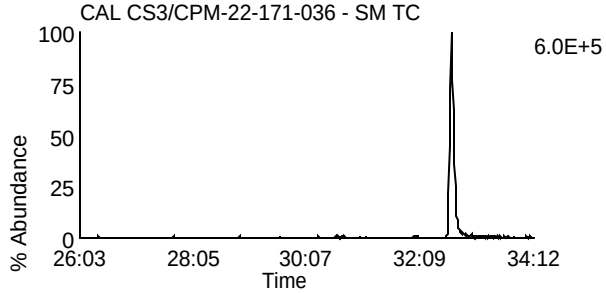
Data File: U230608B_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SM TC



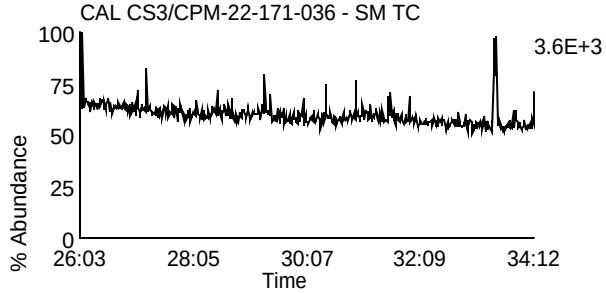
Data File: U230608B_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SM TC



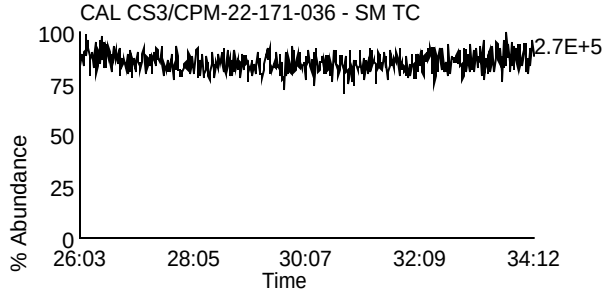
Data File: U230608B_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SM TC

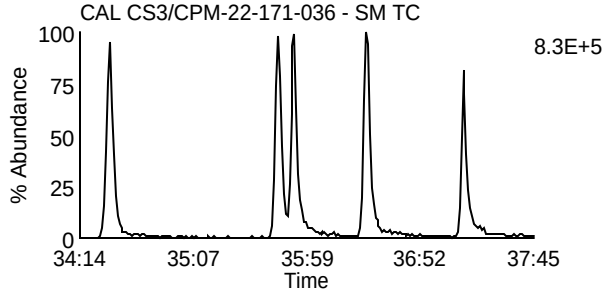


Homologue Group: Hexas

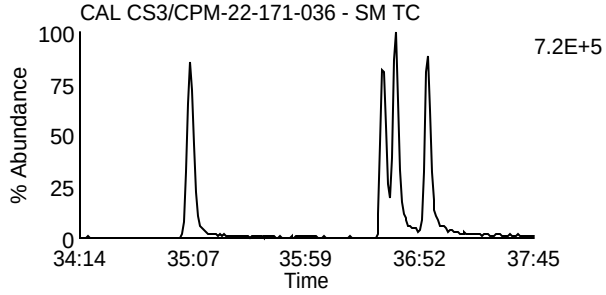
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

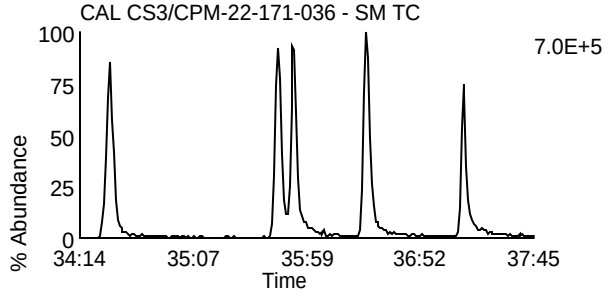
Data File: U230608B_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SM TC



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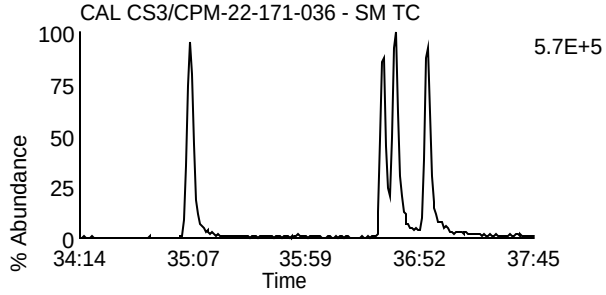
CAL CS3/CPM-22-171-036 - SM TC



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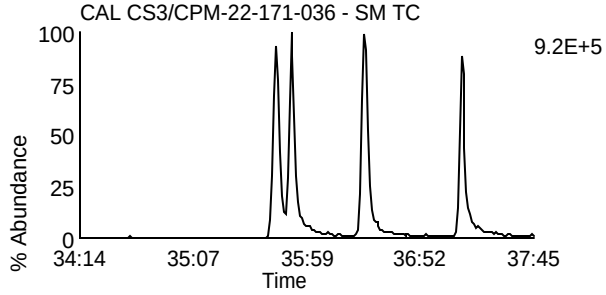
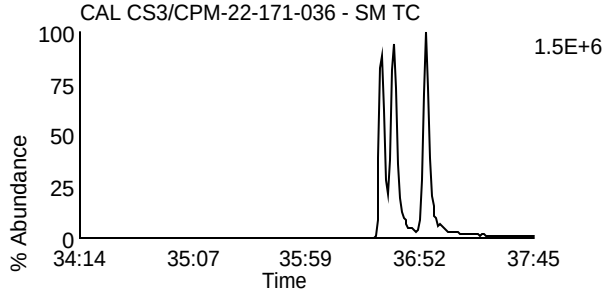
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SM TC



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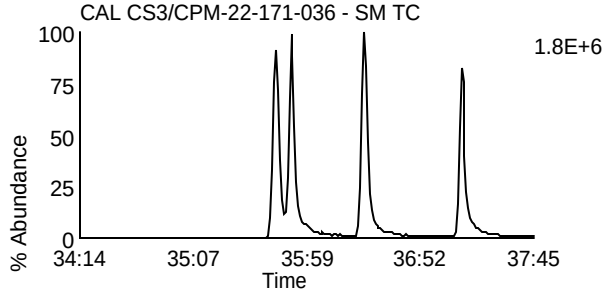
CAL CS3/CPM-22-171-036 - SM TC



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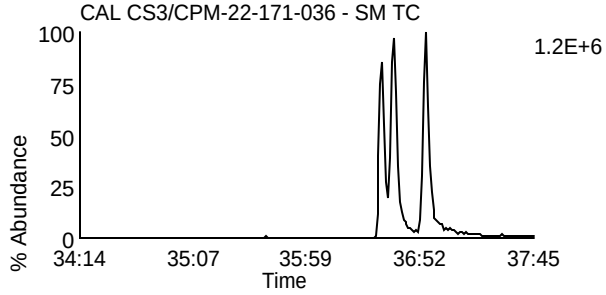
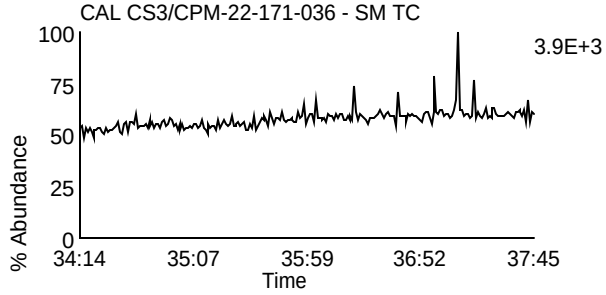
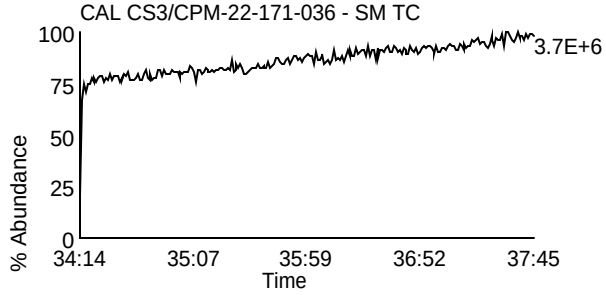
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

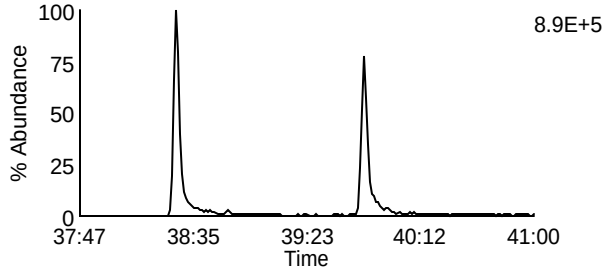


Homologue Group: Heptas

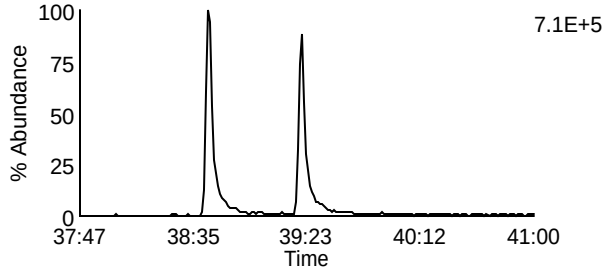
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

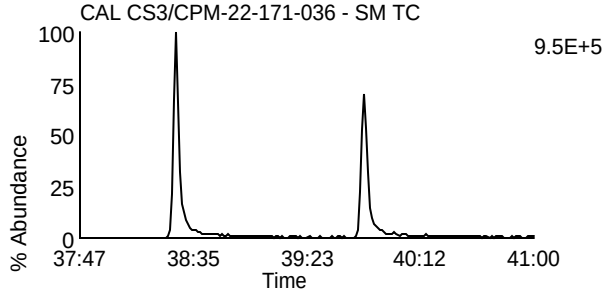
Data File: U230608B_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SM TC



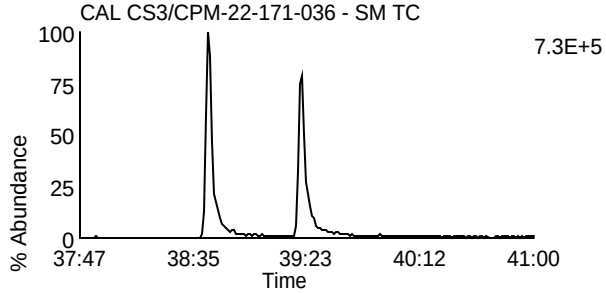
Data File: U230608B_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SM TC



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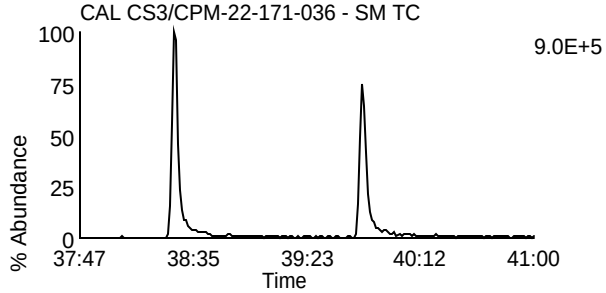
CAL CS3/CPM-22-171-036 - SM TC



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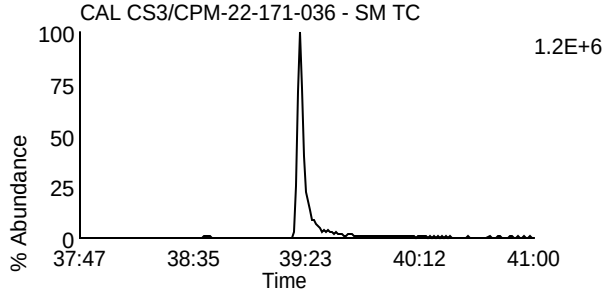
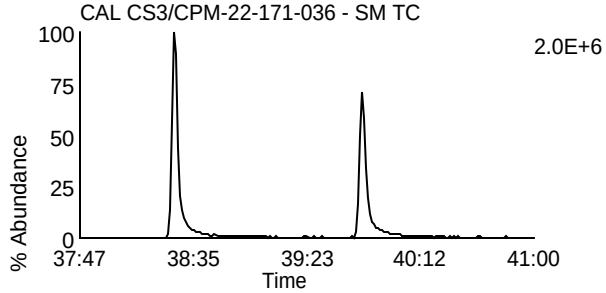
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SM TC



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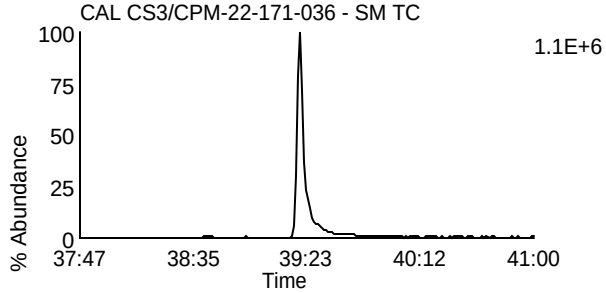
CAL CS3/CPM-22-171-036 - SM TC



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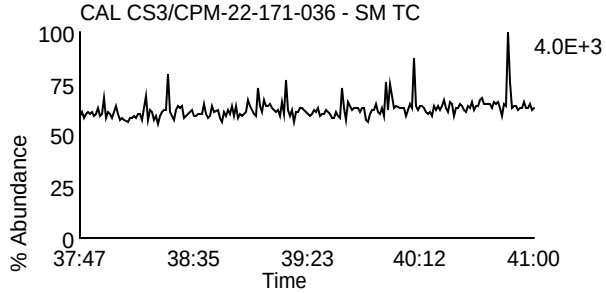
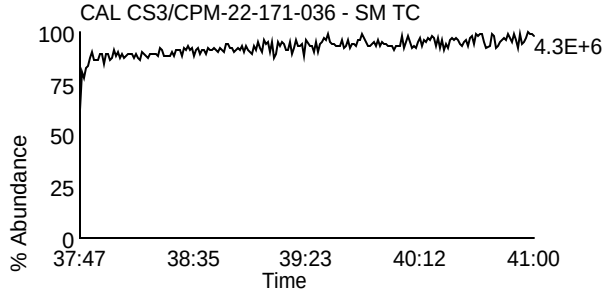
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

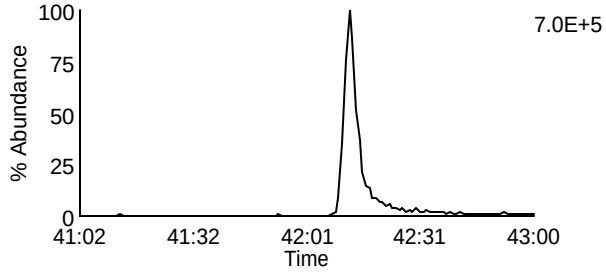


Homologue Group: Octas

Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

Data File: U230608B_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SM TC



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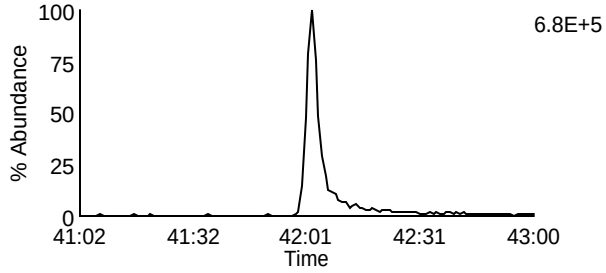
CAL CS3/CPM-22-171-036 - SM TC



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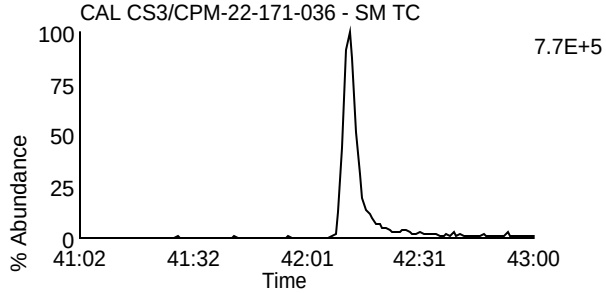
CAL CS3/CPM-22-171-036 - SM TC



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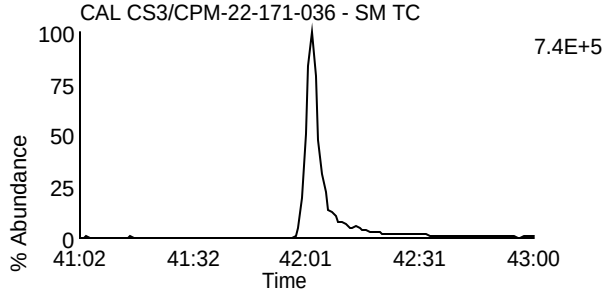
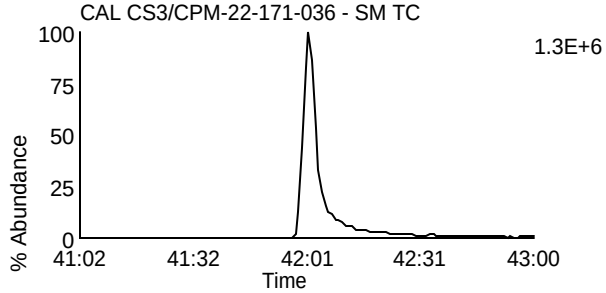
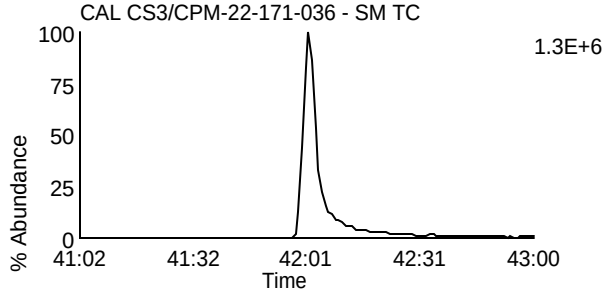
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SM TC



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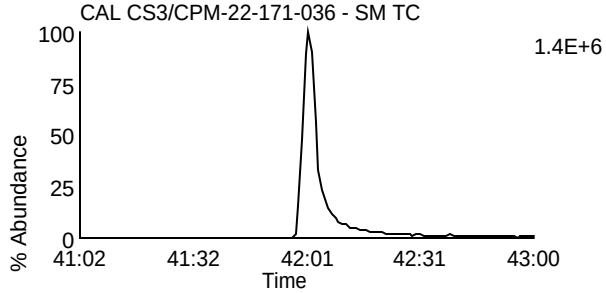
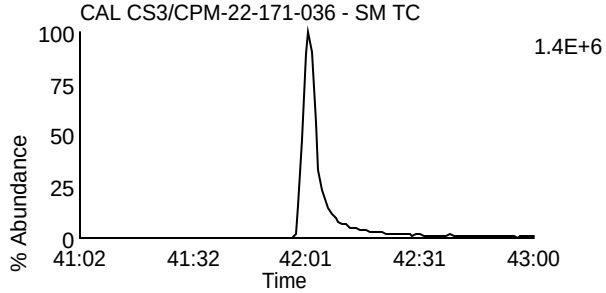
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SM TC



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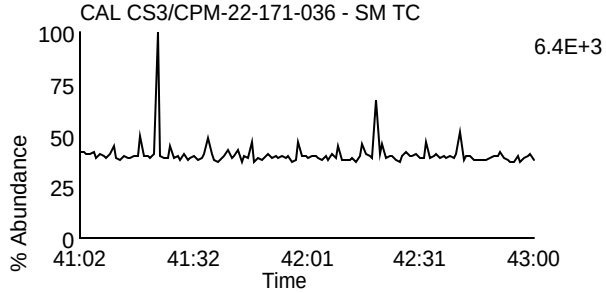
CAL CS3/CPM-22-171-036 - SM TC



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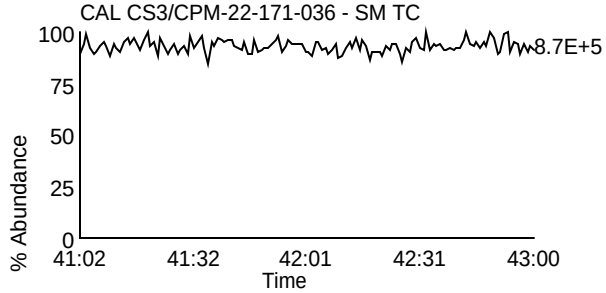
CAL CS3/CPM-22-171-036 - SM TC



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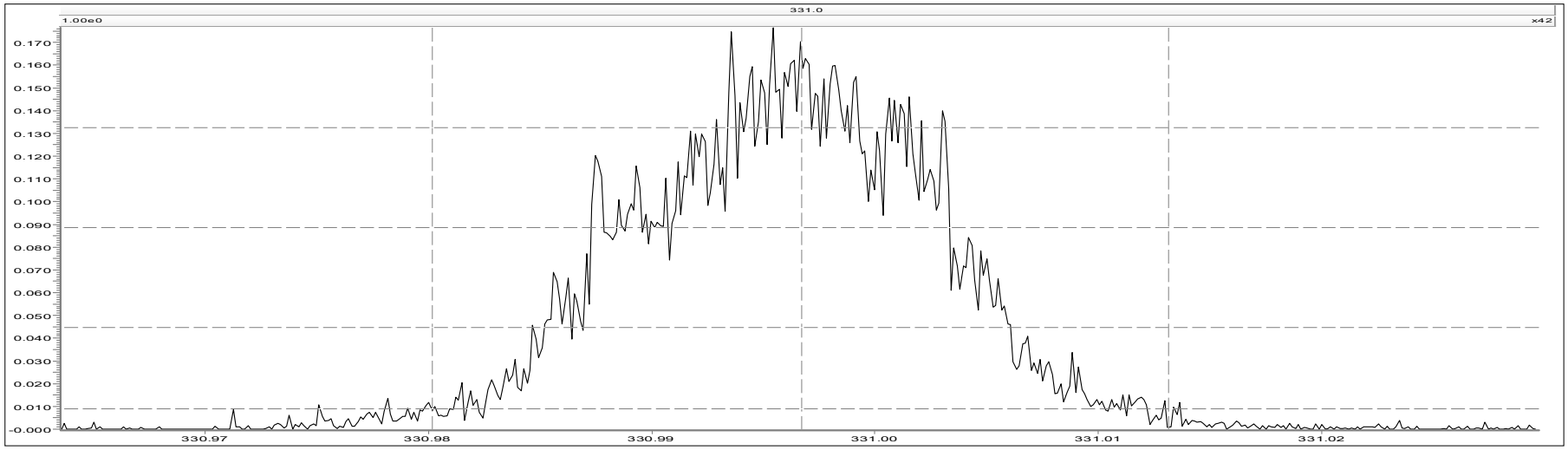
Printed: Saturday, June 10, 2023 11:28:49 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-7.40	Ion Energy	6.00
Focus 1	684	Z4 Restrictor	Off
Beam Centre	32.3	Vacc Limit	8000
Focus 2	4106		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	35.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	9.9	**Engineer**	
Z Deflect 1	10.6	No information	
Z Deflect 2	15.0		
Z Focus 2	2041		
Z Focus 3	0		
Z Deflect 3	-21.3		
Y Focus	3678		
Rotate 2	0.7		
Curve 2	7.1		
Curve 3	-6.3		
Rotate 3	12.7		
Rotate 4	1.8		
V Acc (V)	6700.39		
Magnet Mass	331.0		
Source Slit	32.03		
Collector Slit	11.66		
MIKES Slit	100.00		
Alpha	58.00		
Detector Voltage	360		

File: C:\MassLynx\PaceNew.PRO\ACQUDB\10MSHR15L.ipr

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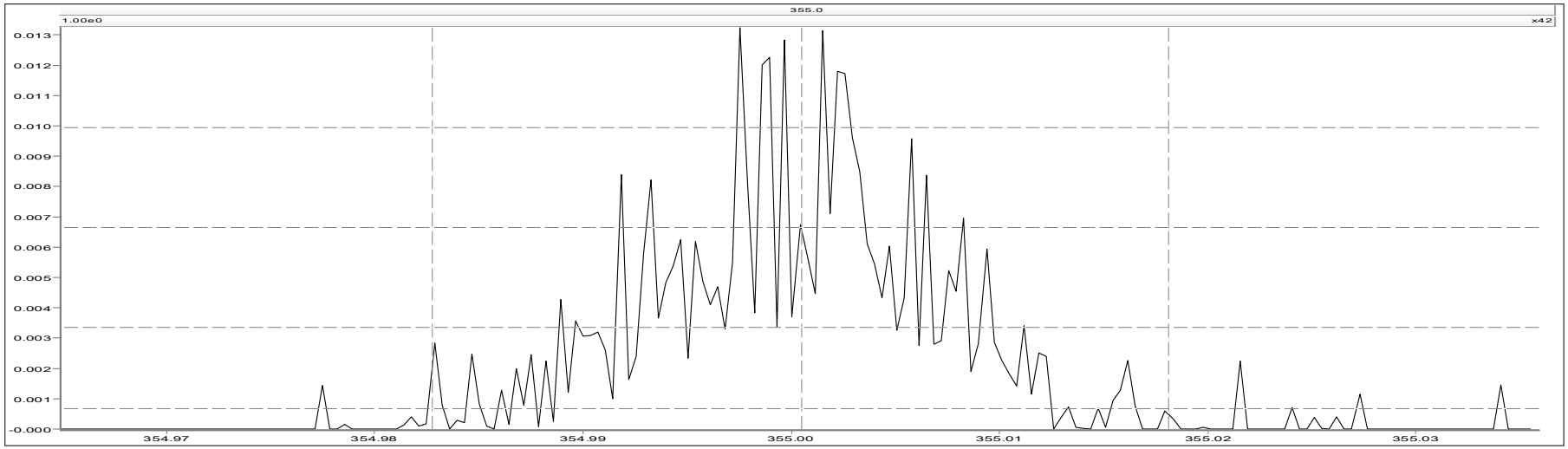

Source (EI+)

Ion Repeller (V)	-7.40
Focus 1	684
Beam Centre	32.3
Focus 2	4106
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	9.9
Z Deflect 1	10.6
Z Deflect 2	15.0
Z Focus 2	2041
Z Focus 3	0
Z Deflect 3	-21.3
Y Focus	3678
Rotate 2	0.7
Curve 2	7.1
Curve 3	-6.3
Rotate 3	12.7
Rotate 4	1.8
V Acc (V)	6700.39
Magnet Mass	331.0
Source Slit	32.03
Collector Slit	11.66
MIKES Slit	100.00
Aperture	58.00
Detector Voltage	360
Ion Energy	6.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

Engineer

No information

File: C:\MassLynx\Default.pro\Acqudb\U10MSHR06.IPR

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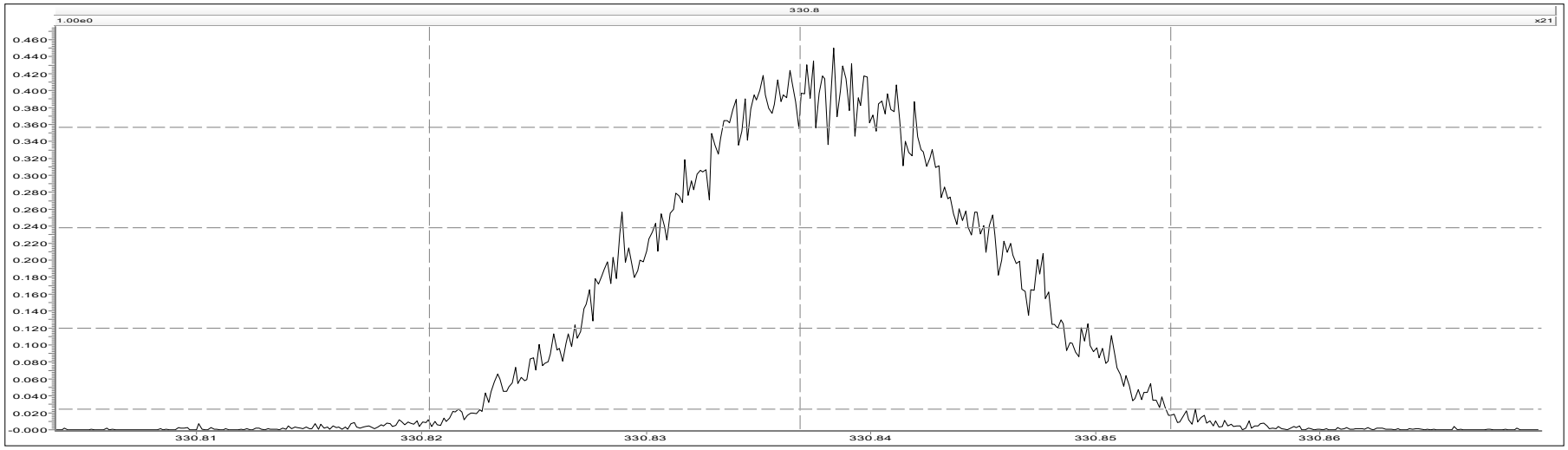

Source (EI+)

Ion Repeller (V)	-7.85	Ion Energy	-5.00
Focus 1	803	Z4 Restrictor	Off
Beam Centre	40.4	Vacc Limit	8000
Focus 2	4264		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-144.6	**Engineer**	
Z Deflect 1	-63.0	No information	
Z Deflect 2	-4.2		
Z Focus 2	2245		
Z Focus 3	0		
Z Deflect 3	79.8		
Y Focus	4437		
Rotate 2	-7.2		
Curve 2	1.2		
Curve 3	-1.4		
Rotate 3	-22.7		
Rotate 4	-40.2		
V Acc (V)	7378.31		
Magnet Mass	330.8		
Source Slit	20.96		
Collector Slit	15.64		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

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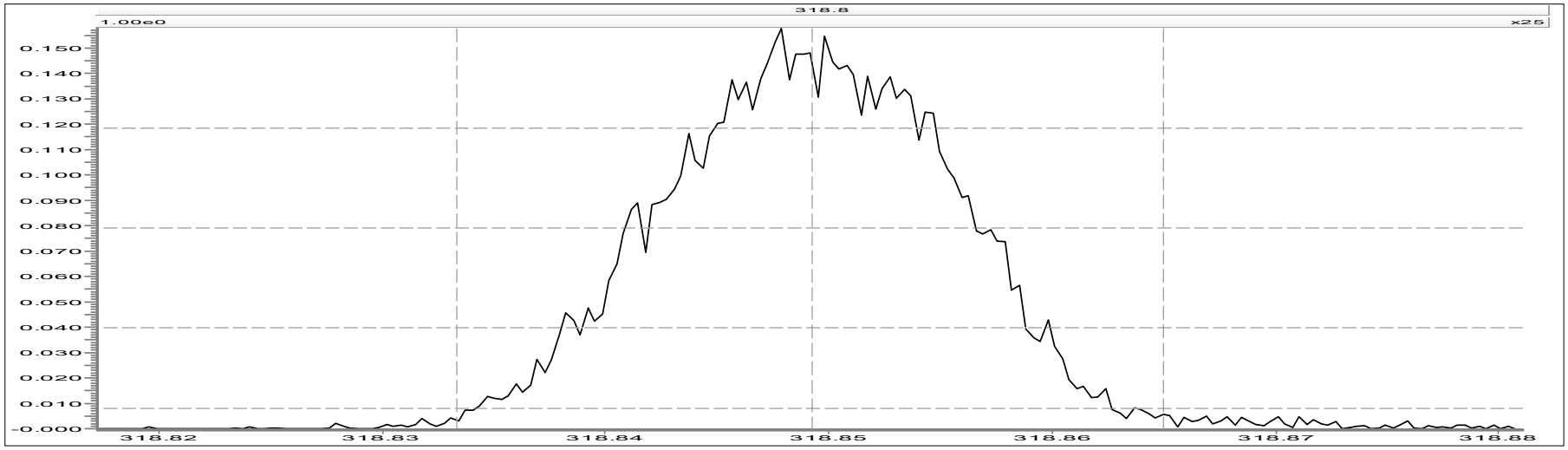


Source (EI+)

Ion Repeller (V)	-7.82
Focus 1	795
Beam Centre	37.1
Focus 2	4281
Temperature (C)	280
Elec Energy (eV)	31.0
Trap Current (uA)	500.0
Y Deflect 1	-141.0
Z Deflect 1	-26.1
Z Deflect 2	6.3
Z Focus 2	2306
Z Focus 3	0
Z Deflect 3	72.5
Y Focus	4451
Rotate 2	-9.0
Curve 2	4.9
Curve 3	2.5
Rotate 3	-22.4
Rotate 4	-44.4
V Acc (V)	7377.66
Magnet Mass	330.9
Source Slit	20.96
Collector Slit	15.10
MIKES Slit	100.00
Alpha	48.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

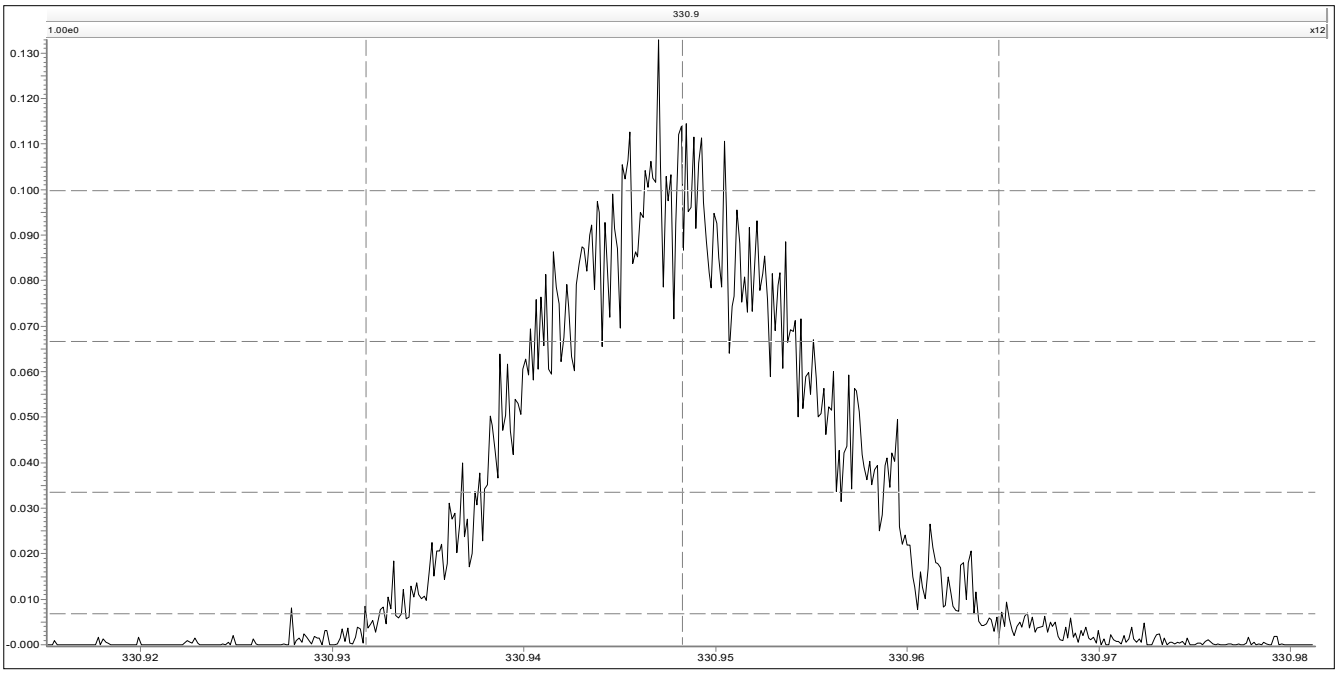
No information

Engineer

No information

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

Printed: Wednesday, June 07, 2023 15:06:14 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-5.09
Focus 1	427
Beam Centre	31.0
Focus 2	4257
Temperature (C)	280
Elec Energy (eV)	31.0
Trap Current (uA)	500.0
Y Deflect 1	-116.4
Z Deflect 1	-15.9
Z Deflect 2	14.8
Z Focus 2	2510
Z Focus 3	0
Z Deflect 3	59.6
Y Focus	4148
Rotate 2	-12.7
Curve 2	6.4
Curve 3	4.5
Rotate 3	-22.6
Rotate 4	-46.6
V Acc (V)	7001.57
Magnet Mass	330.9
Source Slit	20.98
Collector Slit	15.40
MIKES Slit	100.00
Alpha	48.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

Engineer

No information

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

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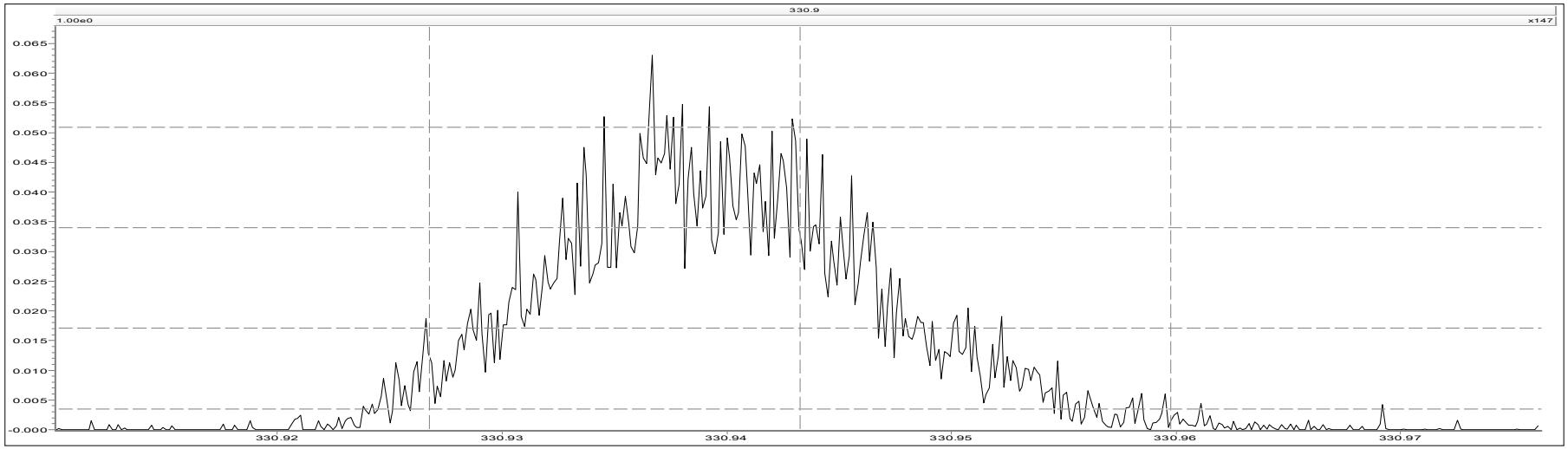

Source (EI+)

Ion Repeller (V)	-5.09	Ion Energy	-5.00
Focus 1	427	Z4 Restrictor	Off
Beam Centre	31.0	Vacc Limit	8000
Focus 2	4257		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-116.4	**Engineer**	
Z Deflect 1	-15.9	No information	
Z Deflect 2	14.8		
Z Focus 2	2510		
Z Focus 3	0		
Z Deflect 3	59.6		
Y Focus	4148		
Rotate 2	-12.7		
Curve 2	6.4		
Curve 3	4.5		
Rotate 3	-22.6		
Rotate 4	-46.6		
V Acc (V)	7001.67		
Magnet Mass	330.9		
Source Slit	20.98		
Collector Slit	15.40		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

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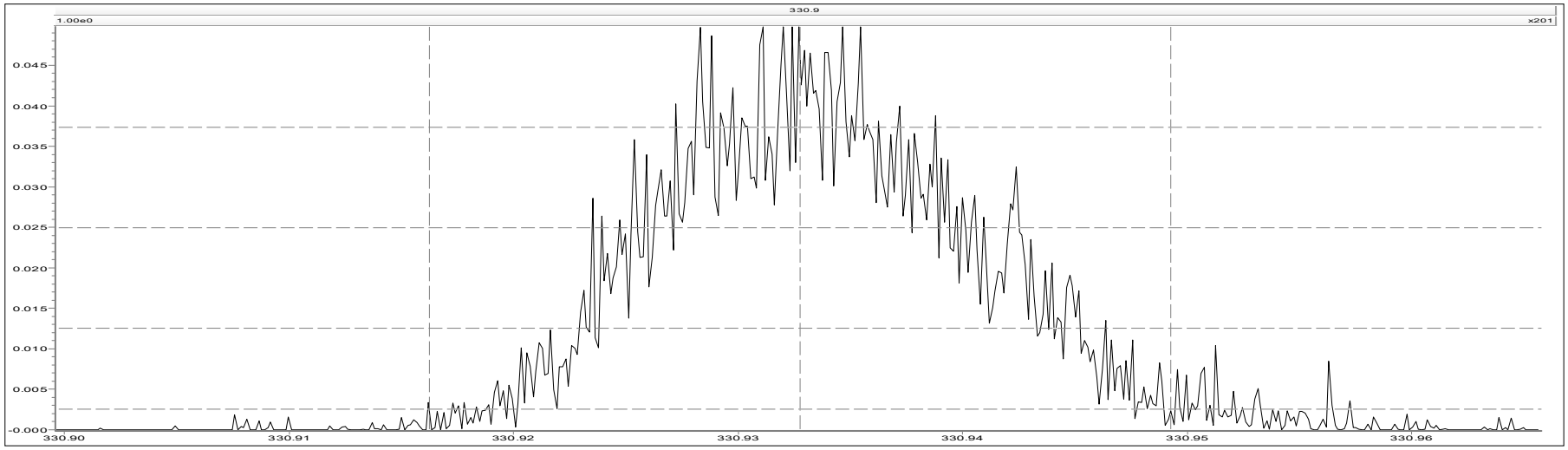

Source (EI+)

Ion Repeller (V)	-4.64	Ion Energy	-5.00
Focus 1	460	Z4 Restrictor	Off
Beam Centre	28.4	Vacc Limit	8000
Focus 2	4303		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-116.0	**Engineer**	
Z Deflect 1	-15.9	No information	
Z Deflect 2	14.8		
Z Focus 2	2510		
Z Focus 3	0		
Z Deflect 3	59.6		
Y Focus	4148		
Rotate 2	-12.7		
Curve 2	6.4		
Curve 3	4.5		
Rotate 3	-22.6		
Rotate 4	-46.6		
V Acc (V)	7001.90		
Magnet Mass	330.9		
Source Slit	20.98		
Collector Slit	15.40		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

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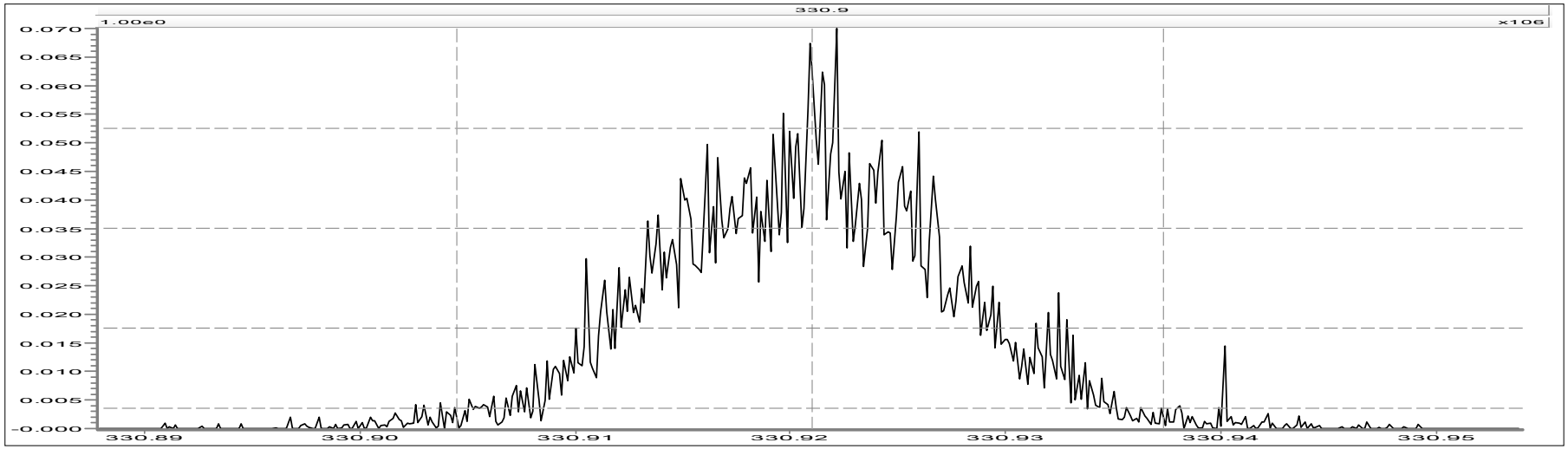

Source (EI+)

Ion Repeller (V)	-5.67	Ion Energy	-5.00
Focus 1	454	Z4 Restrictor	Off
Beam Centre	26.8	Vacc Limit	8000
Focus 2	4294		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-122.2	**Engineer**	
Z Deflect 1	-4.1	No information	
Z Deflect 2	5.9		
Z Focus 2	2550		
Z Focus 3	0		
Z Deflect 3	56.1		
Y Focus	4148		
Rotate 2	-12.0		
Curve 2	4.3		
Curve 3	2.4		
Rotate 3	-16.5		
Rotate 4	-32.2		
V Acc (V)	7002.13		
Magnet Mass	330.9		
Source Slit	20.08		
Collector Slit	15.16		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

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Minneapolis, MN 55414
Phone: 612.607.1700
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www.pacelabs.com

Appendix F

QC Raw Data

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Homologue Group: Tetras

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

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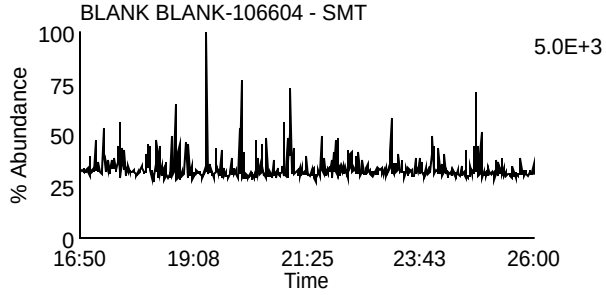

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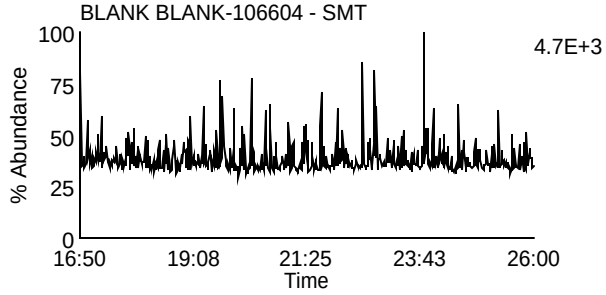

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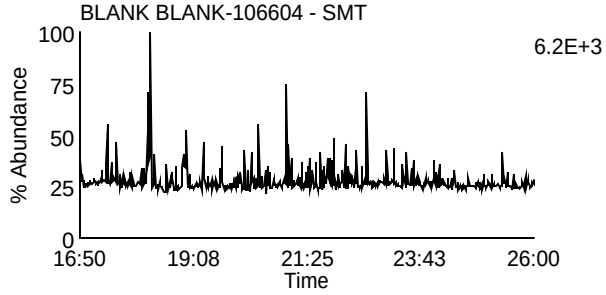

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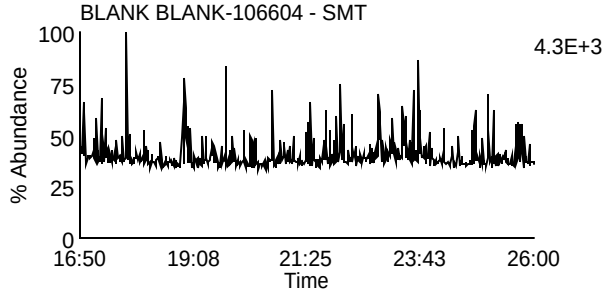

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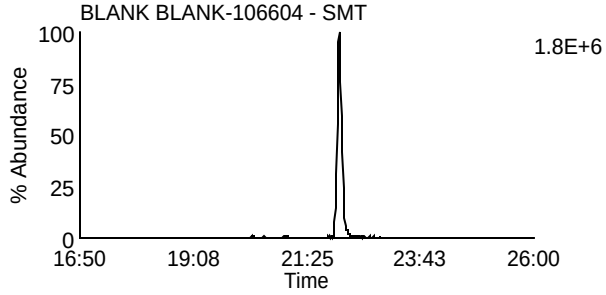

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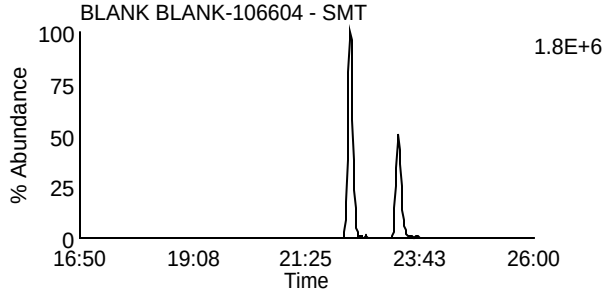

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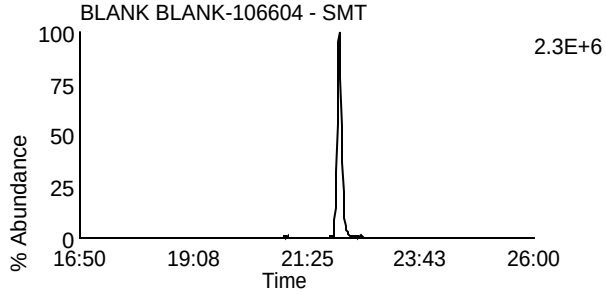

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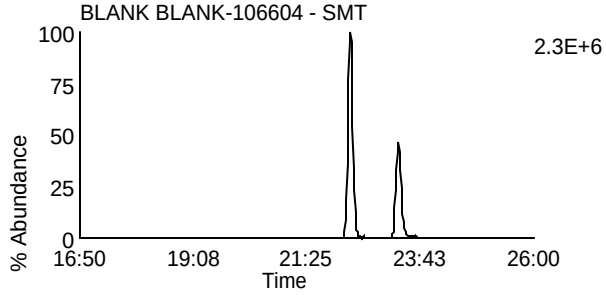

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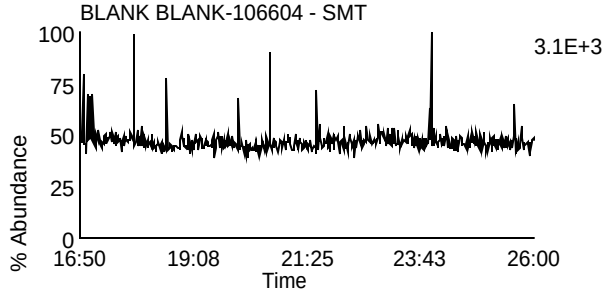

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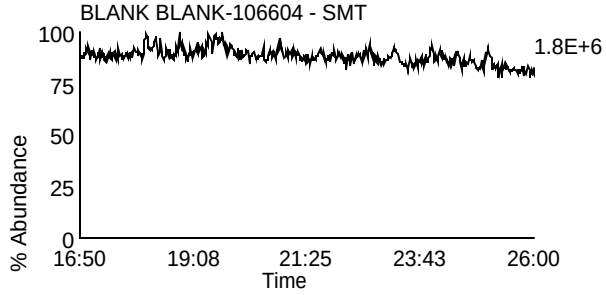

Homologue Group: Penta & Cleanup

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

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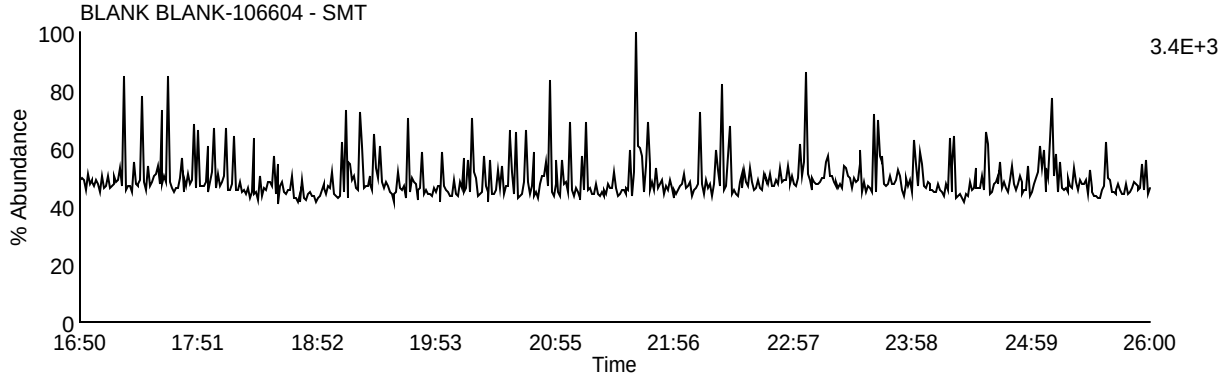

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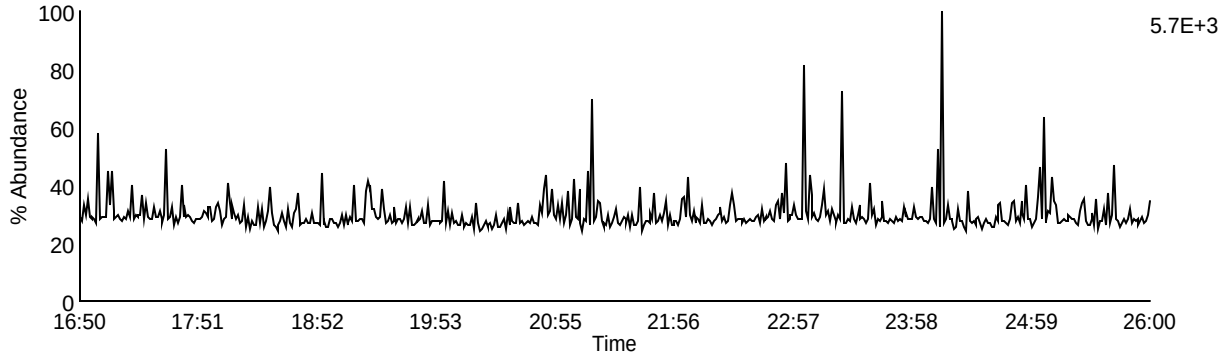

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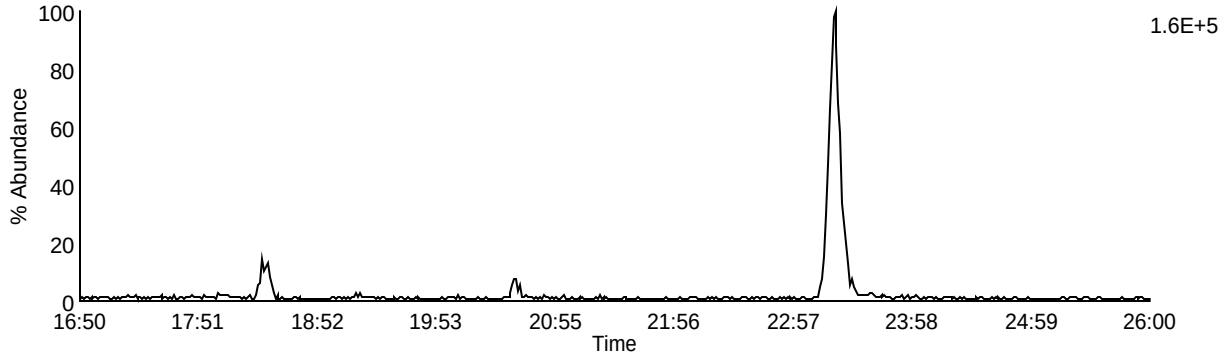

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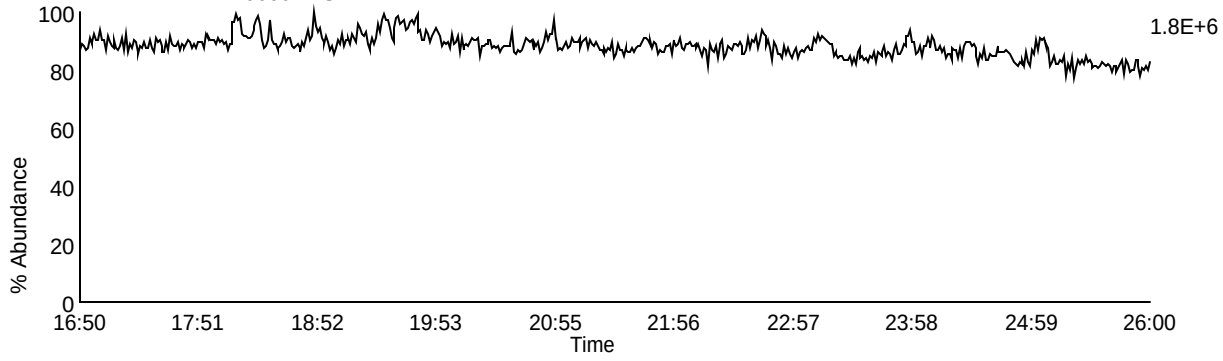

Homologue Group: Pentas

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

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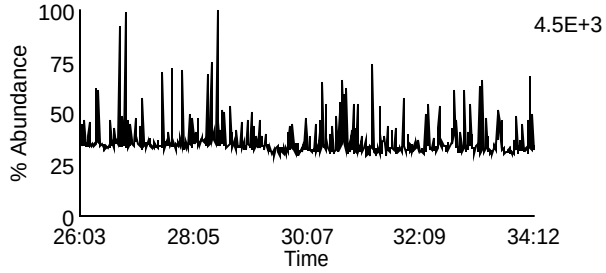

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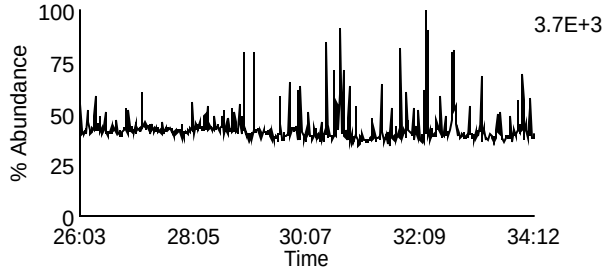

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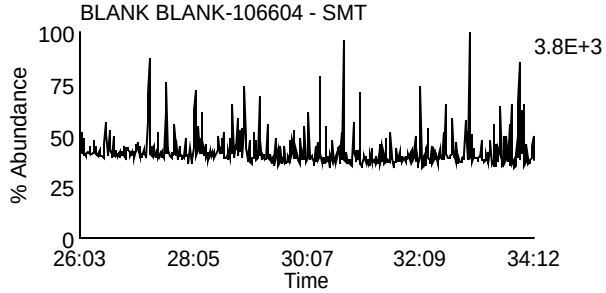

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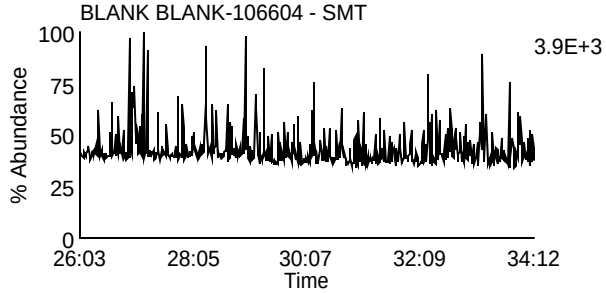

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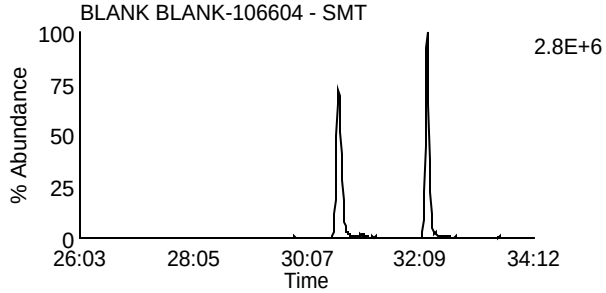

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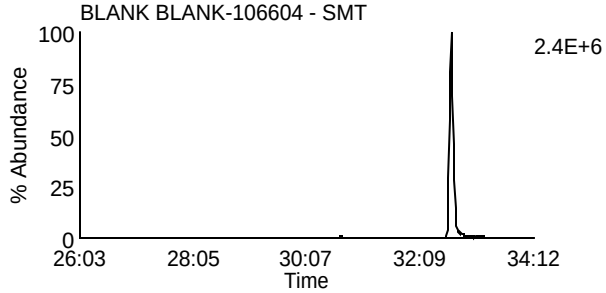

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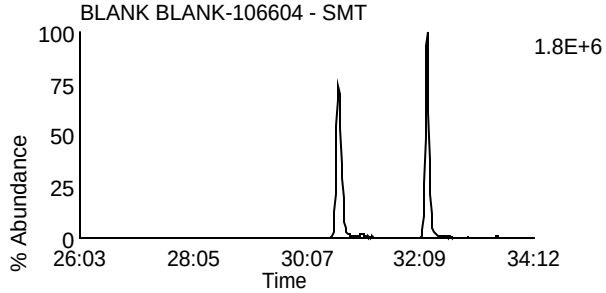

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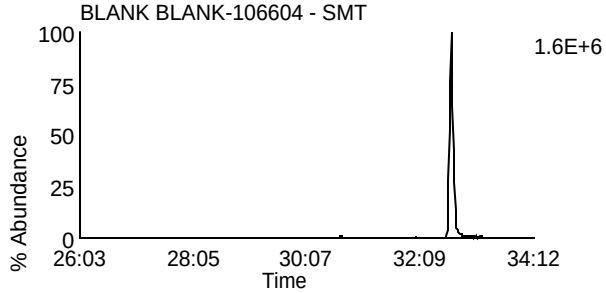

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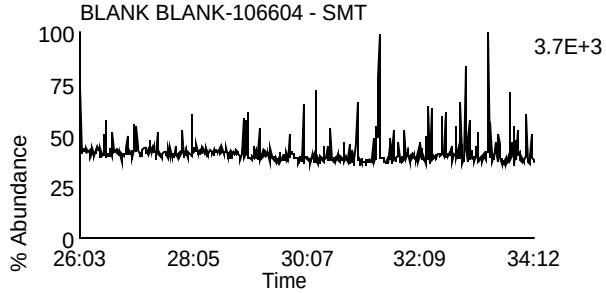
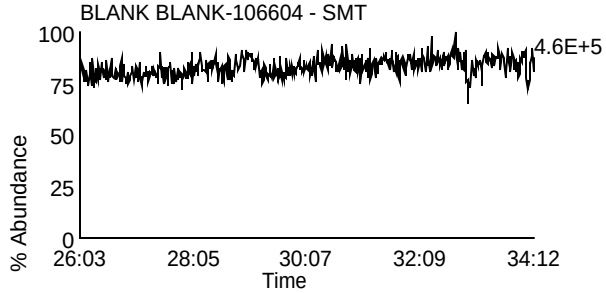


Data File: U230608A_04 G2 C6 - 354.9792
BLANK BLANK-106604 - SMT

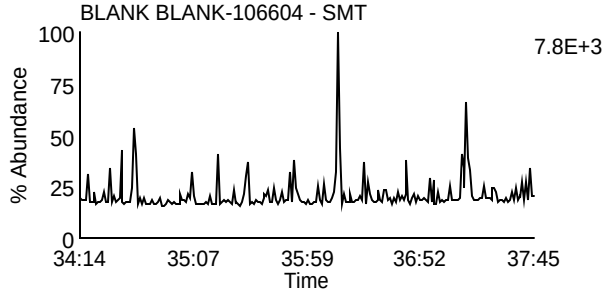


Homologue Group: Hexas

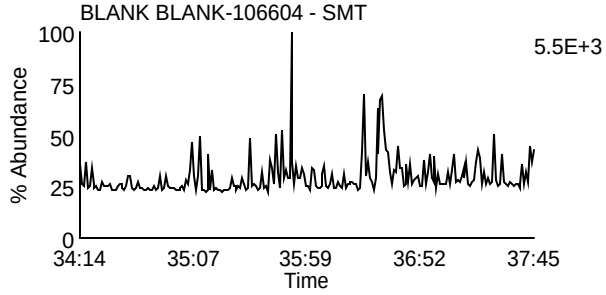
Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

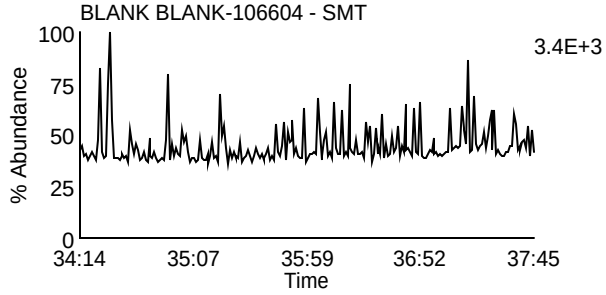
Data File: U230608A_04 G3 C1 - 373.8207
BLANK BLANK-106604 - SMT



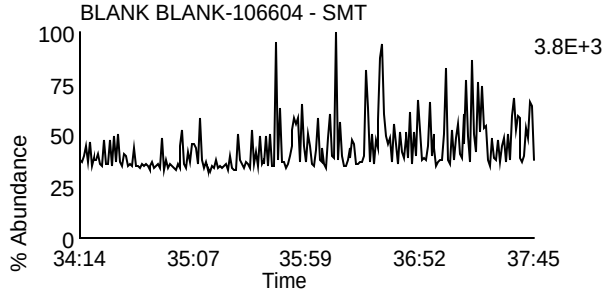
Data File: U230608A_04 G3 C7 - 389.8156
BLANK BLANK-106604 - SMT



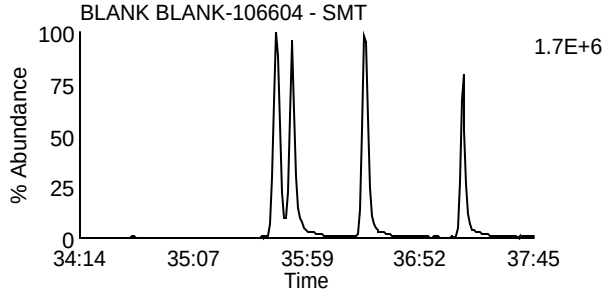
Data File: U230608A_04 G3 C2 - 375.8178
BLANK BLANK-106604 - SMT



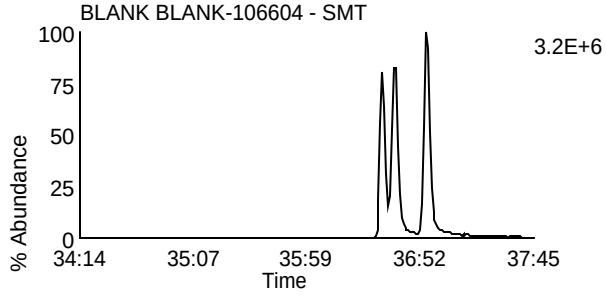
Data File: U230608A_04 G3 C8 - 391.8127
BLANK BLANK-106604 - SMT



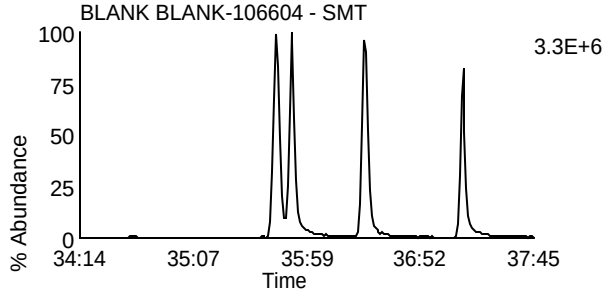
Data File: U230608A_04 G3 C5 - 383.8639
BLANK BLANK-106604 - SMT



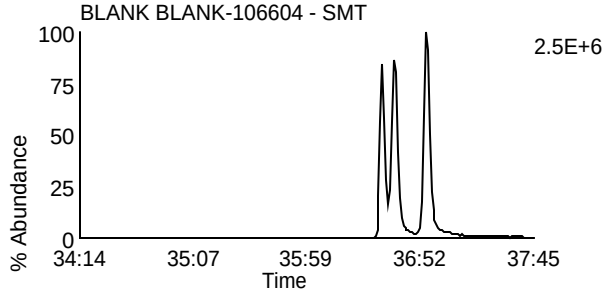
Data File: U230608A_04 G3 C9 - 401.8559
BLANK BLANK-106604 - SMT



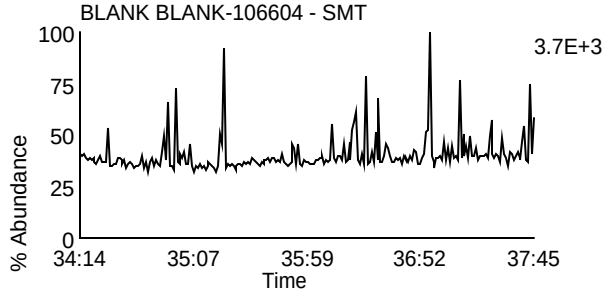
Data File: U230608A_04 G3 C6 - 385.861
BLANK BLANK-106604 - SMT



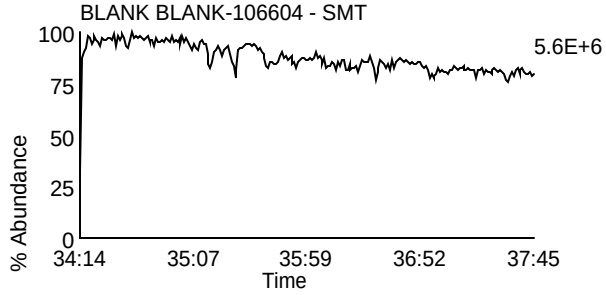
Data File: U230608A_04 G3 C10 - 403.8529
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C11 - 445.7555
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C3 - 380.976
BLANK BLANK-106604 - SMT

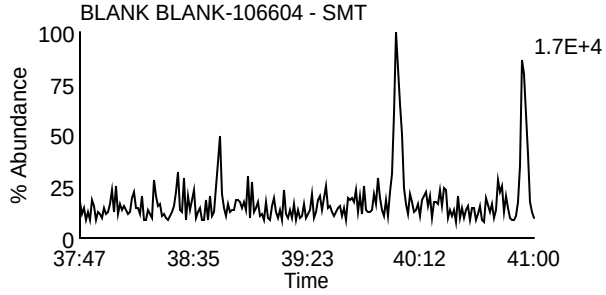


Homologue Group: Heptas

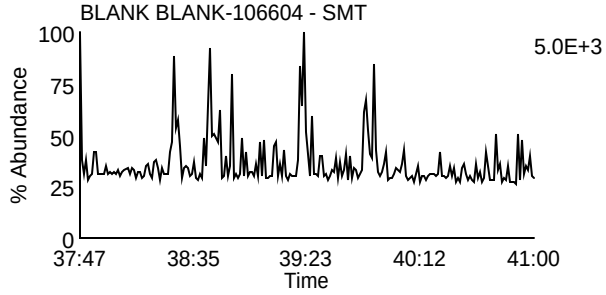
Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

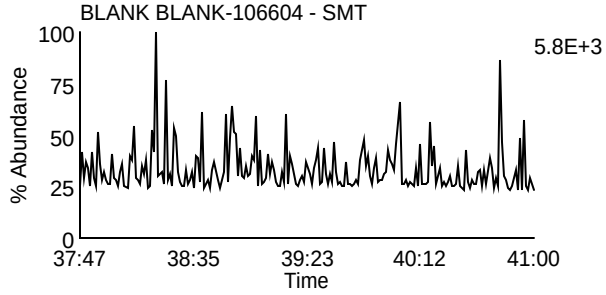
Data File: U230608A_04 G4 C3 - 407.7818
BLANK BLANK-106604 - SMT



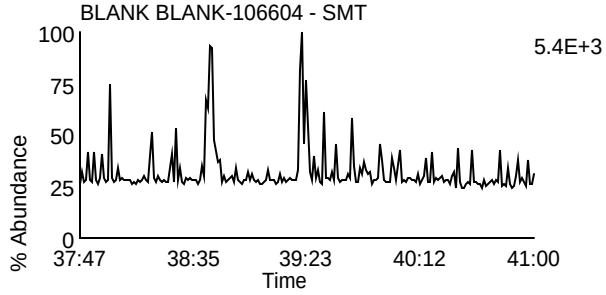
Data File: U230608A_04 G4 C8 - 423.7767
BLANK BLANK-106604 - SMT



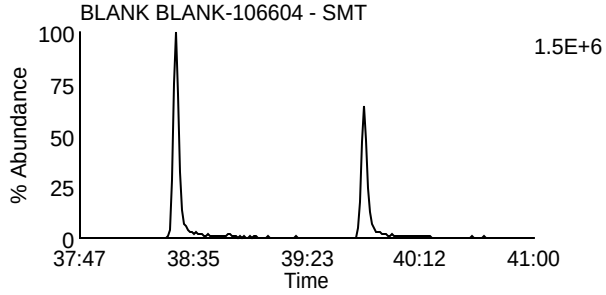
Data File: U230608A_04 G4 C4 - 409.7788
BLANK BLANK-106604 - SMT



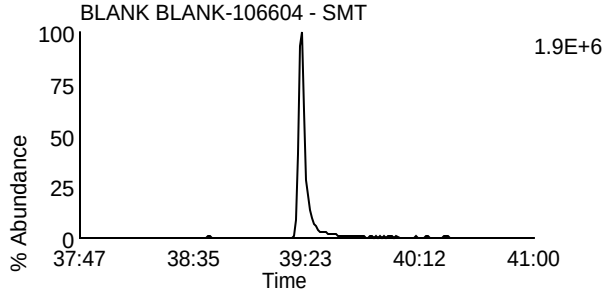
Data File: U230608A_04 G4 C9 - 425.7737
BLANK BLANK-106604 - SMT



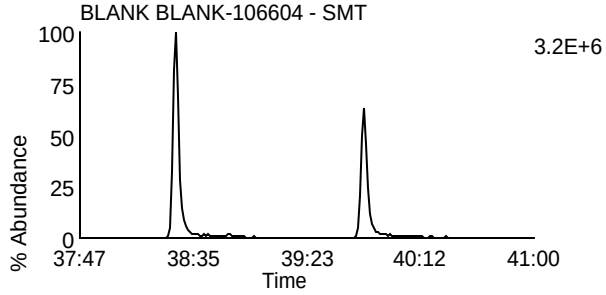
Data File: U230608A_04 G4 C6 - 417.825
BLANK BLANK-106604 - SMT



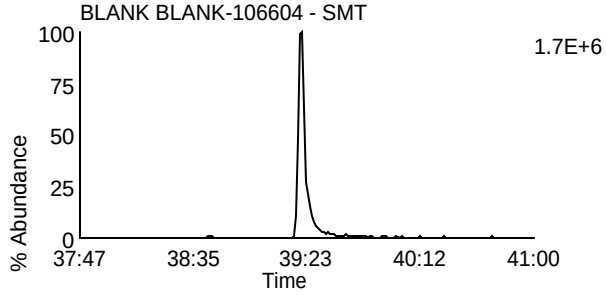
Data File: U230608A_04 G4 C11 - 435.8169
BLANK BLANK-106604 - SMT



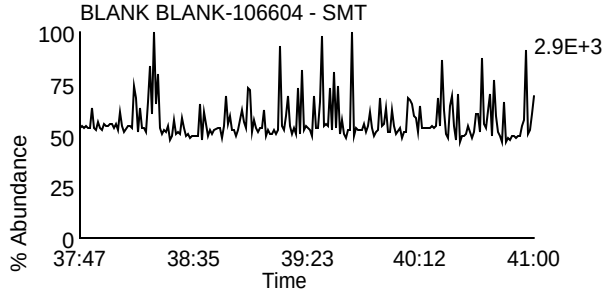
Data File: U230608A_04 G4 C7 - 419.822
BLANK BLANK-106604 - SMT



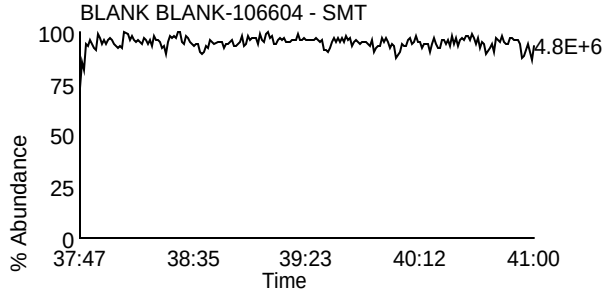
Data File: U230608A_04 G4 C12 - 437.814
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G4 C13 - 479.7165
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G4 C1 - 380.976
BLANK BLANK-106604 - SMT

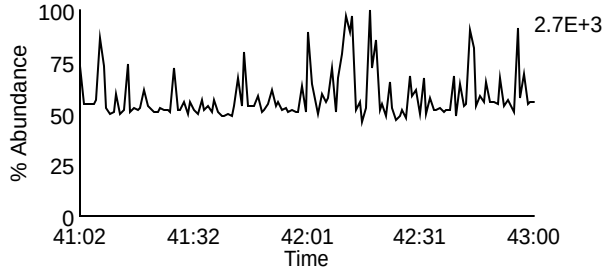


Homologue Group: Octas

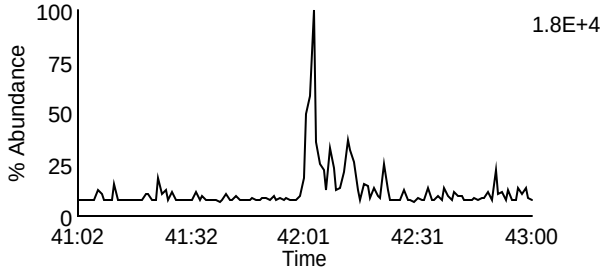
Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

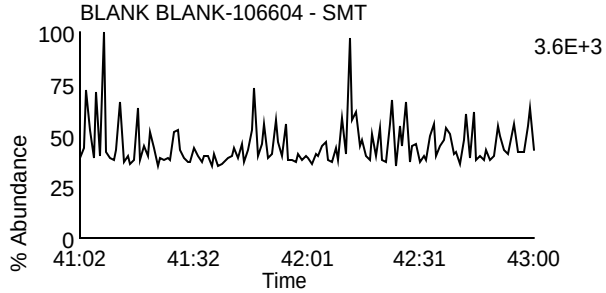
Data File: U230608A_04 G5 C4 - 441.7428
BLANK BLANK-106604 - SMT



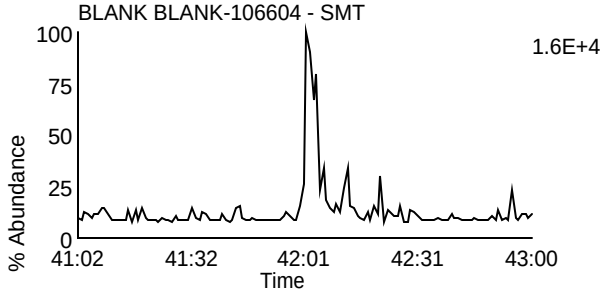
Data File: U230608A_04 G5 C8 - 457.7377
BLANK BLANK-106604 - SMT



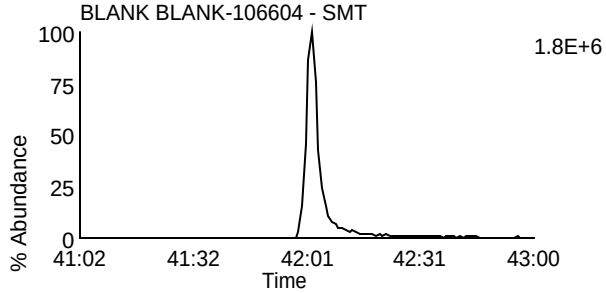
Data File: U230608A_04 G5 C5 - 443.7398
BLANK BLANK-106604 - SMT



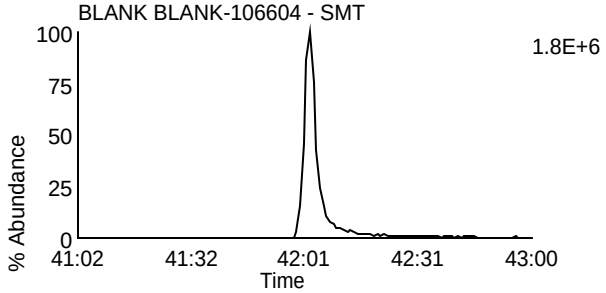
Data File: U230608A_04 G5 C9 - 459.7347
BLANK BLANK-106604 - SMT



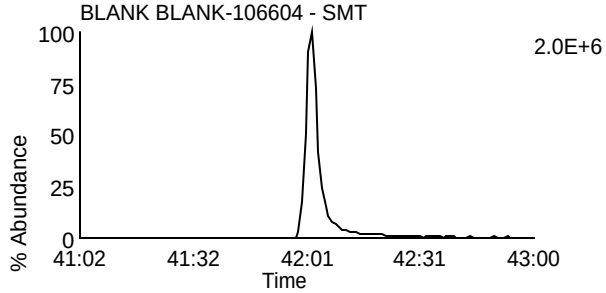
Data File: U230608A_04 G5 C11 - 469.7779
BLANK BLANK-106604 - SMT



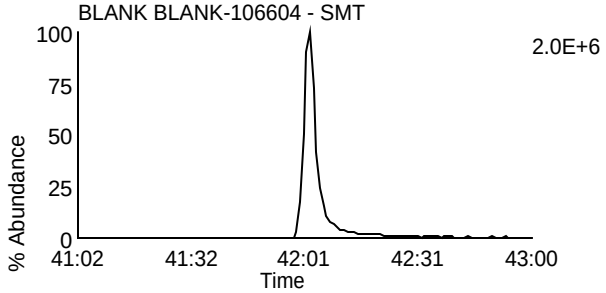
Data File: U230608A_04 G5 C11 - 469.7779
BLANK BLANK-106604 - SMT



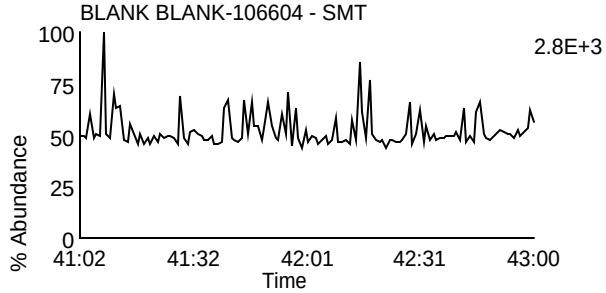
Data File: U230608A_04 G5 C12 - 471.7749
BLANK BLANK-106604 - SMT



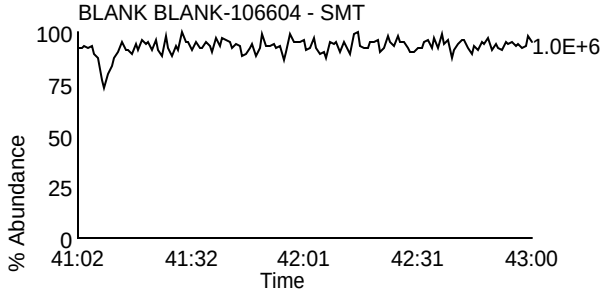
Data File: U230608A_04 G5 C12 - 471.7749
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G5 C13 - 513.6775
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G5 C2 - 430.9728
BLANK BLANK-106604 - SMT

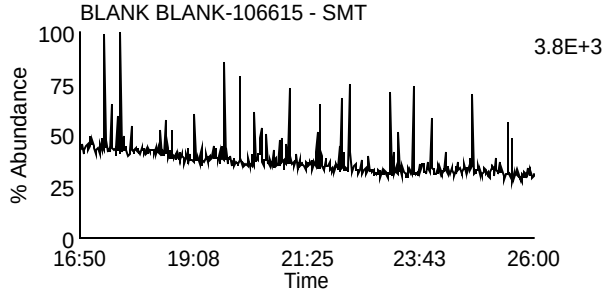


Homologue Group: Tetras

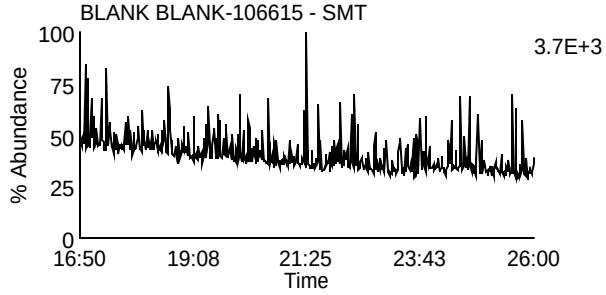
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

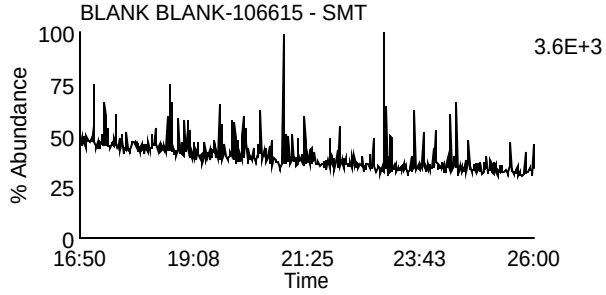
Data File: U230608B_10 G1 C1 - 303.9016
BLANK BLANK-106615 - SMT



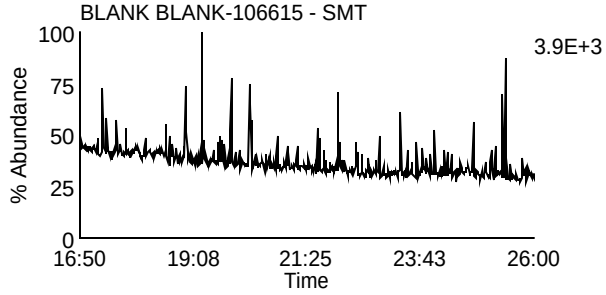
Data File: U230608B_10 G1 C7 - 319.8965
BLANK BLANK-106615 - SMT



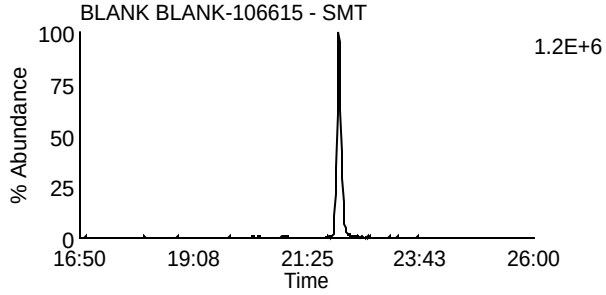
Data File: U230608B_10 G1 C2 - 305.8987
BLANK BLANK-106615 - SMT



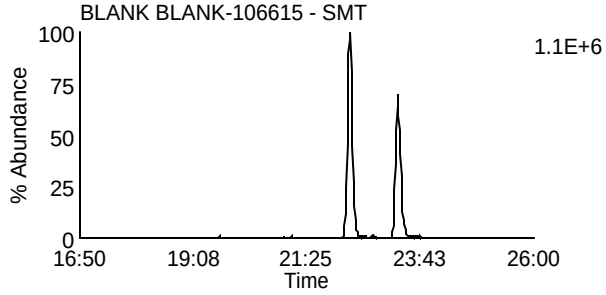
Data File: U230608B_10 G1 C8 - 321.8936
BLANK BLANK-106615 - SMT



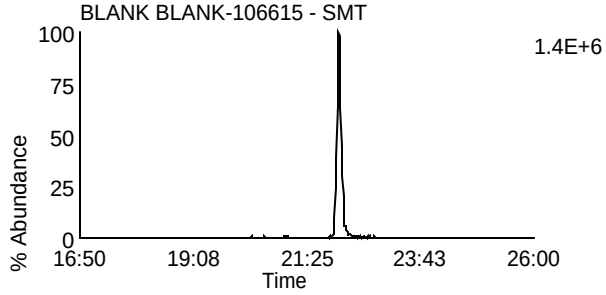
Data File: U230608B_10 G1 C3 - 315.9418
BLANK BLANK-106615 - SMT



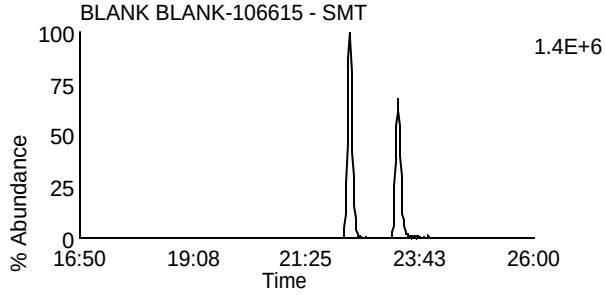
Data File: U230608B_10 G1 C10 - 331.9367
BLANK BLANK-106615 - SMT



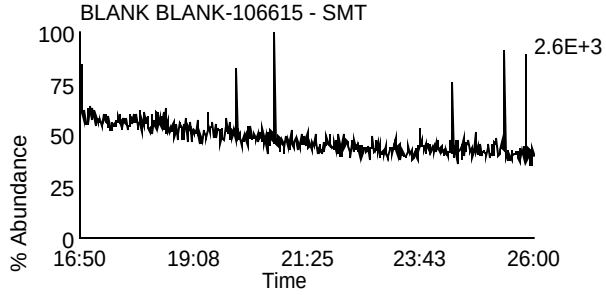
Data File: U230608B_10 G1 C4 - 317.9389
BLANK BLANK-106615 - SMT



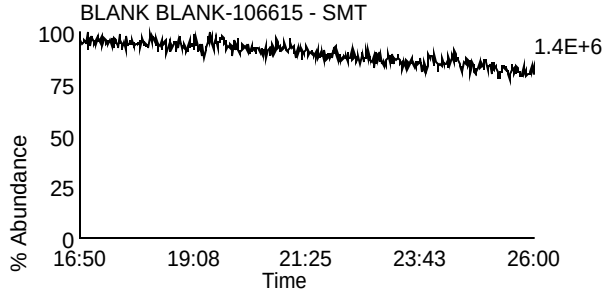
Data File: U230608B_10 G1 C11 - 333.9338
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C14 - 375.8364
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C5 - 318.9792
BLANK BLANK-106615 - SMT

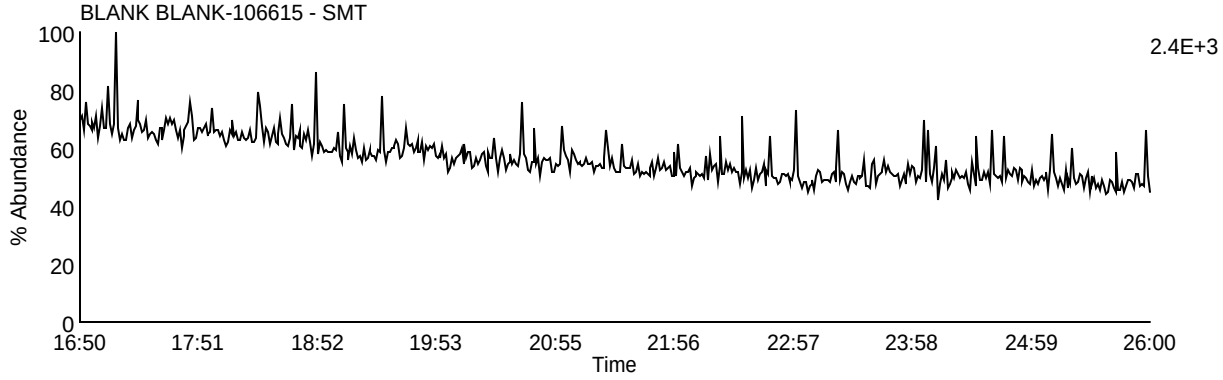


Homologue Group: Penta & Cleanup

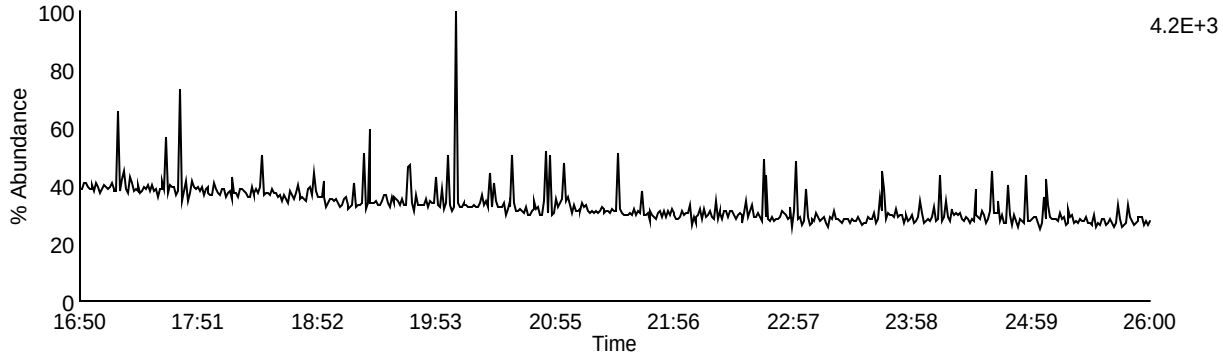
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

Data File: U230608B_10 G1 C12 - 339.8597
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C13 - 341.8567
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C9 - 327.8847
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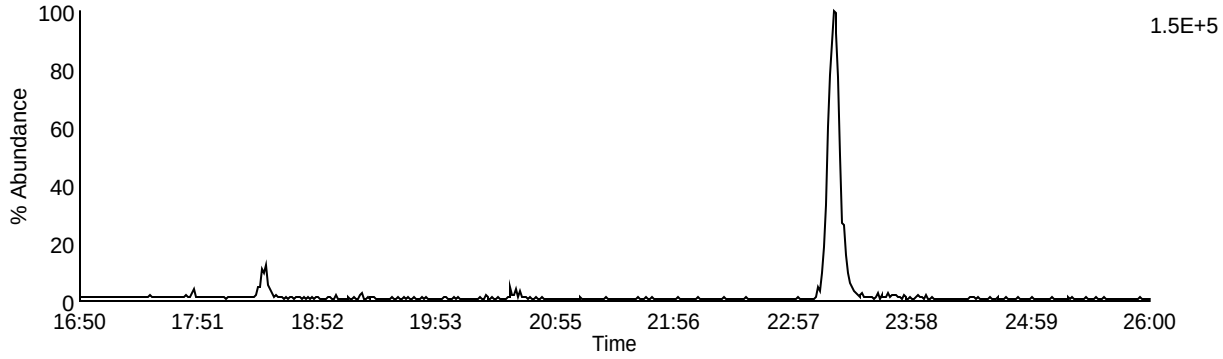
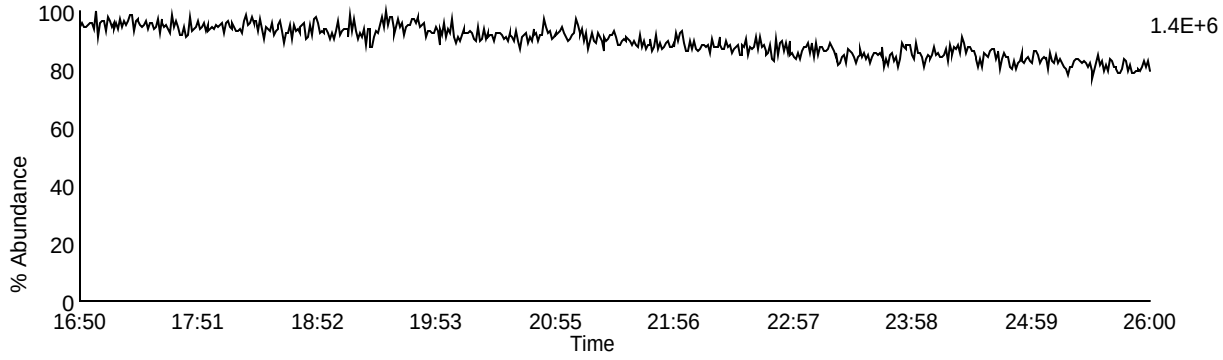


Data File: U230608B_10 G1 C5 - 318.9792
BLANK BLANK-106615 - SMT

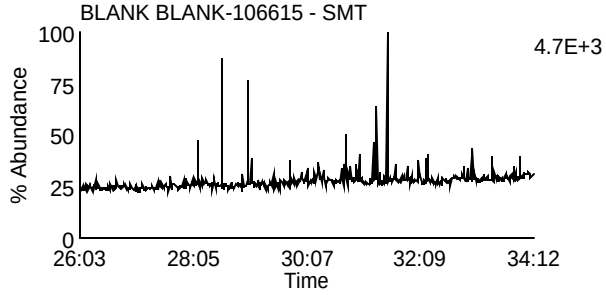


Homologue Group: Pentas

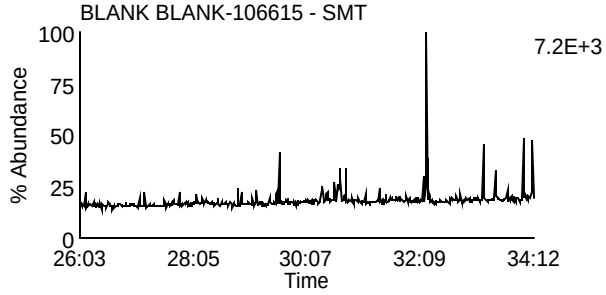
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

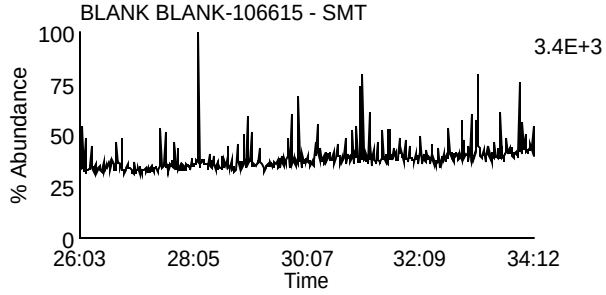
Data File: U230608B_10 G2 C1 - 339.8597
BLANK BLANK-106615 - SMT



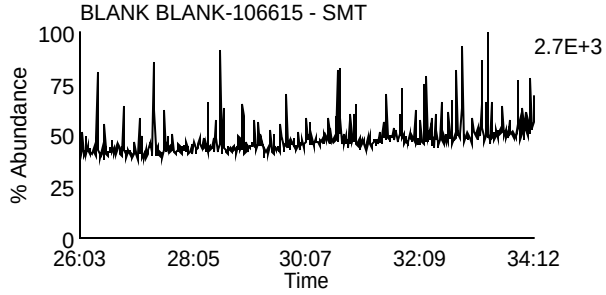
Data File: U230608B_10 G2 C4 - 353.8576
BLANK BLANK-106615 - SMT



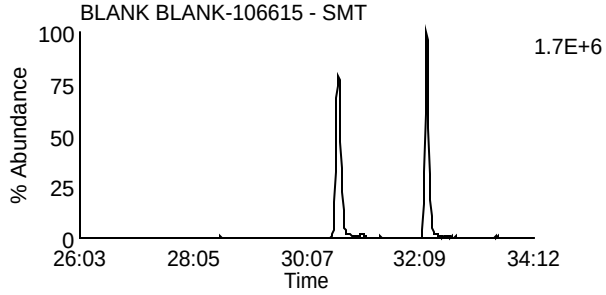
Data File: U230608B_10 G2 C2 - 341.8567
BLANK BLANK-106615 - SMT



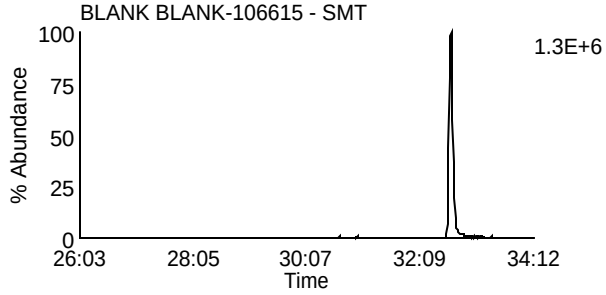
Data File: U230608B_10 G2 C8 - 355.8546
BLANK BLANK-106615 - SMT



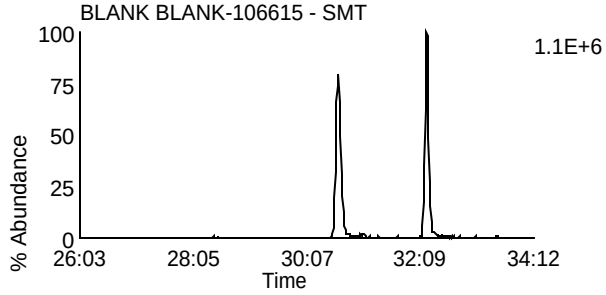
Data File: U230608B_10 G2 C3 - 351.8999
BLANK BLANK-106615 - SMT



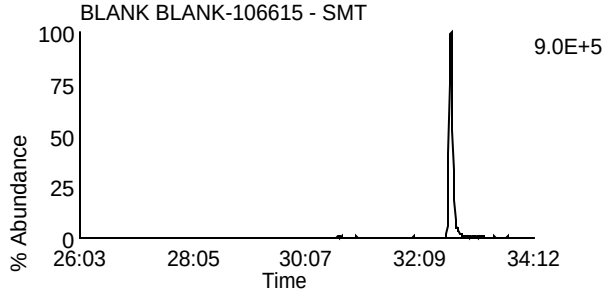
Data File: U230608B_10 G2 C10 - 367.8948
BLANK BLANK-106615 - SMT



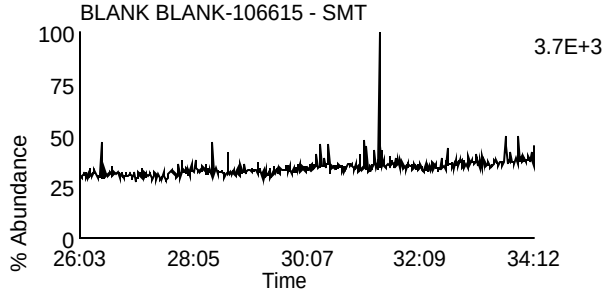
Data File: U230608B_10 G2 C5 - 353.8969
BLANK BLANK-106615 - SMT



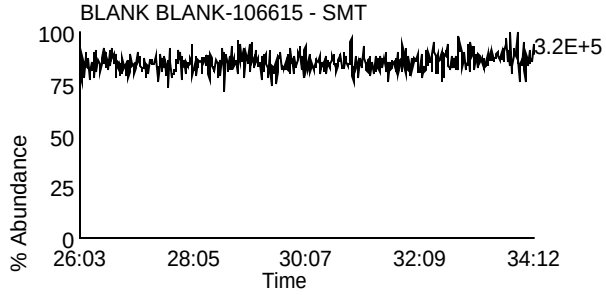
Data File: U230608B_10 G2 C11 - 369.8918
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G2 C12 - 409.7974
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G2 C6 - 354.9792
BLANK BLANK-106615 - SMT

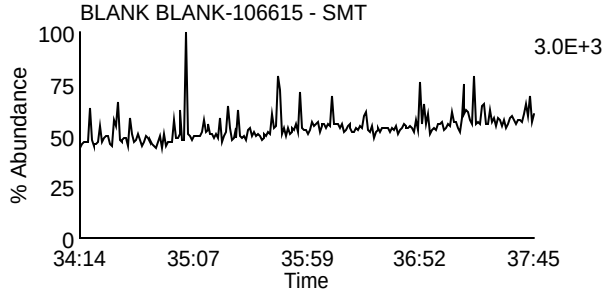


Homologue Group: Hexas

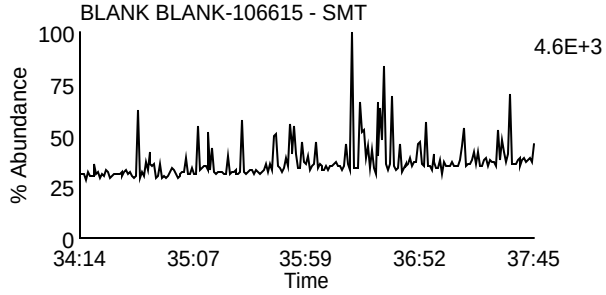
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

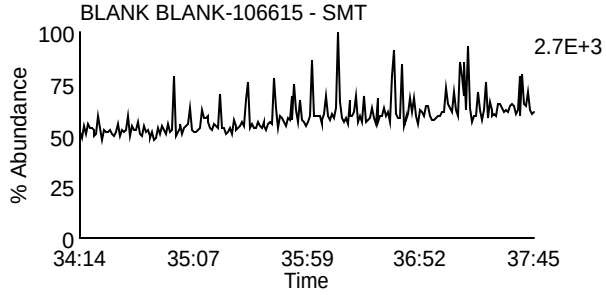
Data File: U230608B_10 G3 C1 - 373.8207
BLANK BLANK-106615 - SMT



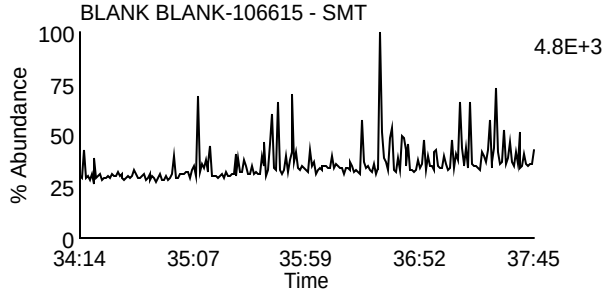
Data File: U230608B_10 G3 C7 - 389.8156
BLANK BLANK-106615 - SMT



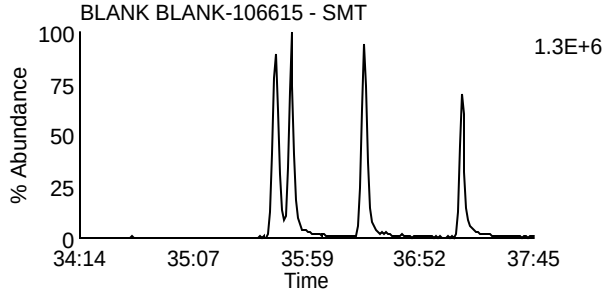
Data File: U230608B_10 G3 C2 - 375.8178
BLANK BLANK-106615 - SMT



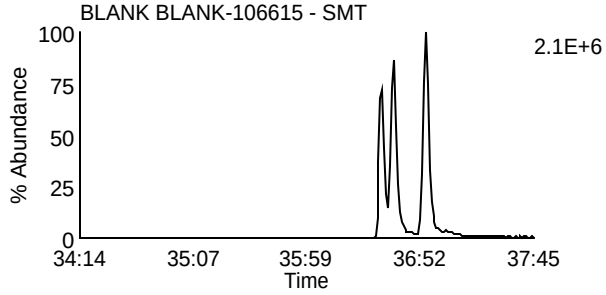
Data File: U230608B_10 G3 C8 - 391.8127
BLANK BLANK-106615 - SMT



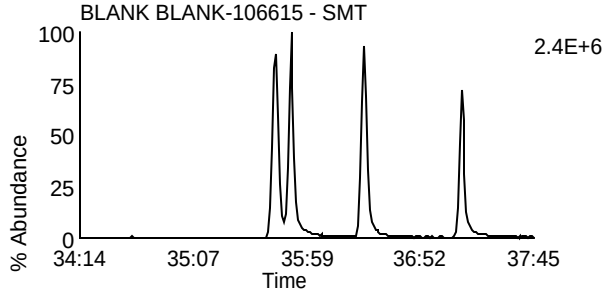
Data File: U230608B_10 G3 C5 - 383.8639
BLANK BLANK-106615 - SMT



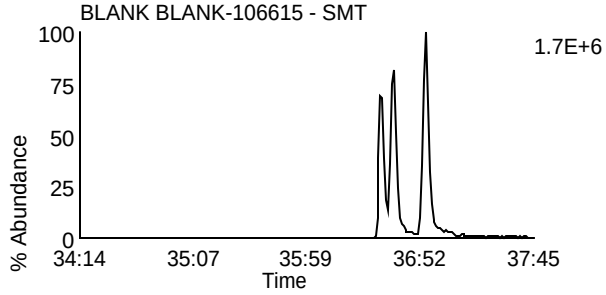
Data File: U230608B_10 G3 C9 - 401.8559
BLANK BLANK-106615 - SMT



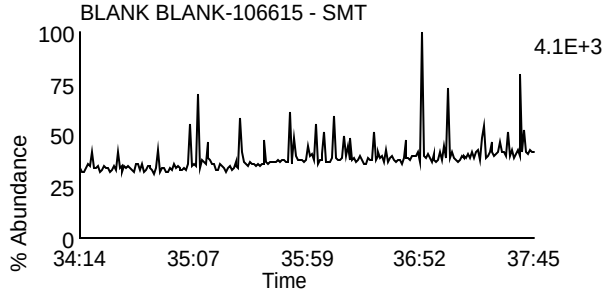
Data File: U230608B_10 G3 C6 - 385.861
BLANK BLANK-106615 - SMT



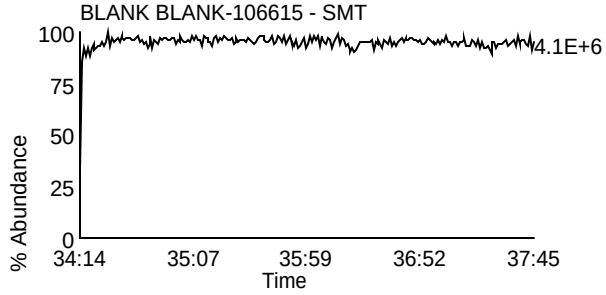
Data File: U230608B_10 G3 C10 - 403.8529
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C11 - 445.7555
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C3 - 380.976
BLANK BLANK-106615 - SMT

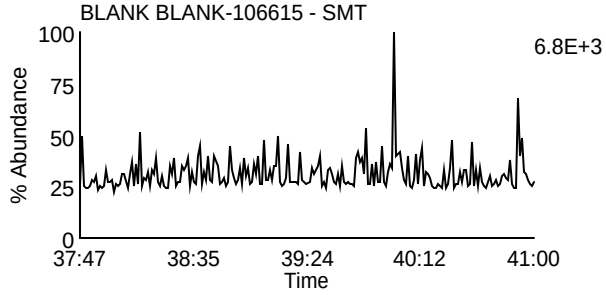


Homologue Group: Heptas

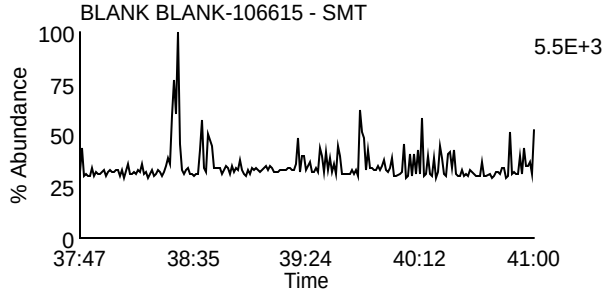
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

Data File: U230608B_10 G4 C3 - 407.7818
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C8 - 423.7767
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C4 - 409.7788
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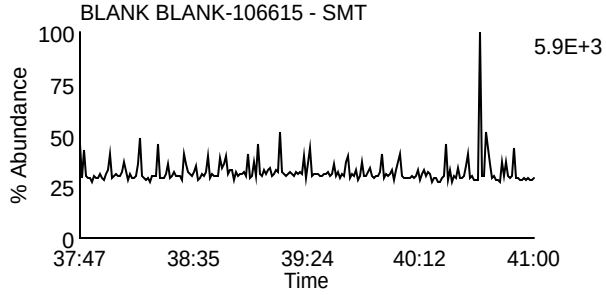

Data File: U230608B_10 G4 C9 - 425.7737
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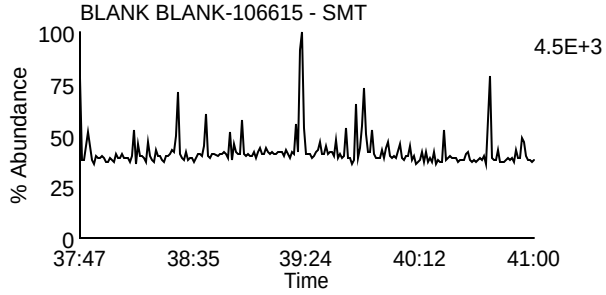
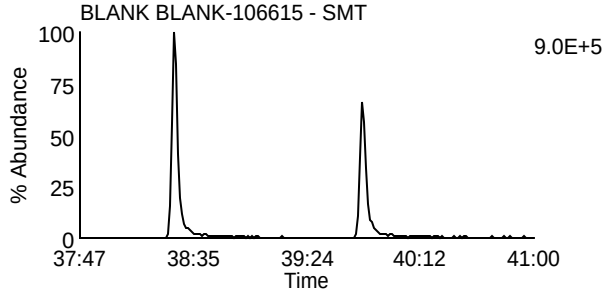
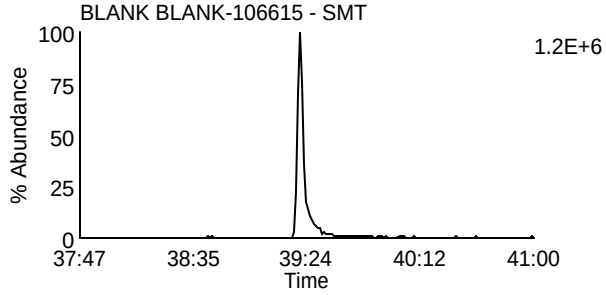


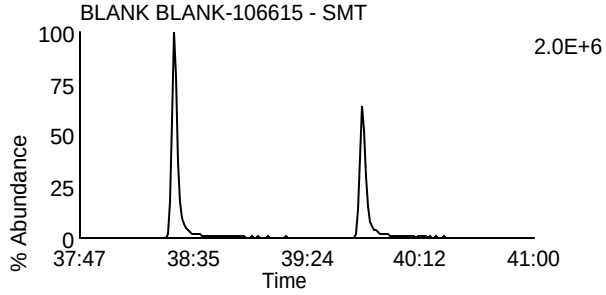
Data File: U230608B_10 G4 C6 - 417.825
BLANK BLANK-106615 - SMT



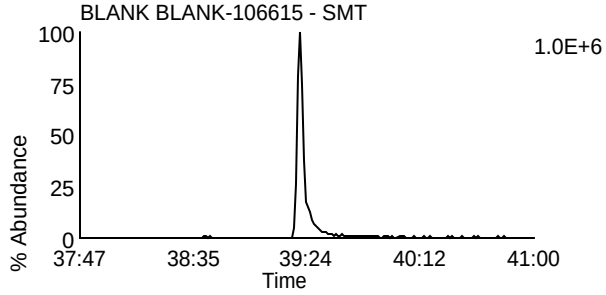
Data File: U230608B_10 G4 C11 - 435.8169
BLANK BLANK-106615 - SMT



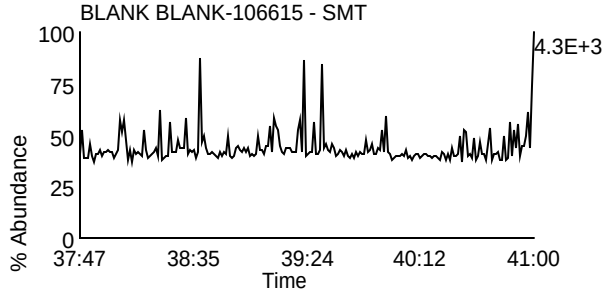
Data File: U230608B_10 G4 C7 - 419.822
BLANK BLANK-106615 - SMT



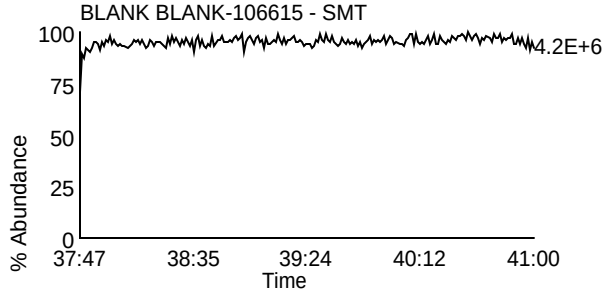
Data File: U230608B_10 G4 C12 - 437.814
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C13 - 479.7165
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C1 - 380.976
BLANK BLANK-106615 - SMT

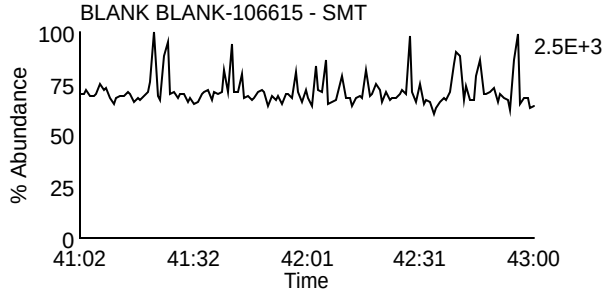


Homologue Group: Octas

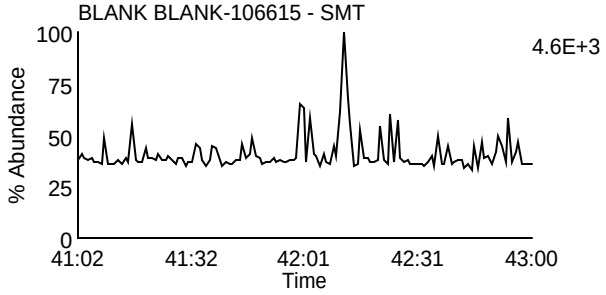
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

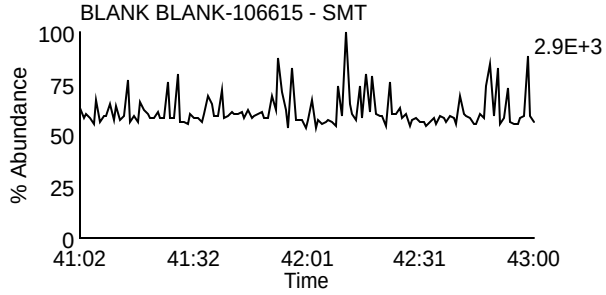
Data File: U230608B_10 G5 C4 - 441.7428
BLANK BLANK-106615 - SMT



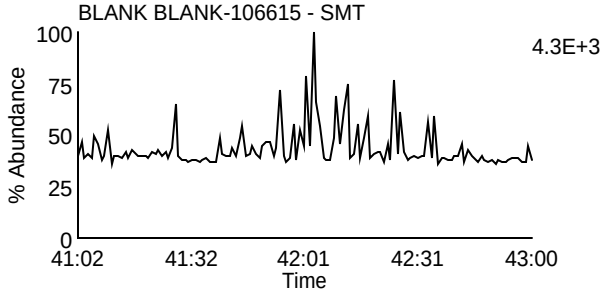
Data File: U230608B_10 G5 C8 - 457.7377
BLANK BLANK-106615 - SMT



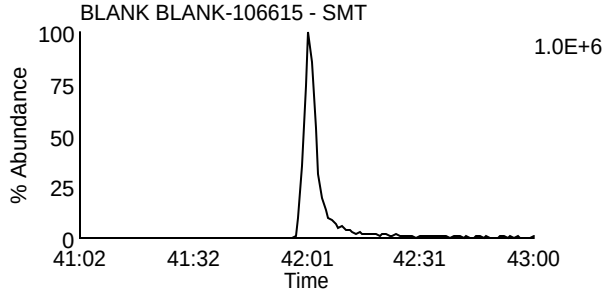
Data File: U230608B_10 G5 C5 - 443.7398
BLANK BLANK-106615 - SMT



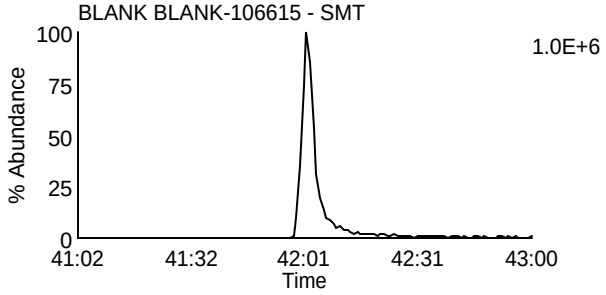
Data File: U230608B_10 G5 C9 - 459.7347
BLANK BLANK-106615 - SMT



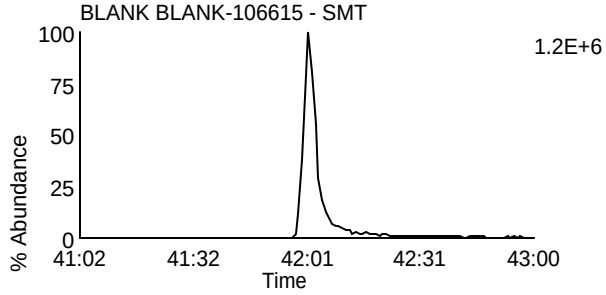
Data File: U230608B_10 G5 C11 - 469.7779
BLANK BLANK-106615 - SMT



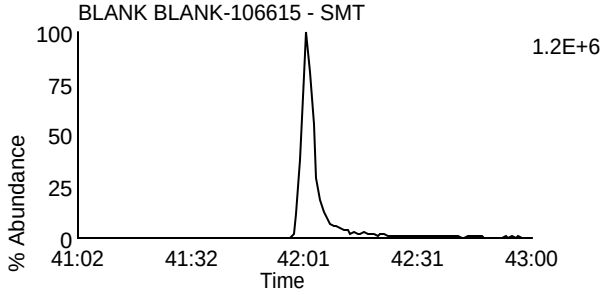
Data File: U230608B_10 G5 C11 - 469.7779
BLANK BLANK-106615 - SMT



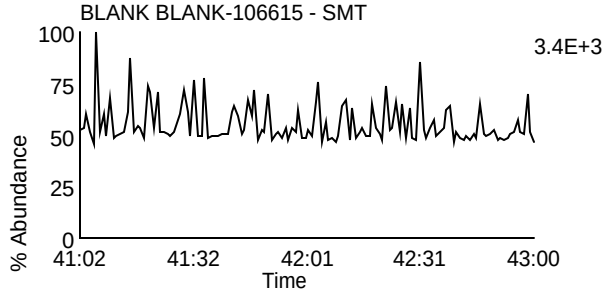
Data File: U230608B_10 G5 C12 - 471.7749
BLANK BLANK-106615 - SMT



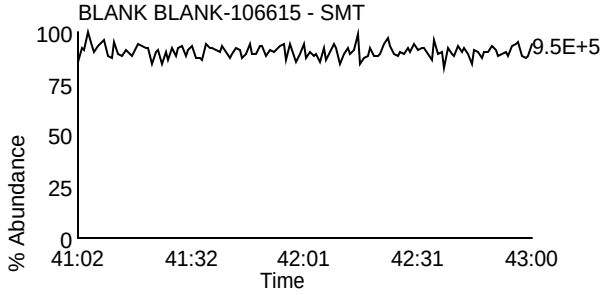
Data File: U230608B_10 G5 C12 - 471.7749
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G5 C13 - 513.6775
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G5 C2 - 430.9728
BLANK BLANK-106615 - SMT

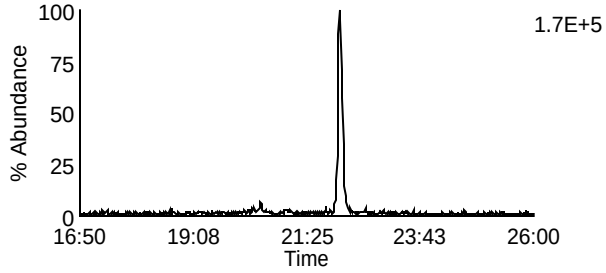


Homologue Group: Tetras

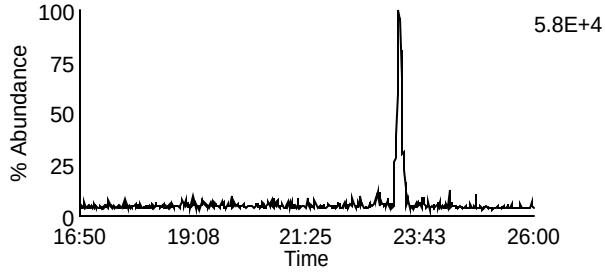
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

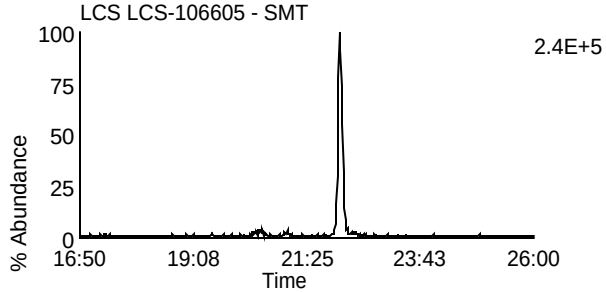
Data File: U230608A_02 G1 C1 - 303.9016
LCS LCS-106605 - SMT



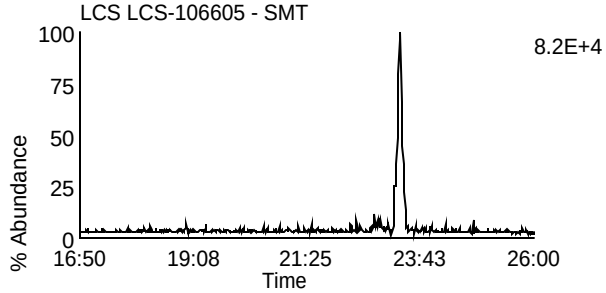
Data File: U230608A_02 G1 C7 - 319.8965
LCS LCS-106605 - SMT



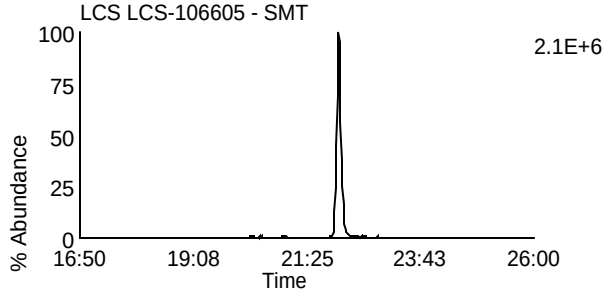
Data File: U230608A_02 G1 C2 - 305.8987
LCS LCS-106605 - SMT



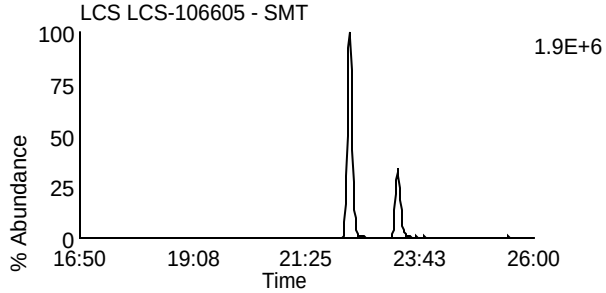
Data File: U230608A_02 G1 C8 - 321.8936
LCS LCS-106605 - SMT



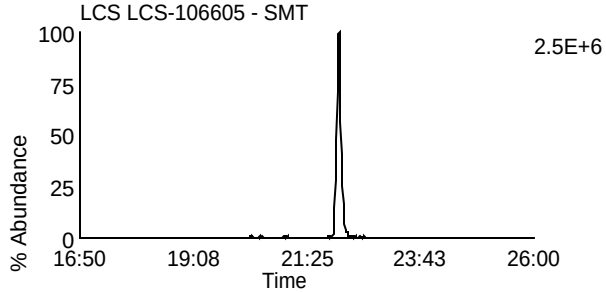
Data File: U230608A_02 G1 C3 - 315.9418
LCS LCS-106605 - SMT



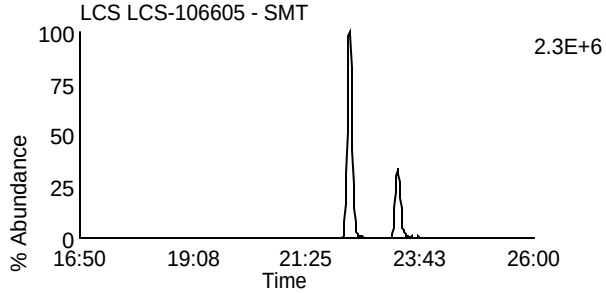
Data File: U230608A_02 G1 C10 - 331.9367
LCS LCS-106605 - SMT



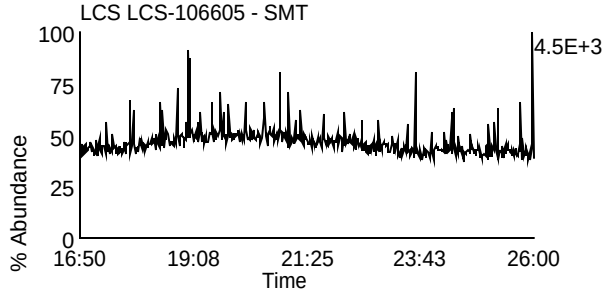
Data File: U230608A_02 G1 C4 - 317.9389
LCS LCS-106605 - SMT



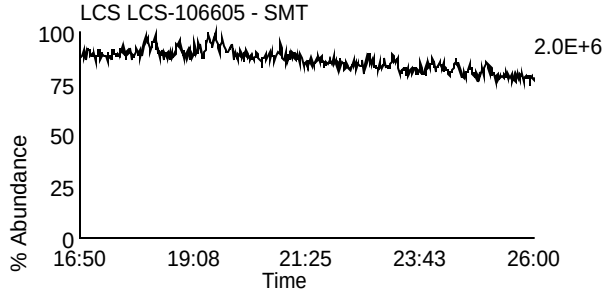
Data File: U230608A_02 G1 C11 - 333.9338
LCS LCS-106605 - SMT



Data File: U230608A_02 G1 C14 - 375.8364
LCS LCS-106605 - SMT



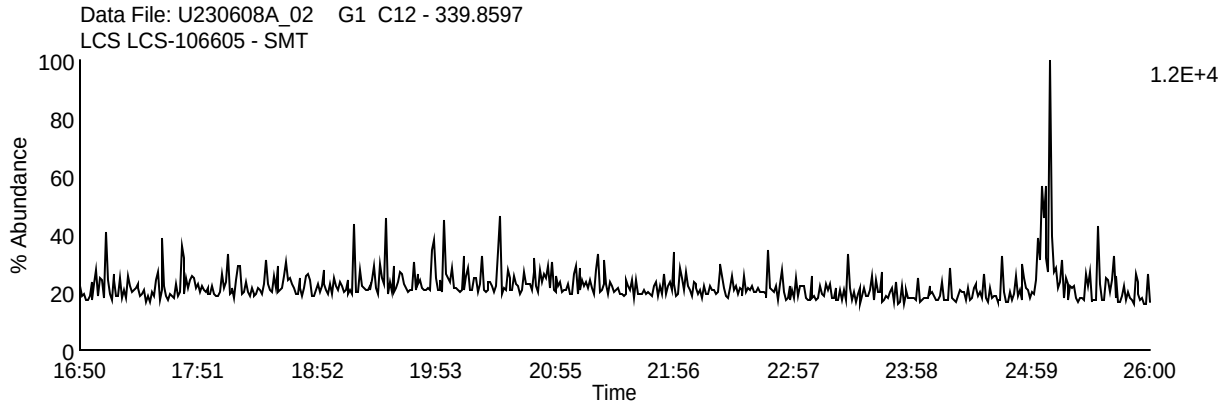
Data File: U230608A_02 G1 C5 - 318.9792
LCS LCS-106605 - SMT

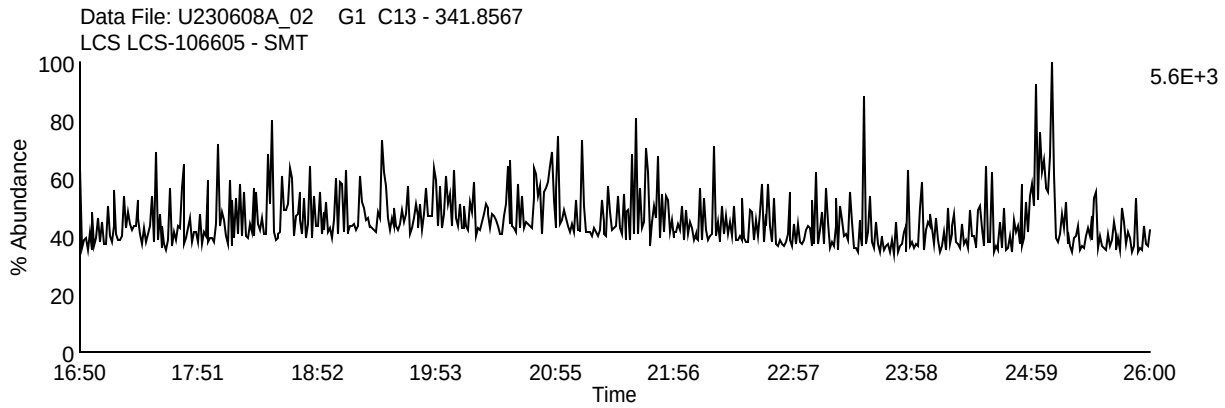


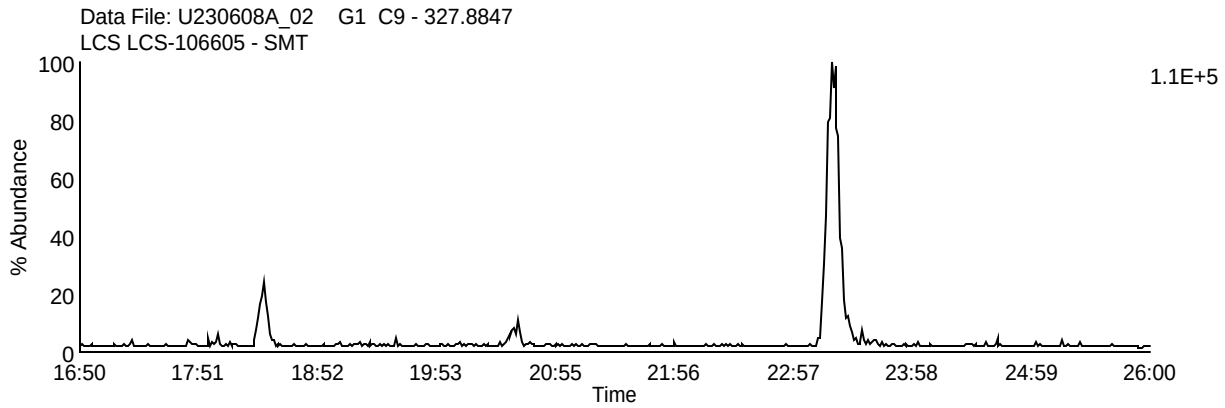
Homologue Group: Penta & Cleanup

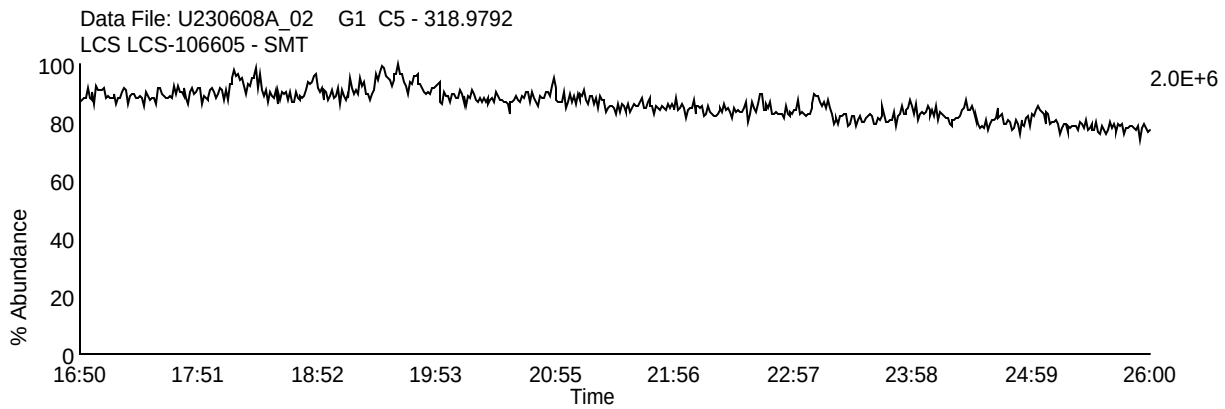
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)







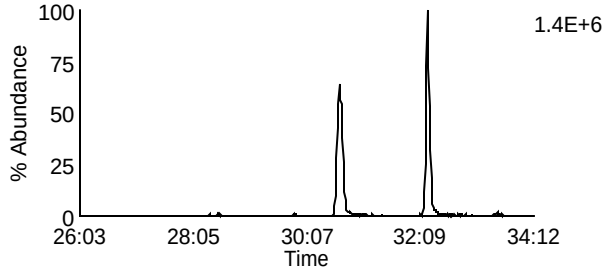


Homologue Group: Pentas

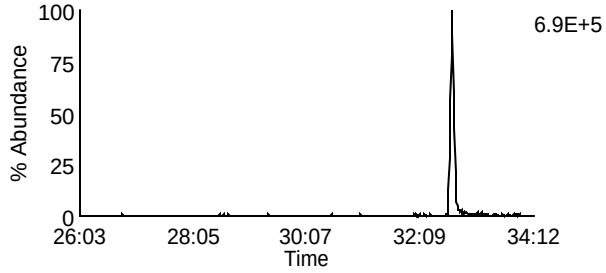
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

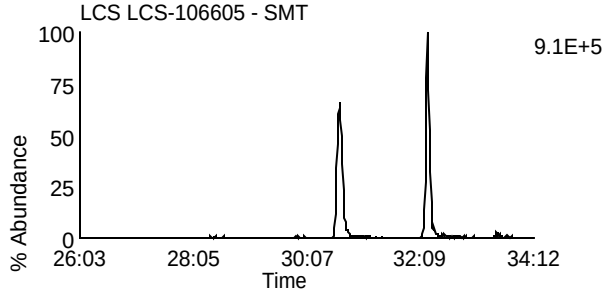
Data File: U230608A_02 G2 C1 - 339.8597
LCS LCS-106605 - SMT



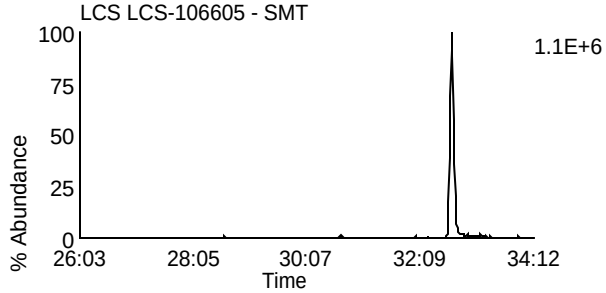
Data File: U230608A_02 G2 C4 - 353.8576
LCS LCS-106605 - SMT



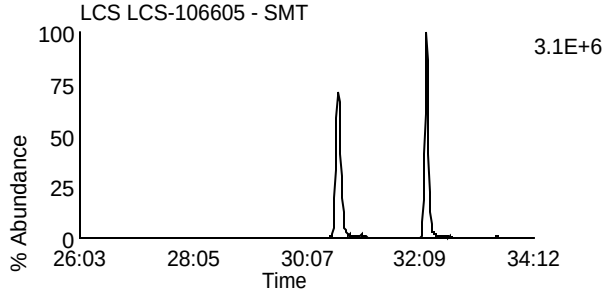
Data File: U230608A_02 G2 C2 - 341.8567
LCS LCS-106605 - SMT



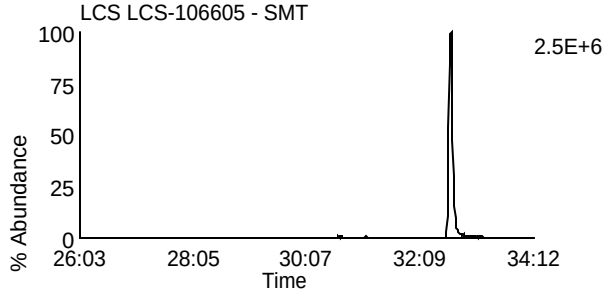
Data File: U230608A_02 G2 C8 - 355.8546
LCS LCS-106605 - SMT



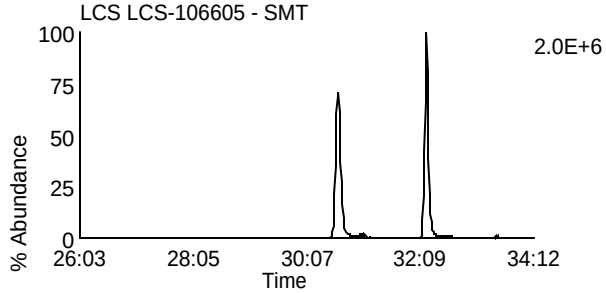
Data File: U230608A_02 G2 C3 - 351.8999
LCS LCS-106605 - SMT



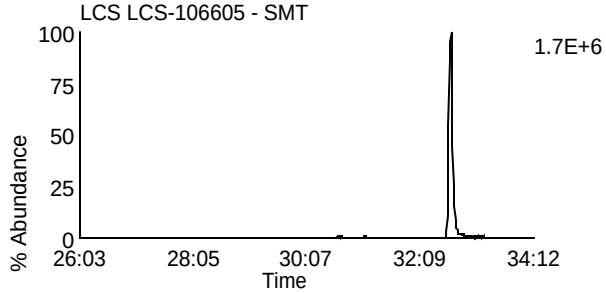
Data File: U230608A_02 G2 C10 - 367.8948
LCS LCS-106605 - SMT



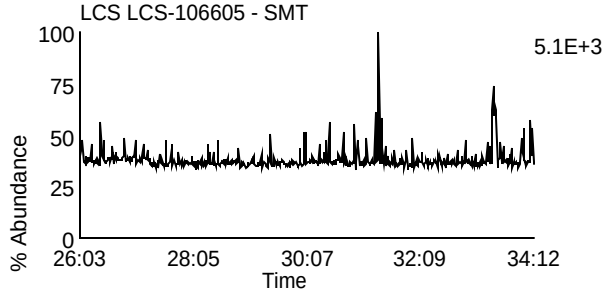
Data File: U230608A_02 G2 C5 - 353.8969
LCS LCS-106605 - SMT



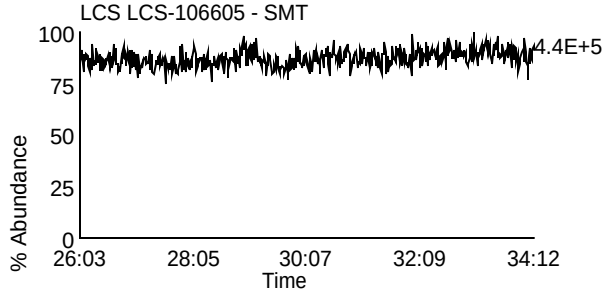
Data File: U230608A_02 G2 C11 - 369.8918
LCS LCS-106605 - SMT



Data File: U230608A_02 G2 C12 - 409.7974
LCS LCS-106605 - SMT



Data File: U230608A_02 G2 C6 - 354.9792
LCS LCS-106605 - SMT

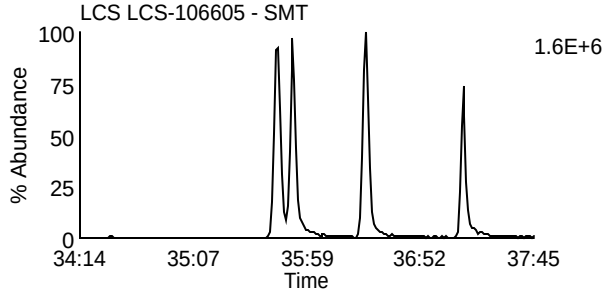


Homologue Group: Hexas

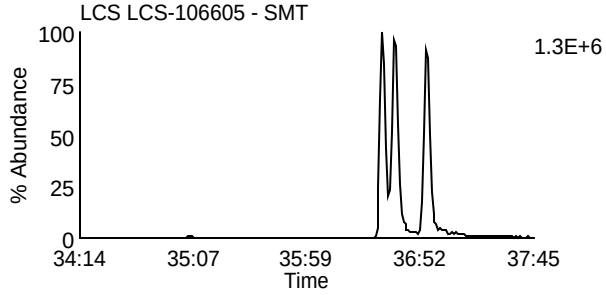
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

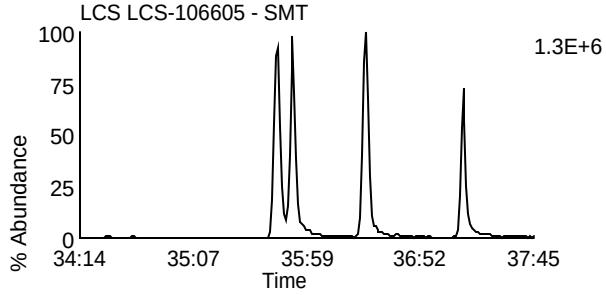
Data File: U230608A_02 G3 C1 - 373.8207
LCS LCS-106605 - SMT



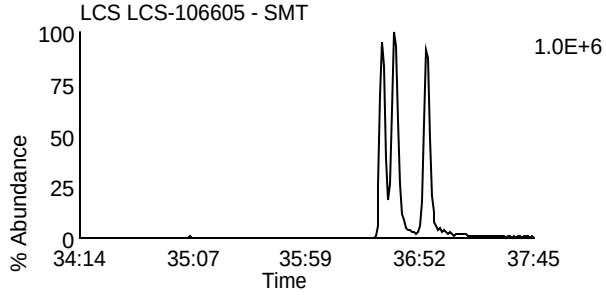
Data File: U230608A_02 G3 C7 - 389.8156
LCS LCS-106605 - SMT



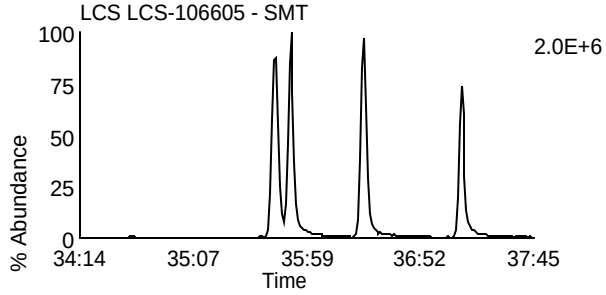
Data File: U230608A_02 G3 C2 - 375.8178
LCS LCS-106605 - SMT



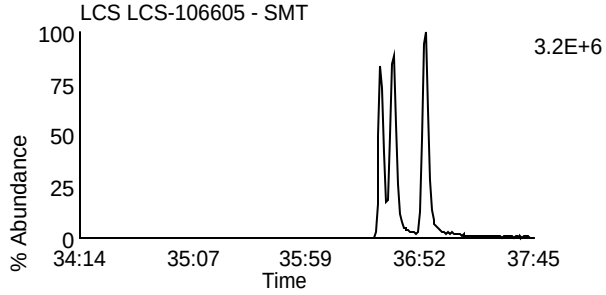
Data File: U230608A_02 G3 C8 - 391.8127
LCS LCS-106605 - SMT



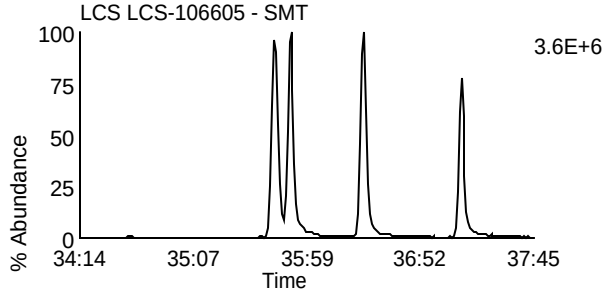
Data File: U230608A_02 G3 C5 - 383.8639
LCS LCS-106605 - SMT



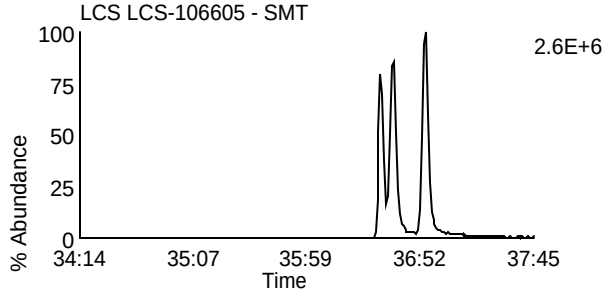
Data File: U230608A_02 G3 C9 - 401.8559
LCS LCS-106605 - SMT



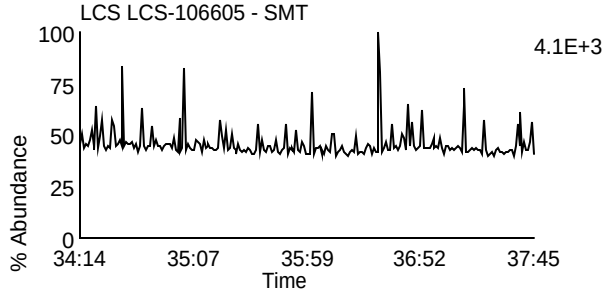
Data File: U230608A_02 G3 C6 - 385.861
LCS LCS-106605 - SMT



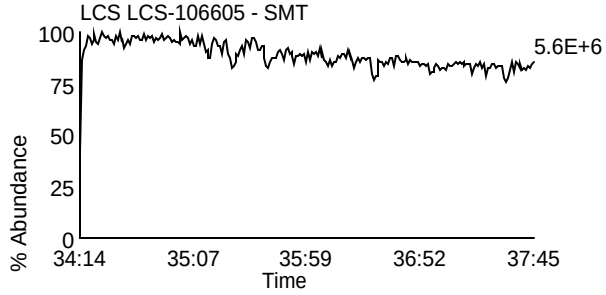
Data File: U230608A_02 G3 C10 - 403.8529
LCS LCS-106605 - SMT



Data File: U230608A_02 G3 C11 - 445.7555
LCS LCS-106605 - SMT



Data File: U230608A_02 G3 C3 - 380.976
LCS LCS-106605 - SMT

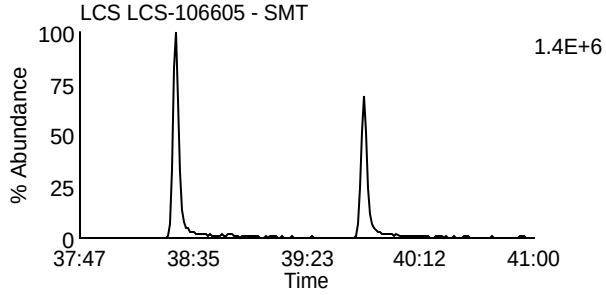


Homologue Group: Heptas

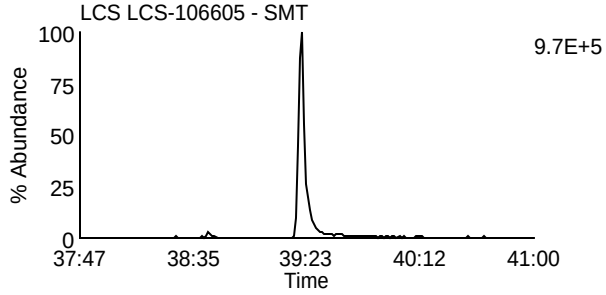
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

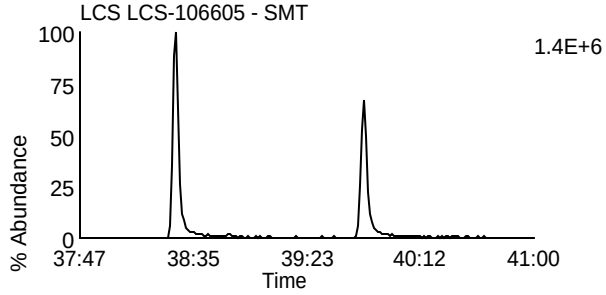
Data File: U230608A_02 G4 C3 - 407.7818
LCS LCS-106605 - SMT



Data File: U230608A_02 G4 C8 - 423.7767
LCS LCS-106605 - SMT



Data File: U230608A_02 G4 C4 - 409.7788
LCS LCS-106605 - SMT



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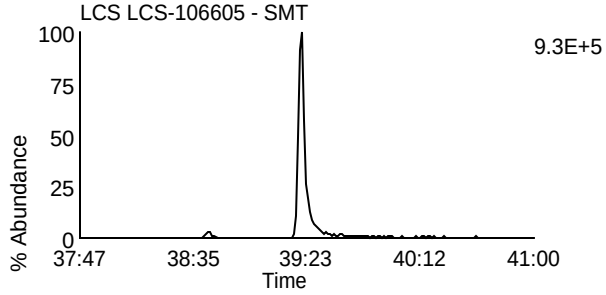
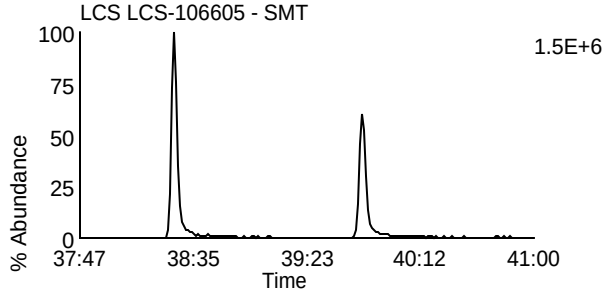
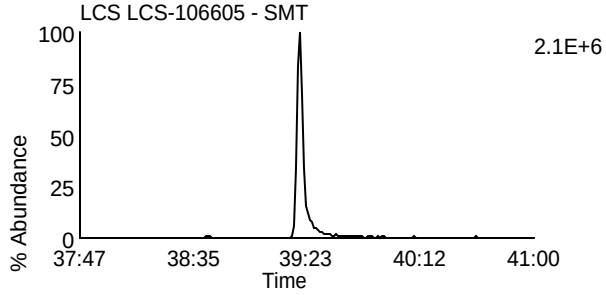
LCS LCS-106605 - SMT



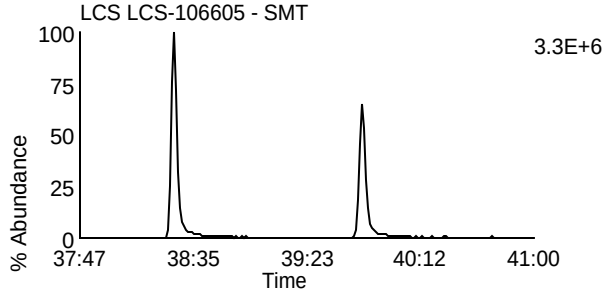
Data File: U230608A_02 G4 C6 - 417.825
LCS LCS-106605 - SMT



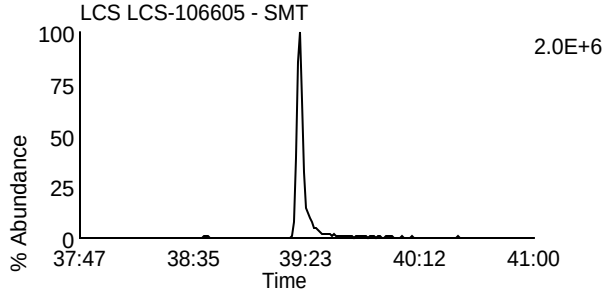
Data File: U230608A_02 G4 C11 - 435.8169
LCS LCS-106605 - SMT



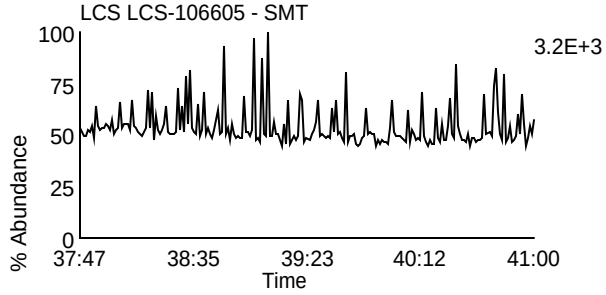
Data File: U230608A_02 G4 C7 - 419.822
LCS LCS-106605 - SMT



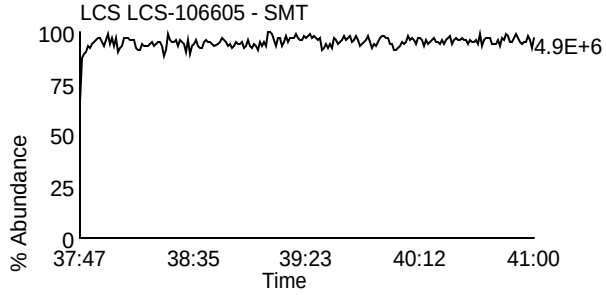
Data File: U230608A_02 G4 C12 - 437.814
LCS LCS-106605 - SMT



Data File: U230608A_02 G4 C13 - 479.7165
LCS LCS-106605 - SMT



Data File: U230608A_02 G4 C1 - 380.976
LCS LCS-106605 - SMT

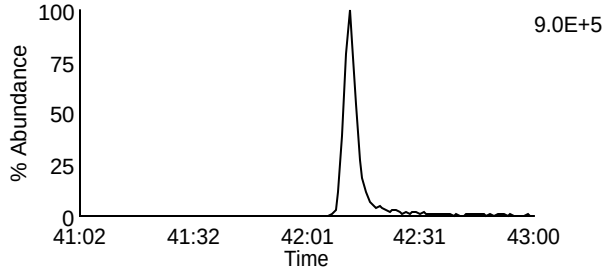


Homologue Group: Octas

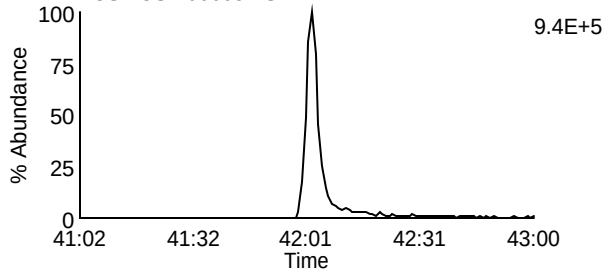
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

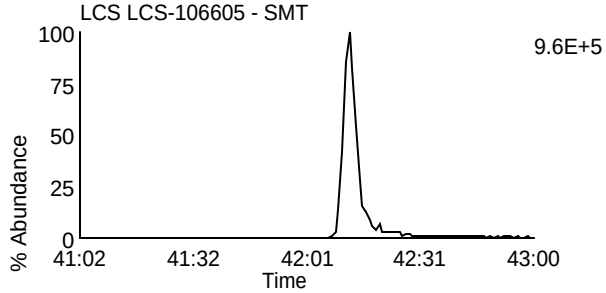
Data File: U230608A_02 G5 C4 - 441.7428
LCS LCS-106605 - SMT



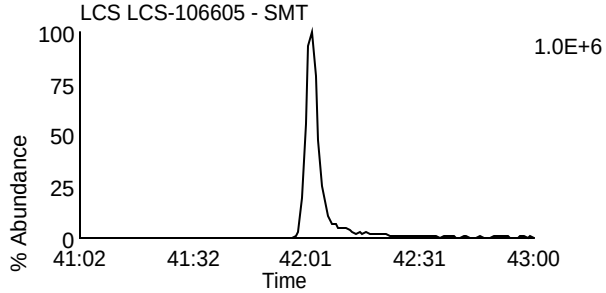
Data File: U230608A_02 G5 C8 - 457.7377
LCS LCS-106605 - SMT



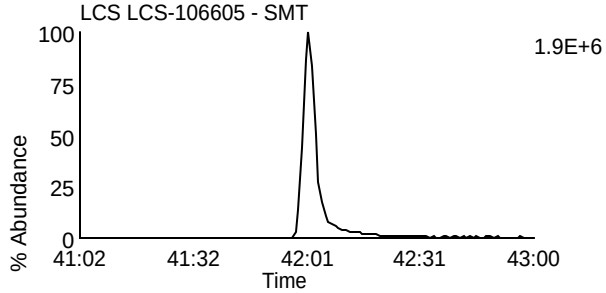
Data File: U230608A_02 G5 C5 - 443.7398
LCS LCS-106605 - SMT



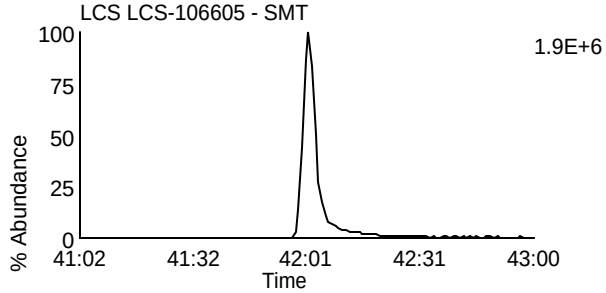
Data File: U230608A_02 G5 C9 - 459.7347
LCS LCS-106605 - SMT



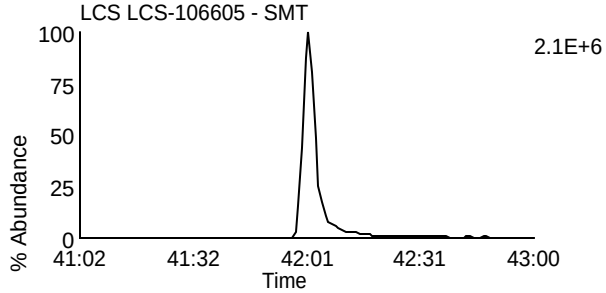
Data File: U230608A_02 G5 C11 - 469.7779
LCS LCS-106605 - SMT



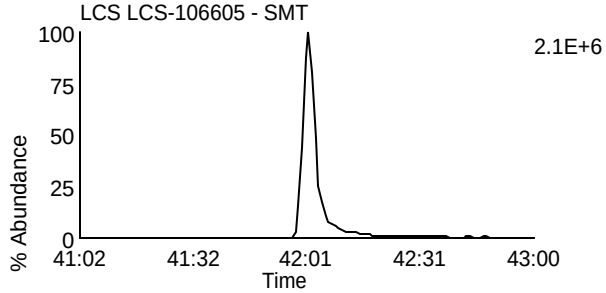
Data File: U230608A_02 G5 C11 - 469.7779
LCS LCS-106605 - SMT



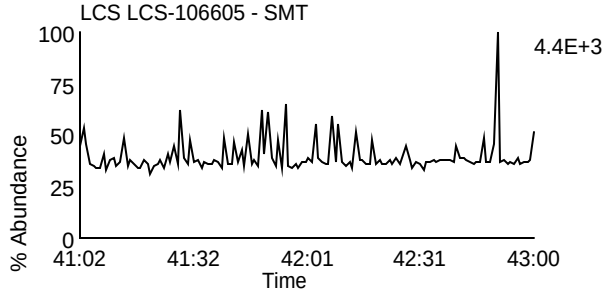
Data File: U230608A_02 G5 C12 - 471.7749
LCS LCS-106605 - SMT



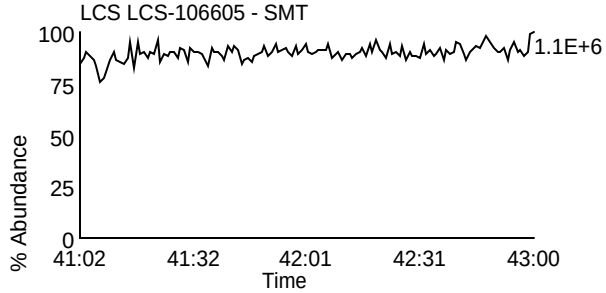
Data File: U230608A_02 G5 C12 - 471.7749
LCS LCS-106605 - SMT



Data File: U230608A_02 G5 C13 - 513.6775
LCS LCS-106605 - SMT



Data File: U230608A_02 G5 C2 - 430.9728
LCS LCS-106605 - SMT

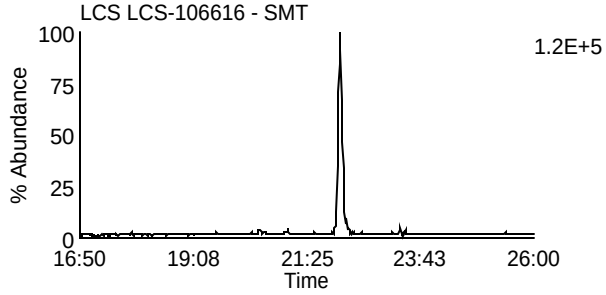


Homologue Group: Tetras

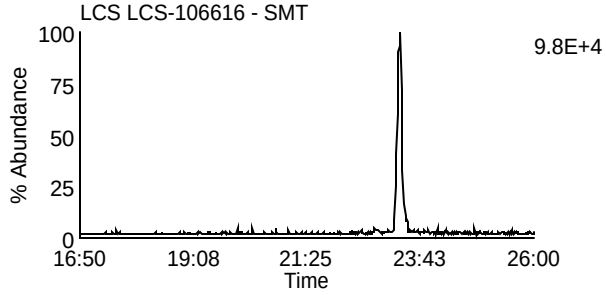
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

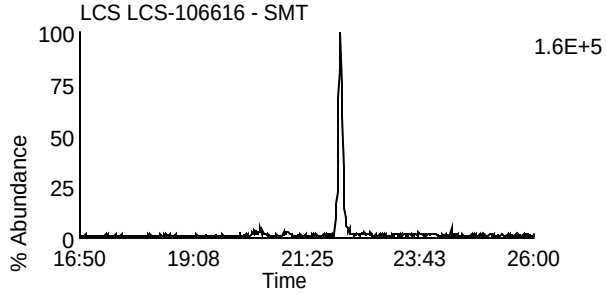
Data File: U230608B_06 G1 C1 - 303.9016
LCS LCS-106616 - SMT



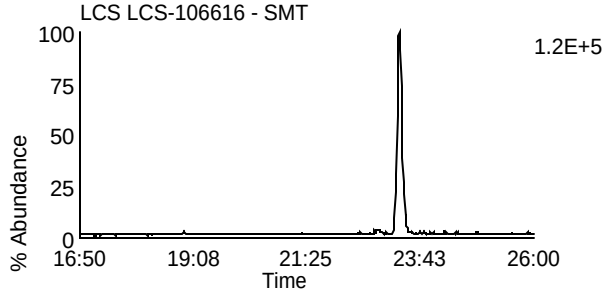
Data File: U230608B_06 G1 C7 - 319.8965
LCS LCS-106616 - SMT



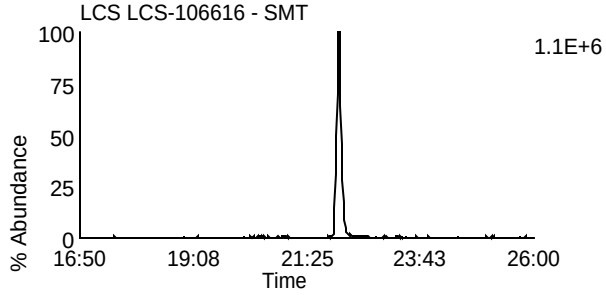
Data File: U230608B_06 G1 C2 - 305.8987
LCS LCS-106616 - SMT



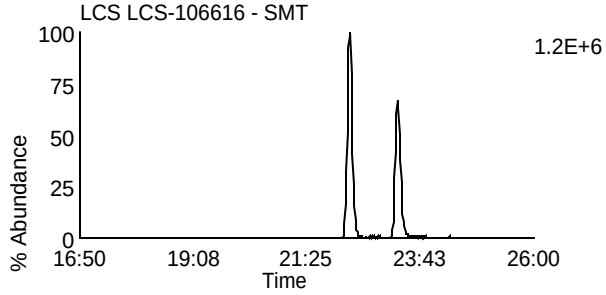
Data File: U230608B_06 G1 C8 - 321.8936
LCS LCS-106616 - SMT



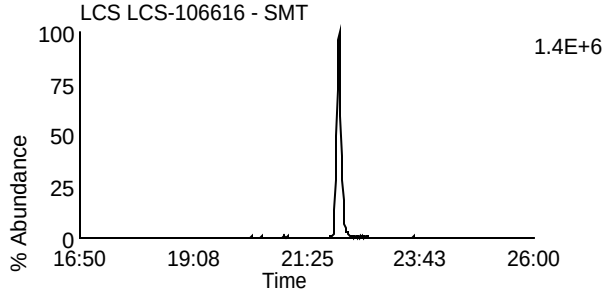
Data File: U230608B_06 G1 C3 - 315.9418
LCS LCS-106616 - SMT



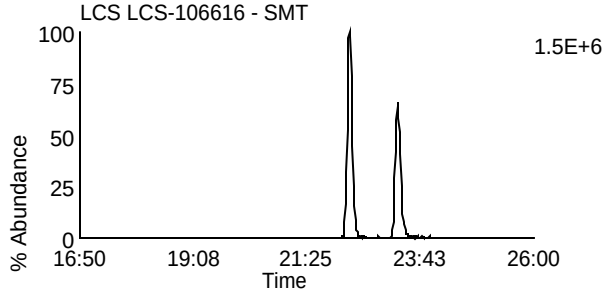
Data File: U230608B_06 G1 C10 - 331.9367
LCS LCS-106616 - SMT



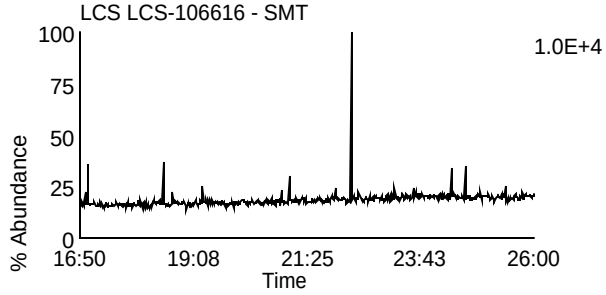
Data File: U230608B_06 G1 C4 - 317.9389
LCS LCS-106616 - SMT



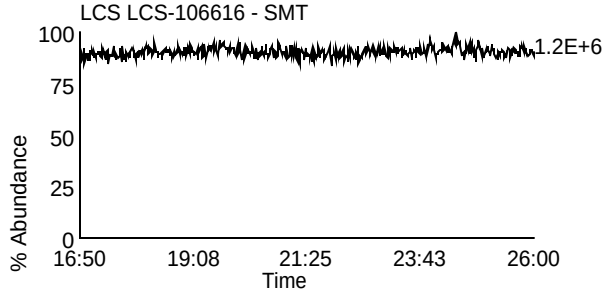
Data File: U230608B_06 G1 C11 - 333.9338
LCS LCS-106616 - SMT



Data File: U230608B_06 G1 C14 - 375.8364
LCS LCS-106616 - SMT



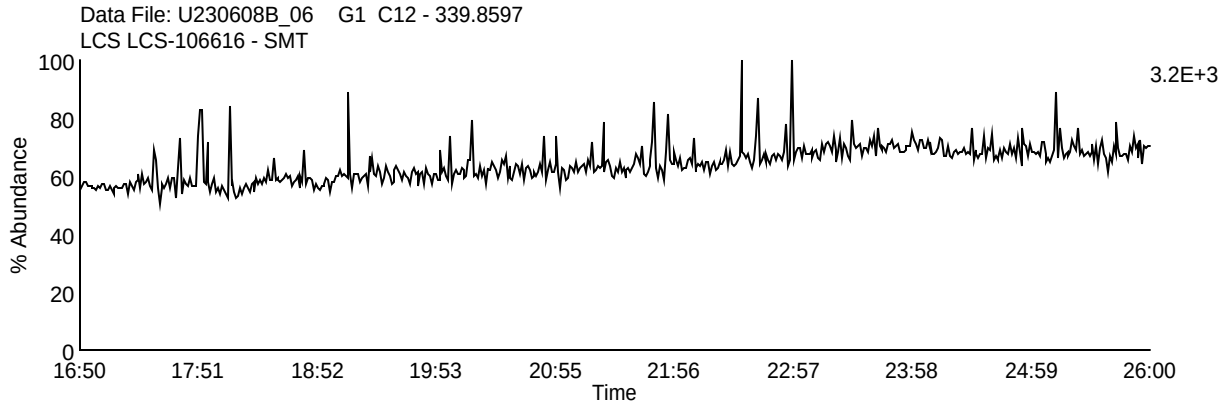
Data File: U230608B_06 G1 C5 - 318.9792
LCS LCS-106616 - SMT

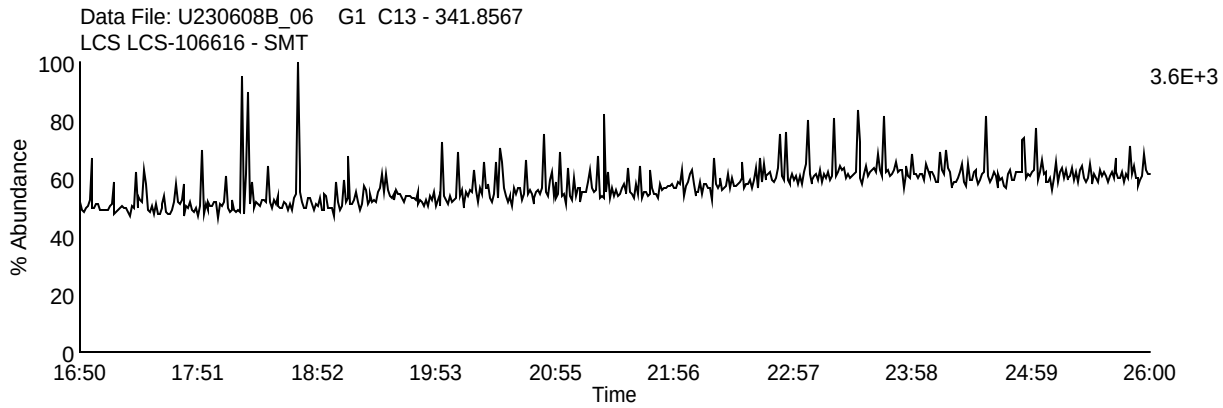


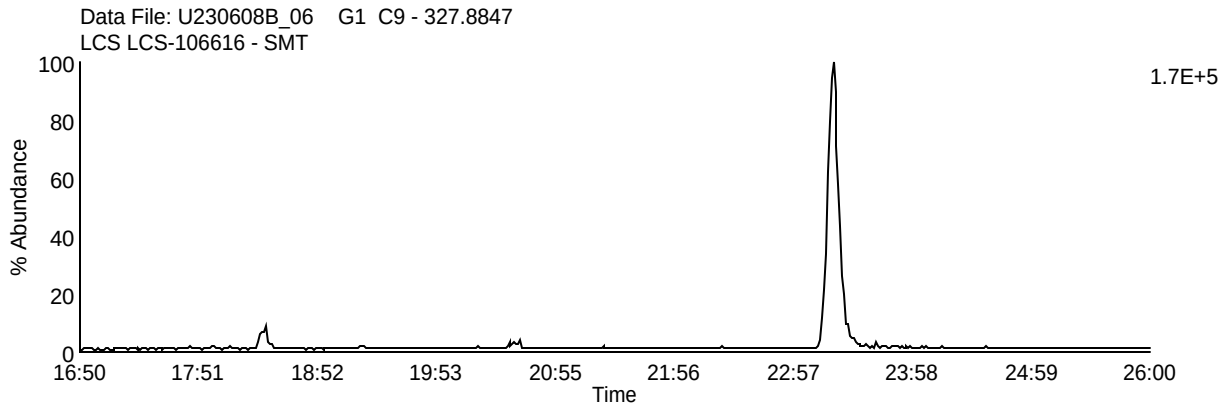
Homologue Group: Penta & Cleanup

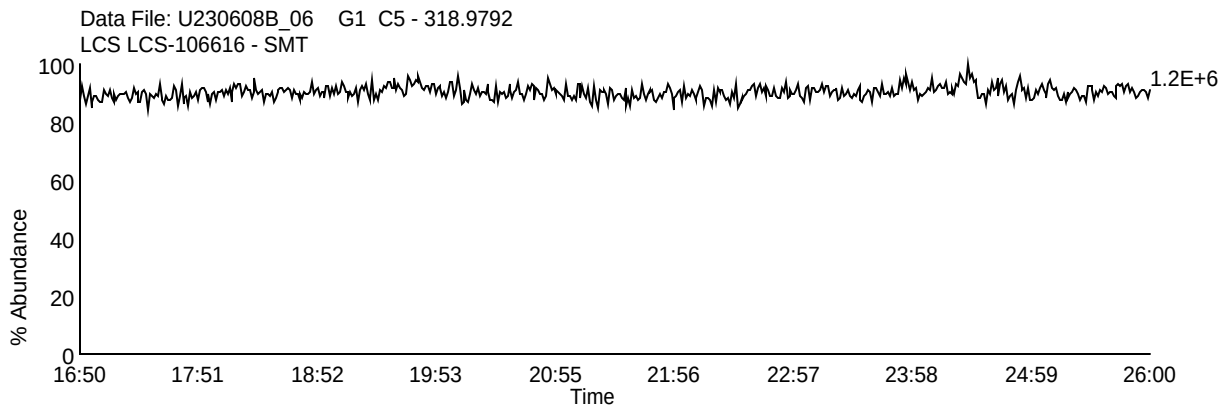
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)







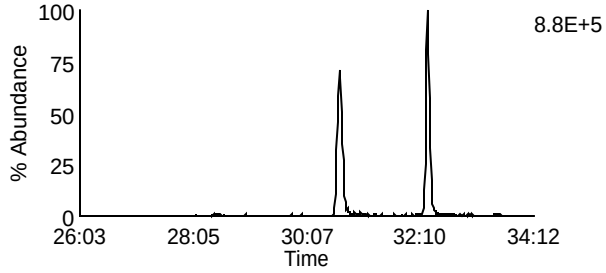


Homologue Group: Pentas

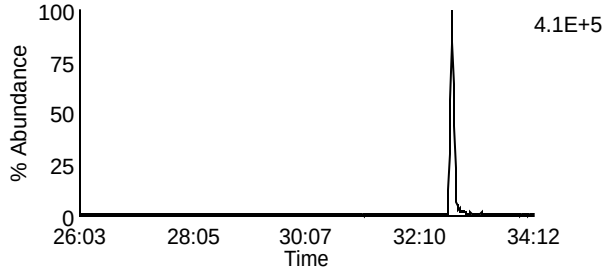
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

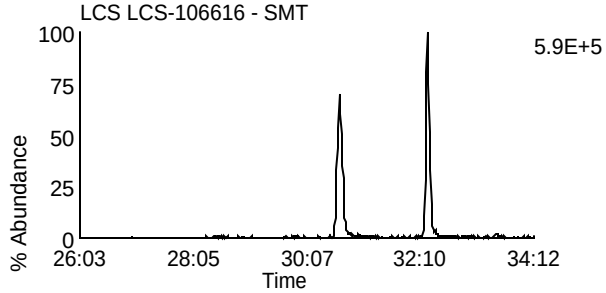
Data File: U230608B_06 G2 C1 - 339.8597
LCS LCS-106616 - SMT



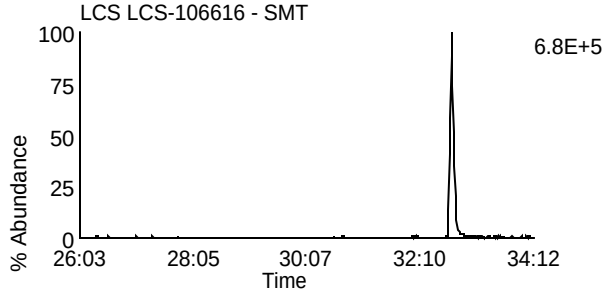
Data File: U230608B_06 G2 C4 - 353.8576
LCS LCS-106616 - SMT



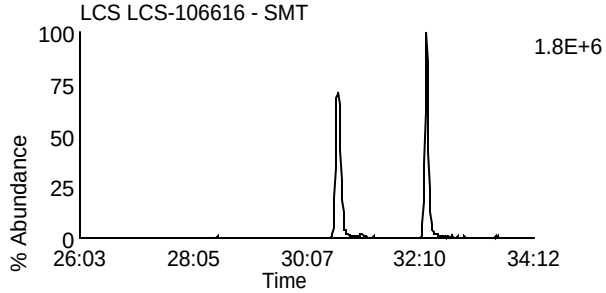
Data File: U230608B_06 G2 C2 - 341.8567
LCS LCS-106616 - SMT



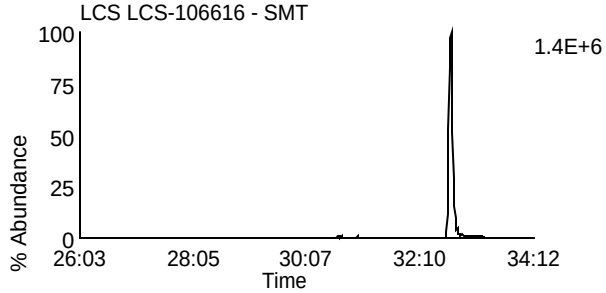
Data File: U230608B_06 G2 C8 - 355.8546
LCS LCS-106616 - SMT



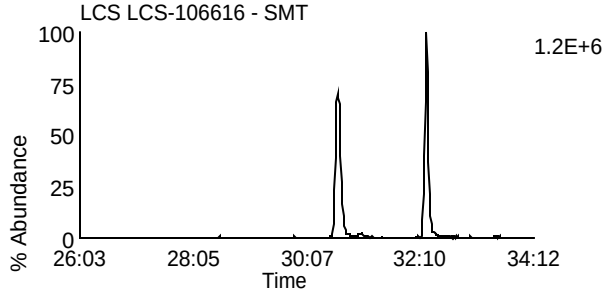
Data File: U230608B_06 G2 C3 - 351.8999
LCS LCS-106616 - SMT



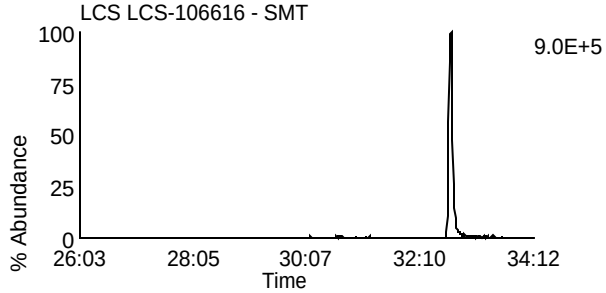
Data File: U230608B_06 G2 C10 - 367.8948
LCS LCS-106616 - SMT



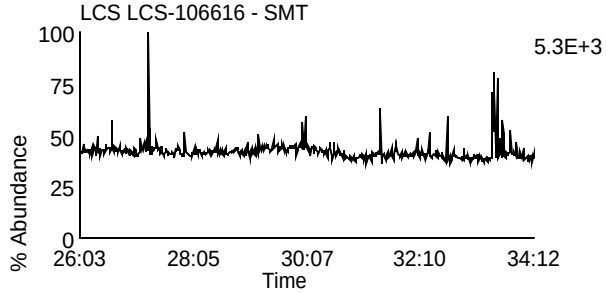
Data File: U230608B_06 G2 C5 - 353.8969
LCS LCS-106616 - SMT



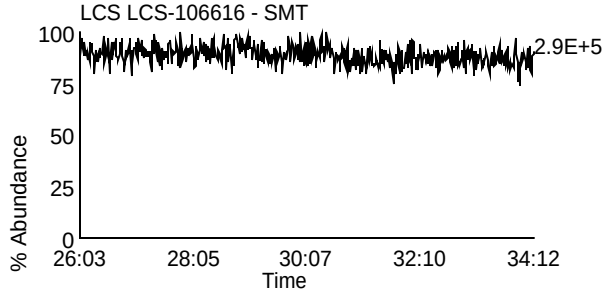
Data File: U230608B_06 G2 C11 - 369.8918
LCS LCS-106616 - SMT



Data File: U230608B_06 G2 C12 - 409.7974
LCS LCS-106616 - SMT



Data File: U230608B_06 G2 C6 - 354.9792
LCS LCS-106616 - SMT

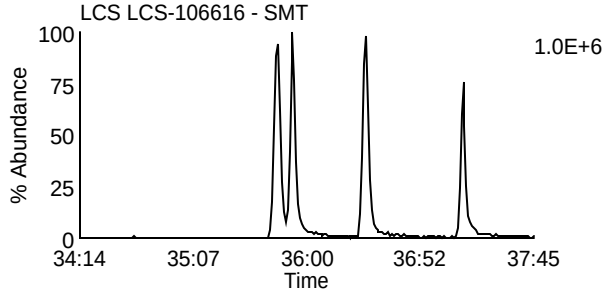


Homologue Group: Hexas

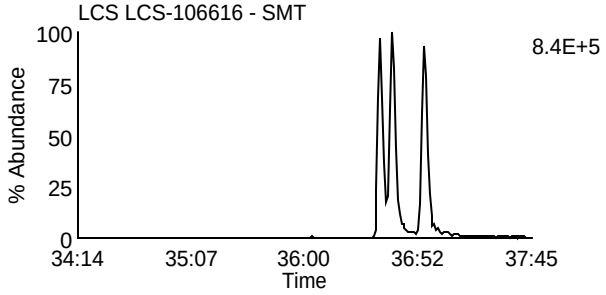
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

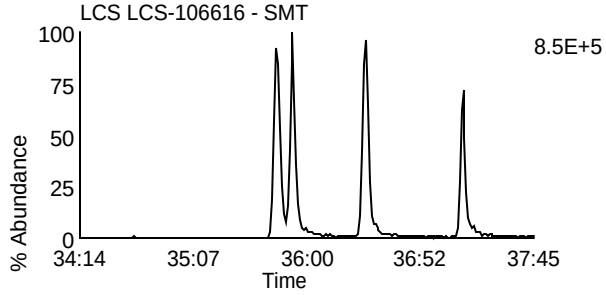
Data File: U230608B_06 G3 C1 - 373.8207
LCS LCS-106616 - SMT



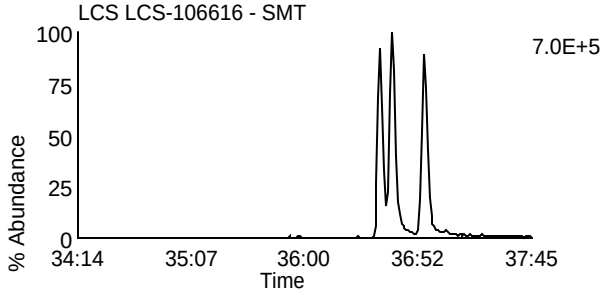
Data File: U230608B_06 G3 C7 - 389.8156
LCS LCS-106616 - SMT



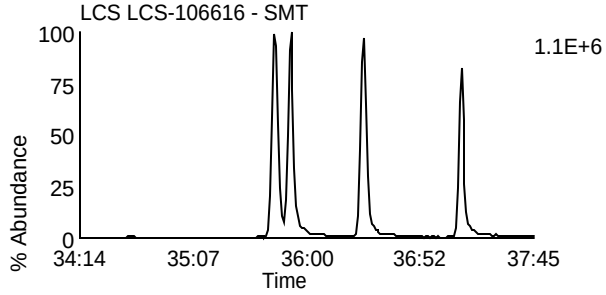
Data File: U230608B_06 G3 C2 - 375.8178
LCS LCS-106616 - SMT



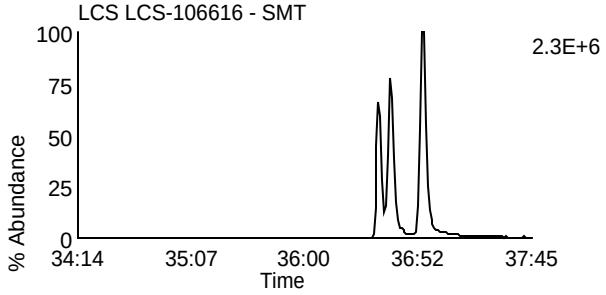
Data File: U230608B_06 G3 C8 - 391.8127
LCS LCS-106616 - SMT



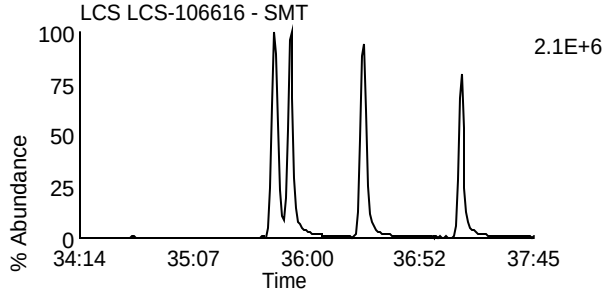
Data File: U230608B_06 G3 C5 - 383.8639
LCS LCS-106616 - SMT



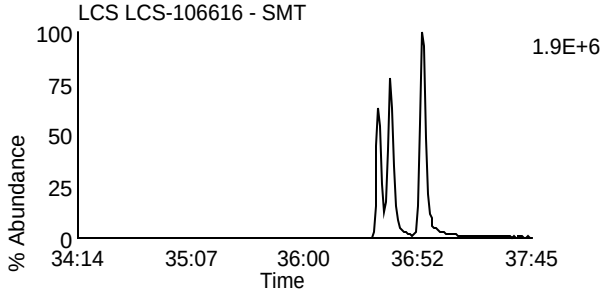
Data File: U230608B_06 G3 C9 - 401.8559
LCS LCS-106616 - SMT



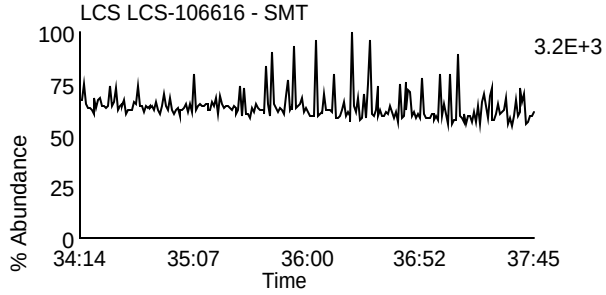
Data File: U230608B_06 G3 C6 - 385.861
LCS LCS-106616 - SMT



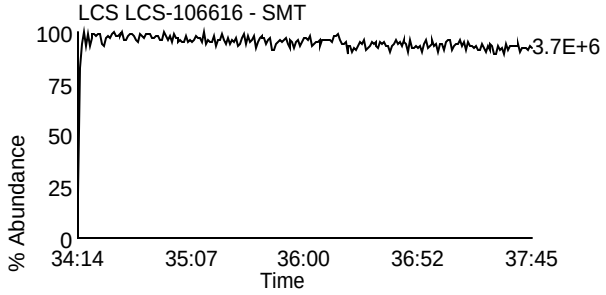
Data File: U230608B_06 G3 C10 - 403.8529
LCS LCS-106616 - SMT



Data File: U230608B_06 G3 C11 - 445.7555
LCS LCS-106616 - SMT



Data File: U230608B_06 G3 C3 - 380.976
LCS LCS-106616 - SMT

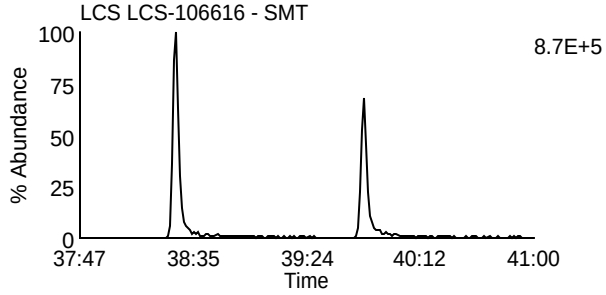


Homologue Group: Heptas

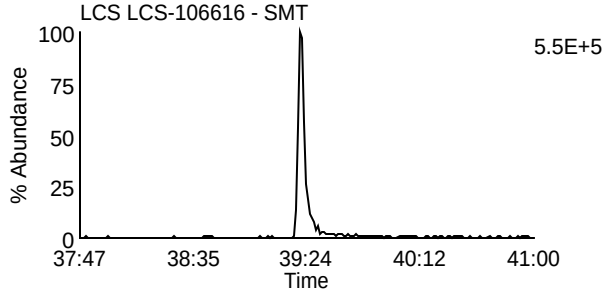
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

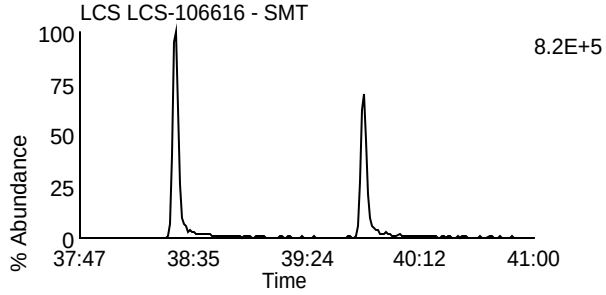
Data File: U230608B_06 G4 C3 - 407.7818
LCS LCS-106616 - SMT



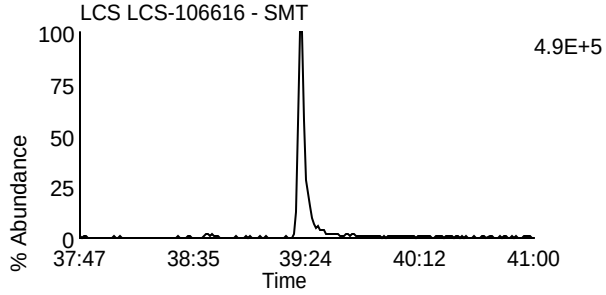
Data File: U230608B_06 G4 C8 - 423.7767
LCS LCS-106616 - SMT



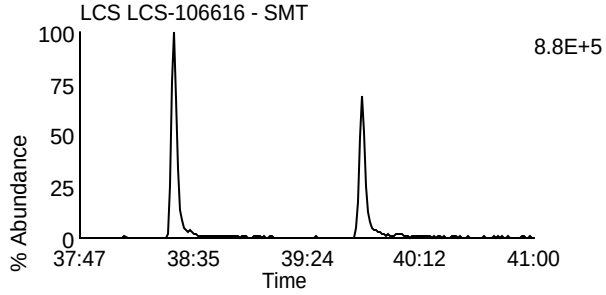
Data File: U230608B_06 G4 C4 - 409.7788
LCS LCS-106616 - SMT



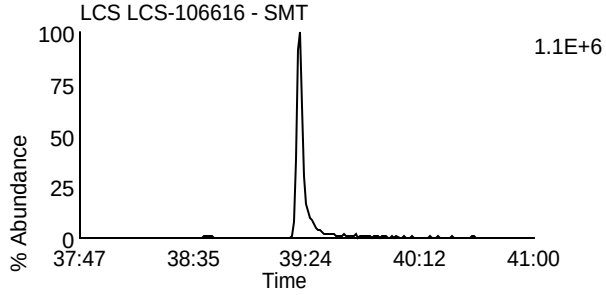
Data File: U230608B_06 G4 C9 - 425.7737
LCS LCS-106616 - SMT



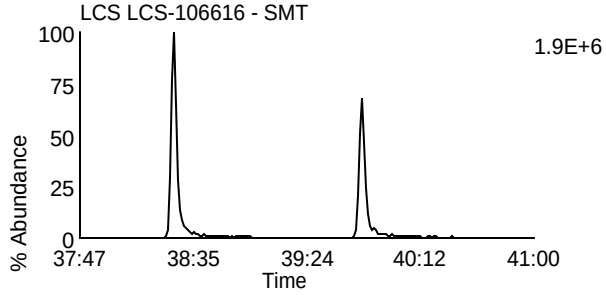
Data File: U230608B_06 G4 C6 - 417.825
LCS LCS-106616 - SMT



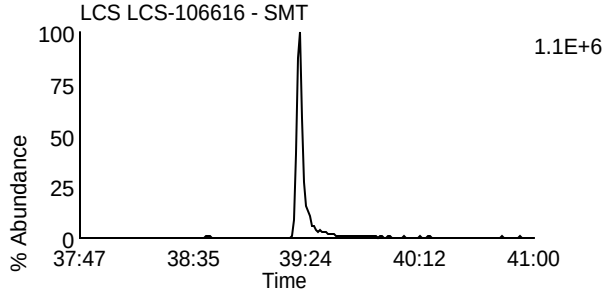
Data File: U230608B_06 G4 C11 - 435.8169
LCS LCS-106616 - SMT



Data File: U230608B_06 G4 C7 - 419.822
LCS LCS-106616 - SMT



Data File: U230608B_06 G4 C12 - 437.814
LCS LCS-106616 - SMT



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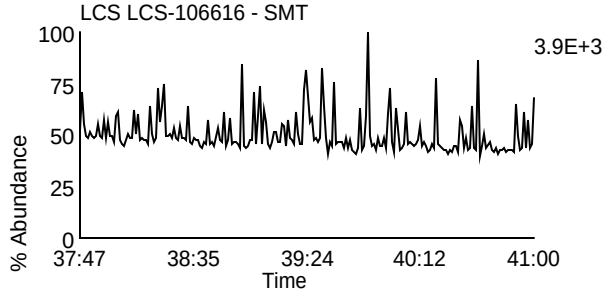
LCS LCS-106616 - SMT



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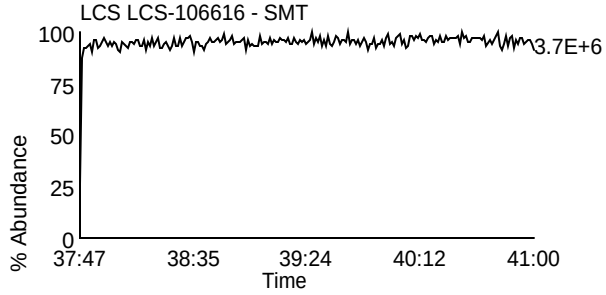
LCS LCS-106616 - SMT

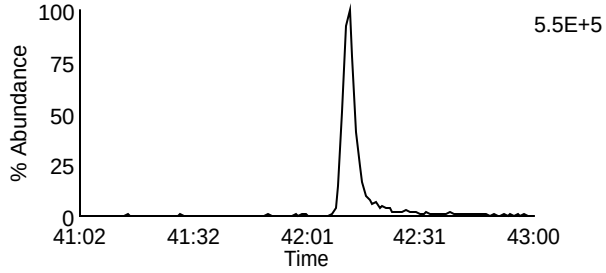


Homologue Group: Octas

Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

Data File: U230608B_06 G5 C4 - 441.7428
LCS LCS-106616 - SMT



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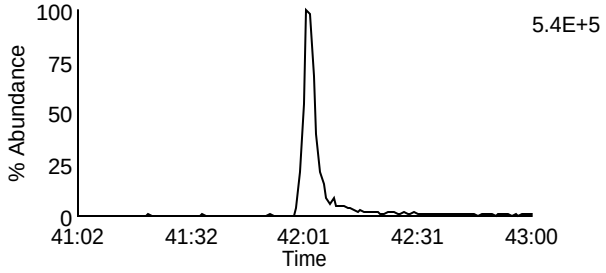
LCS LCS-106616 - SMT



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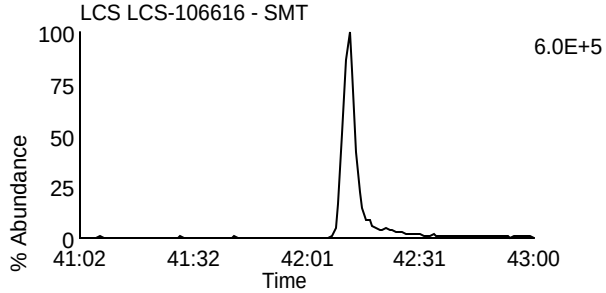
LCS LCS-106616 - SMT



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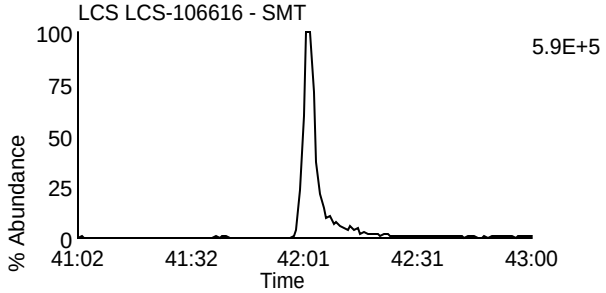
LCS LCS-106616 - SMT



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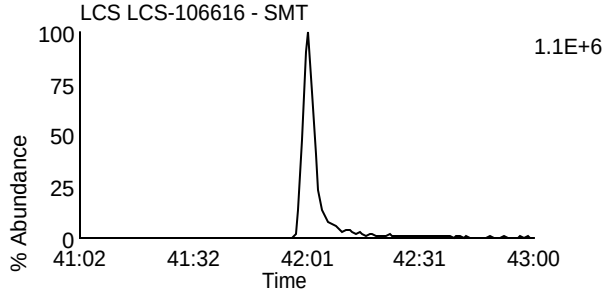
LCS LCS-106616 - SMT



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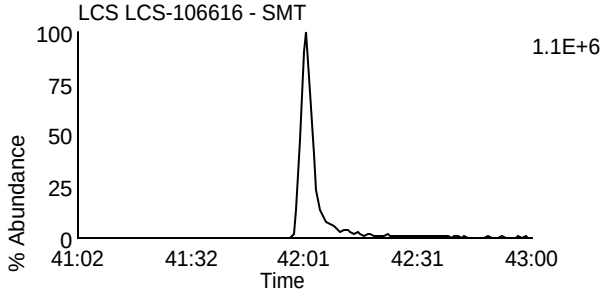
LCS LCS-106616 - SMT



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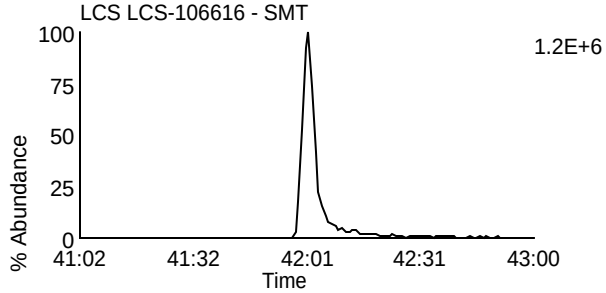
LCS LCS-106616 - SMT



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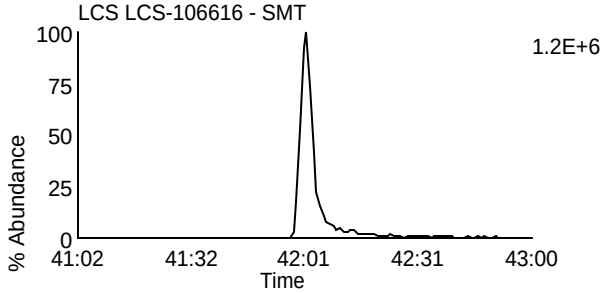
LCS LCS-106616 - SMT



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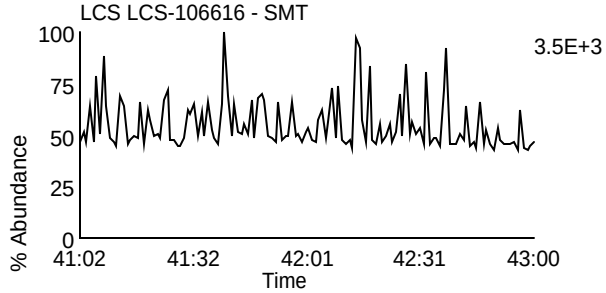

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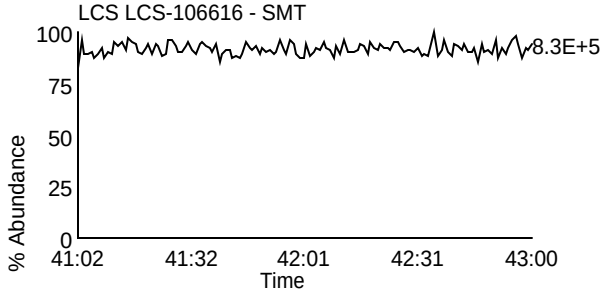
LCS LCS-106616 - SMT



Pace Analytical Services, LLC
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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client ID	DFBLKTO	Injected By	SMT
Lab ID	BLANK-106604	Instrument ID	10MSHR06 (U)
Filename	U230608A_04	GC Column ID	US1246423H
Analyzed	06/08/2023 04:57	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:04	1.22e7	1.57e7	1.82e6	2.30e6	3.792e3	2.293e3	0.78	
2,3,7,8-TCDF	22:06	ND	ND	ND	ND	3.389e2	4.452e2		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:18	1.23e7	1.56e7	1.81e6	2.33e6	2.075e3	2.289e3	0.79	
2,3,7,8-TCDD-13C	23:16	6.47e6	8.08e6	9.10e5	1.09e6	2.102e3	3.064e3	0.80	
2,3,7,8-TCDD-37Cl4	23:18	1.19e6		1.62e5		5.796e2	-----		
2,3,7,8-TCDD	23:18	ND	ND	ND	ND	3.622e2	2.888e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	1.32e7	8.64e6	2.00e6	1.32e6	6.415e3	4.718e3	1.52	
2,3,4,7,8-PeCDF-13C	32:17	1.35e7	8.79e6	2.80e6	1.78e6	1.261e4	1.263e4	1.53	
1,2,3,7,8-PeCDF	30:42	ND	ND	ND	ND	3.322e2	3.451e2		
2,3,4,7,8-PeCDF	32:19	ND	ND	ND	ND	4.412e2	3.217e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:42	1.12e7	7.03e6	2.44e6	1.63e6	1.918e3	3.029e3	1.59	
1,2,3,7,8-PeCDD	32:44	ND	ND	ND	ND	3.038e2	4.714e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	5.63e6	1.03e7	1.72e6	3.29e6	1.263e4	1.001e3	0.55	
1,2,3,6,7,8-HxCDF-13C	35:53	5.98e6	1.22e7	1.67e6	3.31e6	2.771e2	8.573e2	0.49	
2,3,4,6,7,8-HxCDF-13C	36:26	5.52e6	1.02e7	1.70e6	3.19e6	1.193e3	2.450e2	0.54	
1,2,3,7,8,9-HxCDF-13C	37:12	4.28e6	8.55e6	1.36e6	2.72e6	3.336e3	6.047e3	0.50	
1,2,3,4,7,8-HxCDF	35:46	ND	ND	ND	ND	7.428e2	4.723e2		
1,2,3,6,7,8-HxCDF	35:54	ND	ND	ND	ND	8.033e2	3.066e2		
2,3,4,6,7,8-HxCDF	36:27	ND	ND	ND	ND	8.399e2	3.066e2		
1,2,3,7,8,9-HxCDF	37:12	ND	ND	ND	ND	5.708e2	3.559e2		

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client ID	DFBLKTO	Injected By	SMT
Lab ID	BLANK-106604	Instrument ID	10MSHR06 (U)
Filename	U230608A_04	GC Column ID	US1246423H
Analyzed	06/08/2023 04:57	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	(M)7.03e6	5.58e6	2.54e6	2.13e6	1.543e3	2.234e3	1.26	
1,2,3,6,7,8-HxCDD-13C	36:40	(M)9.36e6	7.40e6	2.61e6	2.18e6	1.226e3	1.511e3	1.27	
1,2,3,7,8,9-HxCDD-13C	36:54	(M)1.05e7	8.49e6	3.13e6	2.51e6	6.795e3	6.926e3	1.24	
1,2,3,4,7,8-HxCDD	36:34	(M)1.03e4	(M)6.71e3	2.26e3	1.82e3	6.349e2	4.542e2	1.53	I
1,2,3,6,7,8-HxCDD	36:41	ND	ND	ND	ND	5.714e2	6.104e2		
1,2,3,7,8,9-HxCDD	36:55	ND	ND	ND	ND	4.181e2	6.152e2		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:28	(M)4.33e6	9.93e6	1.46e6	3.16e6	2.919e2	7.250e2	0.44	
1,2,3,4,7,8,9-HpCDF-13C	39:48	(M)3.05e6	6.79e6	9.33e5	2.00e6	4.318e3	3.125e3	0.45	
1,2,3,4,6,7,8-HpCDF	38:29	ND	ND	ND	ND	1.687e3	8.780e2		
1,2,3,4,7,8,9-HpCDF	39:49	ND	ND	ND	ND	1.815e3	1.174e3		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:22	6.38e6	6.08e6	1.91e6	1.71e6	1.131e4	4.590e3	1.05	
1,2,3,4,6,7,8-HpCDD	39:23	(M)9.98e3	(M)9.80e3	3.38e3	3.87e3	5.284e2	6.347e2	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:11	(M)4.30e3	(M)4.32e3	1.16e3	1.91e3	3.392e2	5.555e2	1.00	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:03	7.14e6	8.21e6	1.79e6	2.01e6	3.531e2	3.854e2	0.87	
OCDD	42:03	(M)4.78e4	(M)5.35e4	1.64e4	1.41e4	1.035e3	1.071e3	0.89	

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Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID	DFBLKTS	Injected By	SMT
Lab ID	BLANK-106615	Instrument ID	10MSHR06 (U)
Filename	U230608B_10	GC Column ID	US1246423H
Analyzed	06/09/2023 04:58	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:03	7.49e6	9.27e6	1.19e6	1.41e6	3.721e3	1.931e3	0.81	
2,3,7,8-TCDF	22:05	ND	ND	ND	ND	2.102e2	1.825e2		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:18	7.23e6	8.95e6	1.09e6	1.37e6	1.824e3	1.587e3	0.81	
2,3,7,8-TCDD-13C	23:15	5.22e6	6.48e6	7.68e5	9.30e5	1.592e3	2.529e3	0.81	
2,3,7,8-TCDD-37Cl4	23:17	1.11e6		1.45e5		7.204e2	-----		
2,3,7,8-TCDD	23:16	ND	ND	ND	ND	2.683e2	2.140e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	8.21e6	5.26e6	1.29e6	8.53e5	1.006e3	3.769e2	1.56	
2,3,4,7,8-PeCDF-13C	32:16	8.18e6	5.24e6	1.65e6	1.07e6	4.414e3	4.406e3	1.56	
1,2,3,7,8-PeCDF	30:42	ND	ND	ND	ND	3.174e2	2.301e2		
2,3,4,7,8-PeCDF	32:18	ND	ND	ND	ND	2.649e2	2.366e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	6.33e6	4.12e6	1.33e6	9.01e5	7.664e3	3.561e3	1.53	
1,2,3,7,8-PeCDD	32:43	ND	ND	ND	ND	2.846e2	1.927e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	3.52e6	6.71e6	1.11e6	2.14e6	6.824e2	5.003e2	0.52	
1,2,3,6,7,8-HxCDF-13C	35:52	4.05e6	7.65e6	1.25e6	2.38e6	4.044e2	5.003e2	0.53	
2,3,4,6,7,8-HxCDF-13C	36:26	3.58e6	6.94e6	1.18e6	2.23e6	3.473e2	5.920e3	0.52	
1,2,3,7,8,9-HxCDF-13C	37:11	2.85e6	5.32e6	8.73e5	1.70e6	4.157e3	3.619e3	0.54	
1,2,3,4,7,8-HxCDF	35:46	ND	ND	ND	ND	2.099e2	2.215e2		
1,2,3,6,7,8-HxCDF	35:54	ND	ND	ND	ND	2.501e2	2.215e2		
2,3,4,6,7,8-HxCDF	36:27	ND	ND	ND	ND	1.864e2	2.215e2		
1,2,3,7,8,9-HxCDF	37:12	ND	ND	ND	ND	2.534e2	2.592e2		

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Client ID	DFBLKTS	Injected By	SMT
Lab ID	BLANK-106615	Instrument ID	10MSHR06 (U)
Filename	U230608B_10	GC Column ID	US1246423H
Analyzed	06/09/2023 04:58	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:35	4.59e6	3.64e6	1.47e6	1.16e6	1.372e3	1.160e3	1.26	
1,2,3,6,7,8-HxCDD-13C	36:40	5.72e6	4.54e6	1.79e6	1.38e6	6.847e2	1.160e3	1.26	
1,2,3,7,8,9-HxCDD-13C	36:54	6.45e6	5.60e6	2.05e6	1.67e6	5.455e3	9.839e3	1.15	
1,2,3,4,7,8-HxCDD	36:35	ND	ND	ND	ND	3.291e2	3.427e2		
1,2,3,6,7,8-HxCDD	36:41	ND	ND	ND	ND	5.487e2	4.725e2		
1,2,3,7,8,9-HxCDD	36:55	ND	ND	ND	ND	4.249e2	4.007e2		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	2.77e6	(M)5.75e6	8.96e5	1.98e6	2.329e3	2.933e3	0.48	
1,2,3,4,7,8,9-HpCDF-13C	39:47	1.93e6	4.17e6	5.94e5	1.26e6	2.735e3	3.842e3	0.46	
1,2,3,4,6,7,8-HpCDF	38:28	ND	ND	ND	ND	5.643e2	4.192e2		
1,2,3,4,7,8,9-HpCDF	39:48	ND	ND	ND	ND	6.111e2	5.354e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	(M)3.79e6	(M)3.50e6	1.17e6	1.04e6	8.409e2	3.943e3	1.08	
1,2,3,4,6,7,8-HpCDD	39:22	ND	ND	ND	ND	3.924e2	3.467e2		

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	ND	ND	ND	ND	2.119e2	2.661e2		

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	4.25e6	4.76e6	1.02e6	1.17e6	6.942e3	5.636e3	0.89	
OCDD	42:03	ND	ND	ND	ND	3.726e2	5.909e2		

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID	DLCSRW	Injected By	SMT
Lab ID	LCS-106605	Instrument ID	10MSHR06 (U)
Filename	U230608A_02	GC Column ID	US1246423H
Analyzed	06/08/2023 03:25	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:03	1.32e7	1.66e7	2.08e6	2.48e6	-----	-----	0.79	
2,3,7,8-TCDF	22:04	1.12e6	1.49e6	1.67e5	2.35e5	-----	-----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:17	1.26e7	1.57e7	1.86e6	2.30e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	23:15	4.47e6	5.81e6	6.32e5	7.87e5	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	23:16	8.16e5		1.06e5		-----	-----		
2,3,7,8-TCDD	23:16	4.08e5	5.65e5	5.52e4	7.98e4	-----	-----	0.72	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	1.42e7	9.28e6	2.18e6	1.43e6	-----	-----	1.53	
2,3,4,7,8-PeCDF-13C	32:16	1.42e7	9.52e6	3.08e6	2.03e6	-----	-----	1.49	
1,2,3,7,8-PeCDF	30:42	5.92e6	3.90e6	9.11e5	5.94e5	-----	-----	1.52	
2,3,4,7,8-PeCDF	32:17	6.62e6	4.12e6	1.43e6	8.96e5	-----	-----	1.61	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:42	1.17e7	7.79e6	2.49e6	1.66e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	32:43	2.93e6	4.75e6	6.84e5	1.05e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	6.00e6	1.17e7	1.73e6	3.40e6	-----	-----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:52	6.83e6	1.34e7	1.97e6	3.54e6	-----	-----	0.51	
2,3,4,6,7,8-HxCDF-13C	36:26	6.17e6	1.13e7	1.91e6	3.54e6	-----	-----	0.54	
1,2,3,7,8,9-HxCDF-13C	37:11	4.70e6	8.80e6	1.46e6	2.73e6	-----	-----	0.53	
1,2,3,4,7,8-HxCDF	35:46	5.05e6	3.97e6	1.49e6	1.22e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:53	5.77e6	4.38e6	1.57e6	1.29e6	-----	-----	1.32	
2,3,4,6,7,8-HxCDF	36:27	4.94e6	4.24e6	1.61e6	1.33e6	-----	-----	1.16	
1,2,3,7,8,9-HxCDF	37:12	3.79e6	3.07e6	1.18e6	9.62e5	-----	-----	1.24	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client ID	DLCSRW	Injected By	SMT
Lab ID	LCS-106605	Instrument ID	10MSHR06 (U)
Filename	U230608A_02	GC Column ID	US1246423H
Analyzed	06/08/2023 03:25	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	7.61e6	6.03e6	2.67e6	2.08e6	-----	-----	1.26	
1,2,3,6,7,8-HxCDD-13C	36:40	1.02e7	8.17e6	2.83e6	2.23e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:54	1.08e7	9.01e6	3.19e6	2.62e6	-----	-----	1.19	
1,2,3,4,7,8-HxCDD	36:34	3.66e6	2.96e6	1.26e6	9.96e5	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:40	4.40e6	3.72e6	1.21e6	1.04e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD	36:54	4.11e6	3.42e6	1.15e6	9.53e5	-----	-----	1.20	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	4.70e6	9.94e6	1.54e6	3.33e6	-----	-----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	39:47	3.18e6	7.06e6	9.12e5	2.14e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	38:28	4.51e6	4.33e6	1.41e6	1.38e6	-----	-----	1.04	
1,2,3,4,7,8,9-HpCDF	39:48	3.20e6	3.08e6	9.71e5	9.18e5	-----	-----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	6.81e6	6.34e6	2.08e6	1.97e6	-----	-----	1.08	
1,2,3,4,6,7,8-HpCDD	39:22	2.93e6	3.12e6	9.60e5	9.27e5	-----	-----	0.94	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	3.63e6	3.96e6	8.99e5	9.61e5	-----	-----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	7.62e6	8.56e6	1.87e6	2.12e6	-----	-----	0.89	
OCDD	42:03	3.61e6	4.05e6	9.30e5	10.00e5	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID	DLCSSD	Injected By	SMT
Lab ID	LCS-106616	Instrument ID	10MSHR06 (U)
Filename	U230608B_06	GC Column ID	US1246423H
Analyzed	06/09/2023 01:53	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:03	7.75e6	9.88e6	1.10e6	1.43e6	-----	-----	0.78	
2,3,7,8-TCDF	22:05	7.40e5	9.62e5	1.21e5	1.53e5	-----	-----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:18	8.55e6	1.05e7	1.25e6	1.53e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	23:15	6.17e6	7.55e6	8.36e5	1.01e6	-----	-----	0.82	
2,3,7,8-TCDD-37Cl4	23:17	1.18e6		1.71e5		-----	-----		
2,3,7,8-TCDD	23:18	6.46e5	8.09e5	9.55e4	1.19e5	-----	-----	0.80	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	8.49e6	5.54e6	1.28e6	8.25e5	-----	-----	1.53	
2,3,4,7,8-PeCDF-13C	32:16	8.41e6	5.36e6	1.81e6	1.18e6	-----	-----	1.57	
1,2,3,7,8-PeCDF	30:42	3.83e6	2.53e6	6.20e5	4.13e5	-----	-----	1.51	
2,3,4,7,8-PeCDF	32:17	4.21e6	2.73e6	8.78e5	5.90e5	-----	-----	1.54	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	6.70e6	4.26e6	1.43e6	9.00e5	-----	-----	1.57	
1,2,3,7,8-PeCDD	32:43	1.82e6	2.93e6	4.05e5	6.80e5	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:44	3.54e6	6.81e6	1.09e6	2.09e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:52	4.02e6	7.49e6	1.11e6	2.09e6	-----	-----	0.54	
2,3,4,6,7,8-HxCDF-13C	36:26	3.45e6	6.72e6	1.07e6	1.97e6	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:11	2.78e6	5.37e6	9.06e5	1.67e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:46	3.20e6	2.48e6	9.70e5	7.75e5	-----	-----	1.29	
1,2,3,6,7,8-HxCDF	35:53	3.65e6	2.77e6	1.03e6	8.39e5	-----	-----	1.32	
2,3,4,6,7,8-HxCDF	36:27	3.07e6	2.49e6	1.00e6	8.08e5	-----	-----	1.23	
1,2,3,7,8,9-HxCDF	37:12	2.44e6	1.96e6	7.79e5	6.04e5	-----	-----	1.24	

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Minneapolis, MN 55414

Tel: 612-607-1700
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Client ID	DLCSSD	Injected By	SMT
Lab ID	LCS-106616	Instrument ID	10MSHR06 (U)
Filename	U230608B_06	GC Column ID	US1246423H
Analyzed	06/09/2023 01:53	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	4.37e6	3.50e6	1.52e6	1.19e6	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:39	5.69e6	4.60e6	1.78e6	1.48e6	-----	-----	1.24	
1,2,3,7,8,9-HxCDD-13C	36:54	7.77e6	6.06e6	2.28e6	1.89e6	-----	-----	1.28	
1,2,3,4,7,8-HxCDD	36:35	2.20e6	1.78e6	8.14e5	6.45e5	-----	-----	1.23	
1,2,3,6,7,8-HxCDD	36:40	2.71e6	2.28e6	8.40e5	7.01e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDD	36:54	2.47e6	2.03e6	7.79e5	6.27e5	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	2.67e6	5.41e6	8.75e5	1.88e6	-----	-----	0.49	
1,2,3,4,7,8,9-HpCDF-13C	39:47	1.97e6	4.05e6	6.02e5	1.28e6	-----	-----	0.49	
1,2,3,4,6,7,8-HpCDF	38:28	2.69e6	2.61e6	8.62e5	8.14e5	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:48	1.81e6	1.84e6	5.85e5	5.62e5	-----	-----	0.98	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	3.56e6	3.40e6	1.08e6	1.05e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	39:21	1.80e6	1.74e6	5.42e5	4.83e5	-----	-----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	2.19e6	2.34e6	5.45e5	5.98e5	-----	-----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	4.35e6	4.60e6	1.13e6	1.17e6	-----	-----	0.95	
OCDD	42:02	2.21e6	2.39e6	5.34e5	5.88e5	-----	-----	0.92	

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DATA QUALITY ASSURANCE REVIEW

SITE NAME	San Jacinto Southern Impoundment		
WORK ORDER NUMBER	20600.012.001.1431.01	TDD NUMBER	0001/22-431
PROJECT NUMBER		SDG NUMBER	L1619390

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20600.012.001.1431.01, SDG L1619390, San Jacinto Southern Impoundment. Three soil samples were analyzed for dioxins/furans by Pace Analytical Services, Inc., Minneapolis, MN (subcontract laboratory of Pace Analytical National, Mount Juliet, TN). Sample numbers are listed below.

SAMPLE NUMBERS

12599404-042423-S-NE-Release-1	12599404-042423-S-NE-Release-2	12599404-042423-S-NE-Release-3

This data package was validated to determine if Quality Control (QC) specifications were achieved following USEPA Contract Laboratory Program *National Functional Guidelines for High Resolution Superfund Method Data Review* (November 2020), *EPA SW-846 Method Specific Quality Assurance/Quality Control Guidance,* and/or *EPA SW-846 Chapter Four, Organic Analytes* which includes *Recommended Sample Containers, Preservation Techniques and Holding Times* (December 2018). All samples identified above were validated according to Stage 2B protocol, as described in EPA *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Specific data qualifications are listed in the following discussion.

REVIEWER	Kelly Luck	DATE	08/02/2023
QA REVIEWER	Tara Johnson	DATE	08/03/2023

Data Qualifiers

U The analyte was analyzed for but was not detected. The associated numerical value is the method reporting limit (RL) or detection limit (MDL), which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution, or other analysis-specific parameters.

UJ The analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific QC criteria.

J The analyte was positively identified, and the quantity is estimated because of discrepancies in meeting certain analyte-specific QC criteria; or, the analyte was positively identified, but the associated concentration is estimated because it is greater than or equal to the MDL and below the RL.

R QC criteria indicate that the data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary to confirm or deny the presence of the analyte.

PCDD / PCDF FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed using the procedures specified in **SW-846 Method 1613B**.

2. Holding Time:

All samples were extracted and analyzed within the recommended holding time of one year. Samples were maintained at <4 °C. No qualifications were required.

3. Mass Calibration and Mass Spectrometer Resolution:

The laboratory provided chromatograms to show that mass spectrometer resolving power was within required method limits. No qualifications were required.

4. Window Defining Resolution Checks:

Window defining check of the mass spectrometer and gas chromatograph was conducted using a column performing mix at the required frequency and results showed maximum 14% valley between 2,3,7,8-TCDD and its closest eluting isomer. In addition, the results demonstrated instrument monitoring of first to last eluting isomers of each congener group. No qualifications were required.

5. Initial Calibration:

All isomer mean response factors for the initial calibration were greater than the 0.05 control limit. All percent relative standard deviations were within the control limits of <20% for the unlabeled standards and <35% for the labeled reference compounds.

The ion abundance ratios were within the control limits specified within the method. No qualifications were required.

6. Calibration Verification:

All continuing calibration standard criteria were met. The calibration verification standard was analyzed at the required frequency. The concentrations found and the ion abundance ratios were within method-specified control limits. No qualifications were required.

7. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were extracted for each matrix or every 20 samples, whichever is greater. Target analytes were not detected in the associated blanks. No qualifications were required.

B. Field Blanks:

No field blank samples were submitted with this data set.

8. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Samples from outside this sample set underwent MS/MSD analysis.

9. Duplicates:

A. Laboratory Duplicate Analysis:

No laboratory duplicate analyses were conducted with this sample set.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this sample set.

10. Laboratory Control Sample (LCS):

The laboratory analyzed two LCSs with the sample set and recoveries for these analyses were within the control limits provided. No qualifications were required.

11. Labeled Compounds (Internal Standards):

All recoveries for the labeled compounds were within the method-required control limits, with the exception noted below.

SAMPLE	LABELED COMPOUND	RECOVERY	REQUIRED RECOVERY LIMITS	QUALIFIER
12599404-042423-S-NE-RELEASE-1	2,3,7,8-TCDD-$^{37}Cl_4$	34%	35-197%	J; 2,3,7,8-TCDD and Total TCDD

12. Target Analyte Identification:

For 2,3,7,8-TCDD in sample 12599404-042423-S-NE-RELEASE-2, the laboratory noted that the isotope ratio was out of specification by qualifying the result with an "I". Therefore, the result was reported as an Estimated Maximum Possible Concentration (EMPC). The data validator removed the "I" qualifier and added a "J" qualifier to indicate that the result is estimated.

13. Target Analyte Quantitation:

Results for OCDD in two samples were qualified as "E" by the laboratory, indicating that the results exceeded the calibration range. The data validator removed the "E" qualifier and added a "J" qualifier to indicate that the results are estimated.

All results were reported on a dry-weight basis.

14. Laboratory Contact:

No laboratory contact was required.

15. Overall Assessment:

One analyte in one sample had an ion ratio outside of control limits. The result was qualified as estimated (J).

For one analyte in two samples, the results exceeded the calibration range. The results were qualified as estimated (J).

The analytical data are acceptable for use with the qualifications listed above.

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Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-1		
Lab Sample ID	10654728001		
Filename	L230610A_18		
Injected By	CVS		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	2.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	04/24/2023 11:20
ICAL ID	L230610	Received	05/25/2023 08:50
CCal Filename(s)	L230610A_06	Extracted	06/02/2023 15:12
Method Blank ID	BLANK-106604	Analyzed	06/10/2023 23:53

Native Isomers	Conc ng/Kg		EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	7.6		-----	1.0		2,3,7,8-TCDF-13C	2.00	84	
Total TCDF	13		-----	1.0		2,3,7,8-TCDD-13C	2.00	38	
						1,2,3,7,8-PeCDF-13C	2.00	99	
2,3,7,8-TCDD	2.0	J	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	98	
Total TCDD	3.6	J	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97	
						1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND		-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	ND		-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	91	
Total PeCDF	7.1		-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	97	
						1,2,3,4,7,8-HxCDD-13C	2.00	82	
1,2,3,7,8-PeCDD	ND		-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND		-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	68	
						1,2,3,4,7,8,9-HpCDF-13C	2.00	76	
1,2,3,4,7,8-HxCDF	ND		-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	77	
1,2,3,6,7,8-HxCDF	ND		-----	5.0		OCDD-13C	4.00	76	
2,3,4,6,7,8-HxCDF	ND		-----	5.0					
1,2,3,7,8,9-HxCDF	ND		-----	5.0		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND		-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND		-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	34	R
1,2,3,6,7,8-HxCDD	ND		-----	5.0					
1,2,3,7,8,9-HxCDD	ND		-----	5.0					
Total HxCDD	19		-----	5.0					
1,2,3,4,6,7,8-HpCDF	8.6		-----	5.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND		-----	5.0		Equivalence: 5.4 ng/Kg			
Total HpCDF	19		-----	5.0		(Lower-bound - Using 2005 WHO Factors)			
1,2,3,4,6,7,8-HpCDD	66		-----	5.0					
Total HpCDD	220		-----	5.0					
OCDF	19		-----	10					
OCDD	6200	J	-----	10	~~E~~				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

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KAL 08/02/2023

Pace Analytical Services, LLC
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Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-2		
Lab Sample ID	10654728002		
Filename	L230610A_19		
Injected By	CVS		
Total Amount Extracted	10.1 g	Matrix	Solid
% Moisture	2.2	Dilution	NA
Dry Weight Extracted	9.89 g	Collected	04/24/2023 14:20
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 00:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.2	-----	1.0	2,3,7,8-TCDF-13C	2.00	82
Total TCDF	12	-----	1.0	2,3,7,8-TCDD-13C	2.00	70
				1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	-----	2.0 J	1.0 ~~I~~	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	97
				1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	7.0	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	88
				1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	23	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 6.1 ng/Kg		
Total HpCDF	18	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	85	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	8200 J	-----	10 ~~E~~			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = Exceeds calibration range
I = Isotope ratio out of specification

REPORT OF LABORATORY ANALYSIS

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KAL 08/02/2023

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-3		
Lab Sample ID	10654728003		
Filename	L230610A_20		
Injected By	CVS		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	2.1	Dilution	NA
Dry Weight Extracted	9.97 g	Collected	04/24/2023 16:50
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.5	-----	1.0	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	11	-----	1.0	2,3,7,8-TCDD-13C	2.00	62
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	2.0	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	3.2	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	6.6	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	67
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	21	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.6	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 5.3 ng/Kg		
Total HpCDF	16	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	70	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	6100	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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KAL 08/02/2023

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1201 ELM STREET. SUITE 500

September 28, 2023

Charles W. Munce, P.E.
Project Coordinator
GHD Services Inc.
111451 Katy Freeway, Suite 400
Houston, Texas 77079

RE: March 20, 2023, Release Summary of Split Sample Soil Analytical Laboratory Results
San Jacinto River Waste Pits Superfund Site Southern Impoundment
Unilateral Administrative Order CERCLA Docket No. 06-05-21 (UAO)

Dear Mr. Munce,

On March 20, 2023, EPA was notified that a release had occurred at the San Jacinto River Waste Pits Superfund Site Southern Impoundment of approximately 100 to 200 gallons of water from the pipeline system impacting less than 975 square feet of surface area on-site. Following this release, GHD initiated response actions, pumping released water into the water treatment system and excavating impacted soils to approximately 3 inches below ground surface in the potentially impacted area beyond the Remedial Action excavation footprint.

The Environmental Protection Agency (EPA) required that sampling be conducted to determine whether additional action would be needed in the area of the release and provided GHD with the Sampling and Analysis Plan: San Jacinto Southern Impoundment Superfund Site Surface Soil Sampling (attached) via email on April 6, 2023. EPA also required that split samples be taken for independent analysis at a separate lab coordinated by EPA. Sampling was concluded April 24, 2023, and EPA has received and reviewed the validated analytical results from the independent analysis of the split samples (attached). EPA has also received and reviewed the analytical results provided by GHD on June 16, 2023. Both sets of data confirm that no further action is needed in the release area at this time as all sample results are below the cleanup level.

This package of information, including this cover letter and all attachments, should be incorporated into the 30-Day Release Report as well as the Remedial Action Report.

Thank you for coordinating, and please contact me with any questions at poulos.lauren@epa.gov or 214-665-8371.

Sincerely,

Lauren Poulos
Remedial Project Manager

Cc: Wells Richard, GHD
Brent Sasser, IPC
Katie Delbecq, TCEQ

ATTACHMENTS

Attachment I
Contact Water Release Analysis
San Jacinto Southern Impoundment

					Sample ID	12599404-042423-S-NE-RELEASE-1	12599404-042423-S-NE-RELEASE-2	12599404-042423-S-NE-RELEASE-3
					Date	4/24/2023	4/24/2023	4/24/2023
Analyte	CAS.NO	Units	RSL	Type		FS	FS	FS
EPA 1613B								
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/Kg		--		**66**	**85**	**70**
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/Kg		--		**8.6**	**6.9**	**6.6**
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/Kg		--		5 U	5 U	5 U
1,2,3,4,7,8-HxCDD	39227-28-6	ng/Kg		--		5 U	5 U	5 U
1,2,3,4,7,8-HxCDF	70648-26-9	ng/Kg		--		5 U	5 U	5 U
1,2,3,6,7,8-HxCDD	57653-85-7	ng/Kg		--		5 U	5 U	5 U
1,2,3,6,7,8-HxCDF	57117-44-9	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8,9-HxCDD	19408-74-3	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8,9-HxCDF	72918-21-9	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8-PeCDD	40321-76-4	ng/Kg		--		5 U	5 U	5 U
1,2,3,7,8-PeCDF	57117-41-6	ng/Kg		--		5 U	5 U	5 U
2,3,4,6,7,8-HxCDF	60851-34-5	ng/Kg		--		5 U	5 U	5 U
2,3,4,7,8-PeCDF	57117-31-4	ng/Kg		--		5 U	5 U	5 U
2,3,7,8-TCDD	1746-01-6	ng/Kg		--		**2 J**	**2 J**	**2**
2,3,7,8-TCDF	51207-31-9	ng/Kg		--		**7.6**	**7.2**	**7.5**
OCDD	3268-87-9	ng/Kg		--		**6200 J**	**8200 J**	**6100**
OCDF	39001-02-0	ng/Kg		--		**19**	**21**	**21**
Total HpCDD	37871-00-4	ng/Kg		--		**220**	**270**	**270**
Total HpCDF	38998-75-3	ng/Kg		--		**19**	**18**	**16**
Total HxCDD	34465-46-8	ng/Kg		--		**19**	**23**	**21**
Total HxCDF	55684-94-1	ng/Kg		--		5 U	5 U	5 U
Total PeCDD	36088-22-9	ng/Kg		--		5 U	5 U	5 U
Total PeCDF	30402-15-4	ng/Kg		--		**7.1**	**7**	**6.6**
Total TCDD	41903-57-5	ng/Kg		--		**3.6 J**	1 U	**3.2**
Total TCDF	30402-14-3	ng/Kg		--		**13**	**12**	**11**
TEQ (DL/2)	1746-01-6	ng/Kg		--		**11.03575**	**8.61615**	**11.00415**
TEQ (DL=0)	1746-01-6	ng/Kg		--		**5.3717**	**4.1053**	**5.3523**

Note:
ng/Kg - nanograms per kilogram.
RSL - Regional Screening Level (THQ=0.1, Cancer Risk = 1E -06) Resident Soil Summary Issued 05/2023
FS - Field Sample
U - The analyte was analyzed for but was not detected.
J - The analyte was positively identified, and the quantity is estimated.
Detected values are BOLD

Sampling and Analysis Plan:

San Jacinto Southern Impoundment Superfund Site

Surface Soil Sampling

1. Introduction

The United States Environmental Protection Agency (EPA) was notified on Monday, March 20, of a release of approximately 100 to 200 gallons of water from the pipeline system used for dewatering excavations on the northern portion of the San Jacinto Southern Impoundment. The release is expected to have impacted less than 975 square feet of surface area on-site (Figure 1). All indications are that the release was contained on-site and did not impact any areas off-site. GHD Services, Inc. (GHD), the remedial contractor for the site's potentially responsible party, quickly initiated a response with EPA contractor oversight to pump the water back into the treatment system and address potentially impacted soils. EPA is working with GHD to modify procedures and relevant workplans to prevent any future contact water releases and make sure that there is a clear process for responding to any future issues, if necessary.

1.1 Event Summary and response Measures

At approximately 1 PM Monday, a release of pumped water from the open excavation in the north excavation area was observed near the impacted soil stockpile. GHD shut down operations and initiated response actions including diverting and pumping the released water back into the pipeline and water treatment system and then excavating the impacted soils to approximately 3 inches below ground surface (bgs) in the potentially impacted area beyond the Remedial Action excavation footprint. EPA's contractor was on-site at the time providing oversight and conducted a site walk and inspection of the excavation operations to document no off-site impacts were observed. Response activities were completed at approximately 3:15 p.m. the same day.

The source of the release was an open valve on the water treatment system pipeline. GHD has now implemented daily inspections of all valves along the pipeline system, caps for each open valve end, and is evaluating locking mechanisms to prevent any future releases from occurring. EPA is reviewing the Emergency Response Plan for additional measures that should be included related to spill and release protocols and response measures.

1.2 Sampling Rationale

EPA has developed the following sampling and analysis plan to assess the potential impact of the contact water release on the local soils that were inundated. This plan was developed in consultation with the EPA project management team and EPA contractors and includes soil sampling within the potentially impacted area associated with the released contact water.

2. Soil Sampling

Incremental Sampling Method (ISM) will be used to collect surface soil samples (0-1 ft bgs) within the potentially impacted area (see Figure 1), hereafter referred to as the decision unit (DU). The ISM approach is a statistically supported technique for assessing the unbiased mean contaminant concentration in soil. ISM incorporates two principal components: 1) field sampling methodology and 2) laboratory preparation and processing (Interstate Technology Regulatory Council [ITRC], 2020). The ISM approach reduces data variability and increases sample representativeness by obtaining a single sample that represents a large unit divided into smaller increments. DUs are the smallest volume of soil for which a decision will be made based on sampling results. The collected sample increments are composited, processed, and subsampled according to specific protocols of ISM to reduce variability and increase representativeness (ITRC, 2020).

Three ISM samples, each comprised of 30 surface soil sample increments each (Figure 2) will be collected within the DU. All sample increments were collected from 0 to 1-foot bgs using a dedicated volumetric sampling device (LaMotte 1055 Soil Sampler or AMS Soil Probe).

General Procedure for Collecting Surface Soil via ISM

1. Locate the boundaries of the rectangular-shaped DU using the excavation footprint from the response action. Stakes will be installed at the corners of the DU.
2. Pace the length and width of the DU, counting the paces for each. This information will be used to develop a grid for the DU. The goal of the grid is to space out the sample increments/borings as evenly as possible, consistent with Figure 2.
3. Pin flags will be used to define the sampling area and locate grid/transect pattern.
4. A random sample location will be identified in the first sampling grid cell. The same location will be replicated in each subsequent grid cell.
5. The distance and directional moves that will be required to collect the replicate samples will be determined and this information will be documented in the field logbook(s). The distance moved will be determined by measuring the length of the grid cell, if starting in the X direction, or measuring the height of the grid cell, if starting in the Y direction.
6. A serpentine pattern will be walked to collect initial and replicate samples. The serpentine pattern will alternate between starting in the X or Y direction for each replicate. Illustration 1 shows a simplified example of how samples could be collected. In this example, it is assumed that the 'X' symbol represents the original sample (1st replicate), the 'O' symbol represents the duplicate sample (2nd replicate), and the 'Δ' symbol represents the triplicate sample (3rd replicate).

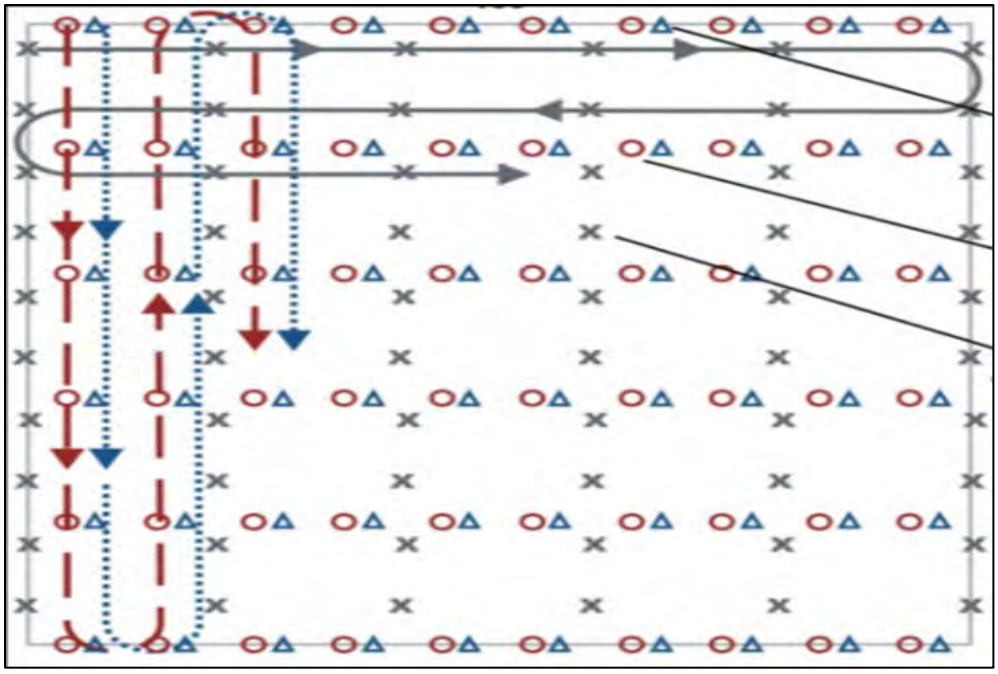

Illustration 1 – ISM serpentine pattern

7. Conduct a trial walk along the paths that will be followed for increment collection to ensure spacing is adequate to collect 30 increments.
8. Pin flags will be placed along these paths. Unique colored flags will be used to differentiate the original sample and the two replicate samples.
9. Following the grid/transect line, locate the first increment collection point for the original sample (replicate #1).
10. Use a dedicated volumetric sampling device to collect an increment.
11. Place increment into sample container.
12. Continue to the next increment collection point for replicate #1 and repeat steps 10 and 11. Repeat this process following a serpentine path until all 30 increments for replicate #1 are collected.
13. Place bulk sample into clean Ziplock® bag.
14. Label each sample bag with the proper identification label.
15. Collect the other replicate samples:
    a. Move the pre-determined number of feet in the pre-designated direction (determined in Steps #5 and 6) from the initial incremental collection point and begin collecting the duplicate sample.
    b. Repeat steps 9 through 15 for the duplicate and triplicate samples (replicate samples #2 and #3).

Additional surface soil sampling notes:

16. All non-soil material will be removed from the sampling area prior to sampling.
17. The sampling team will don the appropriate PPE including nitrile gloves.

18. Care will be taken to obtain the same sample mass from each incremental sample location. The target sample mass for the planned analytical methods is 1,500 grams. Assuming 30 increments per 1,500-gram sample, approximately 50 grams are needed from each increment.
19. Sampling devices will be decontaminated between replicates.
20. One equipment blank will be collected to assess potential contamination resulting from field sampling procedures.

The 30 soil increments for each replicate were placed in double Ziploc® bags, labeled, preserved with ice to below 6°C following sample collection, and transported to the laboratory for homogenization and processing prior to chemical analysis (Note; a detailed discussions of standard laboratory procedures used with ISM samples is provided in the ITRC Guidance document (ITRC, 2020). All ISM soil samples will be analyzed using EPA Method 1613B for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). After processing each ISM sample and removing an aliquot for analysis, the PRP-selected laboratory will remove an additional aliquot and provide it to EPA for split-sample confirmation analysis.

3. Data Evaluation

PCDD and PCDF have a wide range of relative potencies and are found in mixtures in the environment. The EPA endorses the toxicity equivalency factor (TEF) methodology to calculate total dioxin and furan concentrations, using 2,3,7,8-tetrachlorodibenzodioxin (TCDD) as the index chemical using the consensus TEF values published in 2005 by the World Health Organization (2013, EPA). By definition, the TEF for TCDD is 1.0. Each individual dioxin is assigned a scaling factor by which the individual compound concentration is multiplied, yielding total concentration that can be compared to the site cleanup goal for TCDD of 240 nanograms per kilogram (ng/kg). **Equation 1** provides the formula for calculating equivalence concentrations for the number of dioxins in a mixture (n) in TCDD toxic equivalence (TEQ) to the ith individual PCDD or PCDF compound. The selected laboratories will perform this calculation and report the results.

Equation 1 Toxic Equivalence Calculation

$$TEQ = \sum_{i=1}^{n} (C_i \times TEF_i)$$

The updated ITRC ISM 95% Upper Confidence Limit on the mean (UCL) calculator will be used to derive representative concentrations for surface soil in the DU (ITRC v. 3.0, 2020). The updated tool provides instructions for uploading replicate concentrations and determines the appropriate statistical parameter (i.e., Student's t UCL or Chebyshev UCL) to use for comparison to the site cleanup goal. The calculator recommends the 95% Student's t UCL for data sets where the coefficient of variation (CV) of increments is low (defined as CV < 1.5), and the 95% Chebyshev UCL for data sets where the CV is medium (defined as 1.5 < CV < 3) or high (defined as CV > 3).

4. References

EPA, 2013. *Use of Dioxin TEFs in Calculating Dioxin TEQs at CERCLA and RCRA Sites*. May.

EPA, 2017, *Record of Decision, San Jacinto River Waste Pits, Harris County, Texas.* October.

ITRC. 2020. Incremental Sampling Methodology (ISM) Update. October.

LEGEND

- PUMP LOCATION
- RELEASE POINT
- TEMPORARY SUMP LOCATION
- WATER CONVEYANCE PIPING
- APPROXIMATE RELEASE AREA
- SITE BOUNDARY

N

0 50 100

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY, 2023

MAP DATA SOURCE: GHD Release Notification Report

TDD: 0001/22-431
SSID: 06ZQ

US EPA REGION 6

FIGURE 1

SITE PLAN

SAN JACINTO SOUTHERN IMPOUNDMENT
W BANK OF SAN JACINTO RIVER,
N OF HWY 10
CHANNEL VIEW, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MARCH 2023	20600.012.001.1431	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\ER\San Jacinto Southern Impoundment\pro\San Jacinto Southern Impoundment\San Jacinto Southern Impoundment.aprx 8:22 AM 3/30/2023 covasj

LEGEND

- PUMP LOCATION
- RELEASE POINT
- TEMPORARY SUMP LOCATION
- WATER CONVEYANCE PIPING
- APPROXIMATE RELEASE AREA
- SITE BOUNDARY
- SURFACE SOIL SAMPLE GRID (n = 30)

N

0 10 20

SCALE IN FEET

SOURCE: ©NEARMAP IMAGERY, 2023

MAP DATA SOURCE: GHD Release Notification Report

TDD: 0001/22-431
SSID: 06ZQ

US EPA REGION 6

FIGURE 2

SURFACE SOIL INCREMENT SAMPLE GRID MAP
SAN JACINTO SOUTHERN IMPOUNDMENT
W BANK OF SAN JACINTO RIVER,
N OF HWY 10
CHANNEL VIEW, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MARCH 2023	20600.012.001.1431	AS SHOWN

FILE: \\nasatxgis1\ATX_GIS_Data\EPA\Region 6 START IV\ER\San Jacinto Southern Impoundment\pro\San Jacinto Southern Impoundment\San Jacinto Southern Impoundment.aprx 8:38 AM 3/30/2023 covasj

ANALYTICAL REPORT

July 11, 2023

Revised Report

Weston Solutions Inc -Baton Rouge, LA

Sample Delivery Group:	L1619390
Samples Received:	05/24/2023
Project Number:	12599404
Description:	San Jacinto Waste Pits S. Impoundment

Report To:

Jeff Wright
13702 Coursey Blvd
Bldg #7, STE A
Baton Rouge, LA 70817

Entire Report Reviewed By:

Chad A Upchurch
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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12599404-042423-S-NE-RELEASE-1 L1619390-01 Solid

Collected by	Collected date/time	Received date/time
	04/24/23 11:20	05/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2065801	1	06/16/23 00:00	06/16/23 00:00	-	Minneapolis, MN 55414

12599404-042423-S-NE-RELEASE-2 L1619390-02 Solid

Collected by	Collected date/time	Received date/time
	04/24/23 14:20	05/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2065801	1	06/16/23 00:00	06/16/23 00:00	-	Minneapolis, MN 55414

12599404-042423-S-NE-RELEASE-3 L1619390-03 Solid

Collected by	Collected date/time	Received date/time
	04/24/23 16:50	05/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG2065801	1	06/16/23 00:00	06/16/23 00:00	-	Minneapolis, MN 55414

CASE NARRATIVE

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chad A Upchurch
Project Manager

Report Revision History

Level II Report - Version 1: 06/19/23 17:33

Project Comments

Level 4 data package added.

L1619390 -01, -02, -03 contains subout data that is included after the chain of custody.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: J147

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: GHD	Billing Information: GHD Services Inc. 2055 Niagara Falls Blvd., Niagara Falls, New York 14304 USA
Address: 5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	
Report To: Wells Richard	Email To: accountspayableUS@ghd.com
Copy To: Jeff Wright at Weston	Site Collection Info/Address:
Customer Project Name/Number: San Jacinto Waste Pits S. Impoundment	State: Texas / County/City: Harris/Channelview Time Zone Collected: [ ]PT [ ]MT [X]CT [ ]ET
Phone: 225-296-6508 Email: wells.richard@ghd.com	Site/Facility ID #:
Collected By (print):	Purchase Order # : Quote #:
Collected By (signature):	Turnaround Date Required: Standard
Sample Disposal: [ ] Dispose as appropriate [X] Return [ ] Archive: _____ [ ] Hold: _____	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day

Container Preservative Type **: U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Compliance Monitoring? [ ] Yes [ ] No	
DW PWS ID #:	
DW Location Code:	
Immediately Packed on Ice: [ ] Yes [ ] No	
Field Filtered (if applicable): [ ] Yes [ ] No	
Analysis: _____	

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Container Type: Plastic (P) or Glass (G)	Analyses: Dioxin/Furan 1613B (dry weight reporting)
12599404-042423-S-NE-Release-1	SL		4/24/23	11:20				1	G	X
12599404-042423-S-NE-Release-2	SL		4/24/23	14:20				1	G	X
12599404-042423-S-NE-Release-3	SL		4/24/23	16:50				1	G	X

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:
L1699390
-01
-02
-03

Customer Remarks / Special Conditions / Possible Hazards:

Level II & GHD EQuIS 4-file
Copy of Original Client COC included for reference
ISM Prep Completed by Eurofins per GHD

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 6499 7732 7164

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y (N) NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:
NSAT 3.9+0=3.9

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Kristin Deare ELLE	5/23/23 1537		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 5/24/23 0900

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 1

410-126458 Chain of Custody

L1619380

SGS CHAIN OF CUSTODY

SSOW: 12599404-2022-001

B7854

PROJECT INFO

PROJECT: San Jacinto Waste Pits S. Impoundment

P.O. #: —

QUOTE #: —

SITE REF: —

TURN AROUND TIME: Standard

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☒ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

See Remarks

SEND DOCUMENTATION / RESULTS TO

COMPANY: GHD

CONTACT: Wells Richard

ADDRESS:

PHONE: 225-296-6508 EMAIL: Wells.Richard@ghd.com

INVOICE TO (☐ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE: 1	ANALYSIS & METHOD: Dioxins/Furans 1613B	MS MSD	MS/ DUP	REMARKS
12599404-041423-3-NE-Release-1	4/14/23	1120	1	SO		X			Homogenize each bulk sample separately.
↓ -↓-↓-↓-Release-2	↓	1420	1	SO		X			Collect one aliquot from each homogenized
↓ -↓-↓-↓-Release-3	↓	1650	1	SO		X			sample and process.
Temp Blank	—	—	1	W					
									Collect a second aliquot from each homogenized
									sample and send to Eurofins Houston. GHD will
									provide instructions. *Reach out to
									Wells Richard with any questions*
									Follow ISM sample prep guidelines.

COLLECTED/RELINQUISHED BY (1): GHD	DATE: 4/24/23	TIME: 1700	RECEIVED BY:
RELINQUISHED BY (2): Ashley Owens	DATE: 5/10/23	TIME: 10:30	RECEIVED BY:
RELINQUISHED BY (3):	DATE: 5/11/23	TIME: 10:05	RECEIVED BY:

RECEIVED BY LABORATORY: Ashley Owens DATE: 4/26/23 TIME: 10:17

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 1.5°

TRACKING #:

Temp: RAW: 0.8 COR: 0.8

SGS NORTH AMERICA INC. ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Member of the SGS Group (SGS SA)

Kristi Sears 5/23/23 1537 ELLE

U6193390

Q1240

Laboratory Services / GHD Simplified Scope of Work (SSOW)

SSOW Ref. Code
12599404-2022-001

Please contact Project Chemist to implement document

Project summary

Project name	San Jacinto Southern Impoundment		
Project no.	12599404		
Task	OEL.001	Task Org Code	5032
Project location	Channelview, Harris County, Texas		
Client name	IP & MMC		
QAPP title			

Database summary

Database maintained: ☑ Yes ☐ No

Database facility code: 11187072-GD-Channel

FOR INTERNAL USE ONLY - CODING:

Is there more than one laboratory for this event? No

SSOW 1 of 1

Events summary

Phase/study title	Southern Impoundment RA	Rush TAT	3 Day
Event description	Soil Sampling	Final report and EDD TAT	3 Day
Start date	April 21, 2023	Bottle shipping address	1601 South Main Street Highlands, TX 77562
Sampling duration		Phone number	432-413-5158
Sampling frequency	one-time	Sample pick-up required	☐ Yes ☑ No

Sample batching	Sample Event
Date bottle required	April 20, 2023
Attention	Jason Davis

Contacts

	Name	Address	Phone	Cell	Email
Client Project Manager					
Consulting Firm	GHD Services Inc				
Project Manager	Wells Richard	5551 Corporate Blvd., Suite 200, Baton Rouge, LA 70808	225-296-6508	225-454-4363	wells.richard@ghd.com
Project Coordinator	Alice Harpole				Alice.Harpole@ghd.com
Project Coordinator	Sarah Belanger				Sarah.Belanger@ghd.com
Field Leader	Jason Davis	11451 Katy Fwy #400, Houston, TX 77079		432-413-5158	jason.davis@ghd.com
Laboratory (Vendor)					
Lab Project Manager	Tamara Burkamper	5500 Business Drive, Wilmington, NC 28405	910-350-1903,x343	910-794-2527	tamara.burkamper@sgs.com
Lab Project Manager	Beth Stopen	2235 US-130, Dayton, NJ 08810	732-329-0200 ext 14555		Beth.Stopen@sgs.com
Chemistry/data mgt. firm	GHD Services Inc.				
Chemist	Shaw, Kathy	45 Farmington Valley Drive, Plainville, CT 06062	860-747-8298		Kathleen.Shaw@ghd.com
Database Analyst	Cameron, Mary	26850 Haggerty Road, Farmington Hills, Michigan, 48331	248-893-3400		mary.cameron@ghd.com

Lab deliverables

EDD format: ☐ GHD EQuIS EZEDD ☐ GHD EQuIS 4-File ☐ Other (Please Specify)

Report level requested: ☑ Level III ☐ Level IV ☐ Other (Please Specify)

Additional reporting requirements

Form 1s include: ☑ MDLs ☑ PQLs ☑ J Values

TICs: ☐ Yes ☑ No

Soil reporting: ☑ Dry ☐ Wet

Lab deliverables distribution

Rush TAT data (email deliverable only)	Wells Richard, Kathy Shaw, Mary Cameron
Final EDD and result summary (PDF)	edds@ghd.com
Final lab report	Wells Richard, Kathy Shaw, Mary Cameron, Mansa Oriaku

GHD data review level

☐ Stage 1 ☑ Stage 2a ☐ Stage 2b

☐ Stage 4 ☑ Stage 4/2b ☐ Other (Please Specify)

Data management deliverables

☐ EQuIS Database ☐ Cross Tab Table ☐ Flat File ☑ Database ☐ Other (please specify) EDAT

Data management deliverables distribution

Distribution list: Wells Richard, Kathy Shaw, Mary Cameron

Database exports - reporting down to MDL ☐ Yes ☐ No

Comments

Please see below for shipping information to the Eurofins Denver Lab
Eurofins Denver
4955 Yarrow St, Arvada, CO 80002

Attn Anthony Grimaldi

* additional Final Lab Report copy (in PDF format) is available in the GHD Project File folder. Please contact Project Chemist.

SSOW email distribution list	wells.richard@ghd.com; jason.davis@ghd.com; Alice.Harpole@ghd.com; tamara.burkamper@sgs.com; Sarah.Belanger@ghd.com; Kathleen.Shaw@ghd.com; mary.cameron@ghd.com; Jennifer.Devonshire@ghd.com					
Prepared by	Kathy Shaw	Date		Revision number	2	Revision Date	May 10, 2023

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Client Services
Pace Analytical National
12065 Lebanon Rd
Mt. Juliet TN 37122

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10654728
Sample Receipt Date: 05/25/2023
Client Project #: L1619390 WG2065801
Client Sub PO #: L1619390
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kongmeng Vang, your Pace Project Manager.

This report has been reviewed by:

June 16, 2023

Kongmeng Vang, Project Manager
(612) 607-6382
(612) 607-6444 (fax)
kongmeng.vang@pacelabs.com

Report Prepared Date:
June 15, 2023

Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on three samples submitted by a representative of Pace Analytical National. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount, and the sensitivity was verified by signal-to-noise measurements. The quantitation limits, adjusted for sample extraction amount, may be somewhat higher or lower than the reporting limits provided in this report. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 38-99%. Except for two low values, which were flagged "R" on the results tables, the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations above the calibration range were flagged "E" and should also be regarded as estimates.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to be free of PCDDs and PCDFs at the reporting limits.

A laboratory spike sample was also prepared with each sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 86-109%. These results were within the target ranges for the method. Matrix spikes were prepared with the sample batches using sample materials from separate projects; results from these analyses will be provided upon request.

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without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Missouri	10100
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska-DW	MN00064	Nevada	MN00064
Alaska-UST	17-009	New Hampshire	2081
Arizona	AZ0014	New Jersey	MN002
Arkansas - WW	88-0680	New York	11647
Arkansas-DW	MN00064	North Carolina-	27700
California	2929	North Carolina-	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio-DW	41244
Florida	E87605	Ohio-VAP (170	CL101
Georgia	959	Ohio-VAP (180	CL110
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon-Primary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Report No.....10655587

Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

WO# : 10654728

10654728

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — **Required Client Information:**

Company:	Pace Analytical
Address:	12065 Lebanon Rd.
	Mt. Juliet, TN 37122
Email:	MTJLSuboutTeam@pacelabs.com
Phone:	(615) 773-9756 Fax: (615) 758-5859
Requested Due Date:	1-Jun

Section B — **Required Project Information:**

Report To:	Pace Analytical Subout Team
Copy To:	
Purchase Order #:	L1619390
Project Name:	San Jacinto Waste Pits S. Impoundment
Project #:	

Section C — **Invoice Information:**

Attention:	Jackie Brewster
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	Kongmeng Vang
Pace Profile #:	38076

Regulatory Agency

State / Location: MN 55414, MN 55414

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Dioxins and Furans 1613	Residual Chlorine (Y/N)	
1	12599404-042423-S-NE-RELEASE-1	SL				24-Apr	11:20		1	1									X		001
2	12599404-042423-S-NE-RELEASE-2	SL				24-Apr	14:20		1	1									X		002
3	12599404-042423-S-NE-RELEASE-3	SL				24-Apr	16:50		1	1									X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Angela Ford	24-May	11:28	PACE	5.25.23	850	0.9	4	4	4
Pace Analytical Batch: WG2065801										
Pace Analytical SDGs: L1619390										
Location: Minneapolis, MN 55414										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:			
SIGNATURE of SAMPLER:		DATE Signed:	

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

DC#_Title: ENV-FRM-MIN4-0150 v13_Sample Condition Upon Receipt (SCUR)
Effective Date: 4/14/2023

Sample Condition Upon Receipt

Client Name: PACE NATIONALS

Project #: **WO#: 10654728**

PM: KV **Due Date: 06/19/23**
CLIENT: ESC_TN

Courier: ☒ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 6491 5472 8006 ☐ See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☒ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 01339252/1710 **Type of Ice:** ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☒ No ☐ N/A

Temp should be above freezing to 6 °C **Cooler temp Read w/Temp Blank:** 0.9 °C

Correction Factor: TBUG **Cooler Temp Corrected w/temp blank:** 0.9 °C

Average Corrected Temp (no temp blank only): ____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☒ N/A, water sample/other: Soil)

Date/Initials of Person Examining Contents: 5.25.23 CM2

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☒ Yes ☐ No pmn 5/25/23

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☐ Minneapolis ☐ Virginia				**COMMENTS**
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☒ No	☐ N/A	3. 5.25.23 CM7
Samples Arrived within Hold Time?	☒ Yes	☐ No		4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other ____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Sample Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No	☐ N/A	8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☒ No	☐ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	☒ Yes	☐ No		11. **If no, write ID/Date/Time of container below:** ☐ See Exceptions ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	☐ Yes	☐ No	☒ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 **pH Paper Lot #**
				Residual Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes	☐ No	☒ N/A	13.
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
3 Trip Blanks Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): ____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager Review: [signature] **Date:** 5/26/23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: CM7 **Line:** 2

	DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist
Pace ANALYTICAL SERVICES	Effective Date: 08/19/2022

USDA Regulated Soil Checklist

To be Completed by Sample Receiving:

WO: 10654728 **Date:** 5/25/23 **Initials:** PMM

Sample Origin (check one): ☑ DOMESTIC ☒ QUARANTINED KV 5/26/23 ☐ FOREIGN

NOTE: Soil samples from Hawaii, Guam, Puerto Rico, and the US Virgin Islands are Foreign originated.

If **DOMESTIC**, circle state of origin: AL AR AZ CA FL GA LA MS NC NM NY OK OR SC TN (TX) VA

Includes: IFA, SOD, Golden Nematode, Karnal Bunt, and Witchweed List County: San Jacinto

(USDA Permit/Compliance Agreement authorizes movement of samples from these domestic regulated zones)

If **QUARANTINED**, circle state of origin: CA ID NY TX

Includes: Fruit Fly and Pale Cyst Nematode List County: _____

(Movement is not authorized for Pale Cyst Nematode (ID)—remaining quarantines require additional paperwork)

If **FOREIGN**, list country of origin: _____

(Movement from some Canadian Provinces is not allowed. Refer to ENV-FRM-MIN4-0137 *Regulated Soil Flow Chart*)

REQUIREMENT	ACTION	COMPLETED		
PPQ-530 Paperwork must be included for any samples from counties with a Fruit Fly Quarantine in CA, NY, and TX. Reference ENV-SOP-MIN4-0095.	Scan PPQ-530 to the corresponding Project folder on the X:drive. If PPQ-530 is not present, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)
Samples from ID may not be moved from the quarantined region. Reference ENV-SOP-MIN4-0095.	If samples originated in a quarantined zone, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)

REQUIREMENT	ACTION	COMPLETED		
"Special Handling" stickers are to be placed on all samples.	Did "special handling" stickers get placed on all sample containers?	(YES)	NO	N/A
Samples must be segregated and stored in designated bins, shelves, and coolers.	Were samples placed in a designated cooler, containers, and shelves?	(YES)	NO	N/A
Samples must be double contained to prevent accidental release.	Were there any signs of breakage or leakage (check for broken glass and/or loose soil in the cooler)? *NOTE: If NO, ice and melt water can be disposed of by normal process (ex: down the drain).*	YES	(NO)	N/A
	If **YES**, were ice and melt water separated from the cooler and disposed of properly?	YES	NO	(N/A)
	Any broken glass and/or loose soil are to be bagged and placed in a USDA Regulated satellite container or active drum (see Waste Coordinator). **Ice and melt water should be baked at a temperature range of 121-154°F for 2 hours and then cooled before going down the drain.**			
Equipment and supplies that have come into contact samples must be decontaminated.	Was the cooler(s) and/or countertop(s) decontaminated using either a fresh 10% bleach solution or 70% ethanol? (Gloves and other lab supplies will be bagged and placed in the USDA Regulated satellite container or active drum).	(YES)	NO	

COMMENTS:

Pace ANALYTICAL SERVICES	**DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist**
	Effective Date: 08/19/2022

To be Completed by Project Management (PM and/or PC):

Sample analysis will be conducted (circle all that apply): MN Subcontract Lab

If **subcontract**, list lab(s): _____

REQUIREMENT	ACTION	COMPLETED		
Permission to ship untreated soil must be on file prior to shipping to any subcontract lab, including IR Pace Labs.	Go to: *S:\CLIENTSVR\10_Client Services Department Documents\Regulated Soils Permits\Permission to Ship* If permission to ship letter is not there, contact the laboratory's designated USDA permit holder.	YES	NO	N/A
Shipment must include a valid copy of the receiving lab's permit as well as permission to ship letter.	Is a copy of all needed paperwork included with the COC? **Do NOT ship samples until all necessary paperwork is compiled.**	YES	NO	N/A

COMMENTS:

PM Signature: _____ **Date:** 5/26/23

Qualtrax ID: 52751

Pace Analytical Services, LLC
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Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

H2 = Extracted outside of holding time

I = Isotope ratio out of specification

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-1		
Lab Sample ID	10654728001		
Filename	L230610A_18		
Injected By	CVS		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	2.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	04/24/2023 11:20
ICAL ID	L230610	Received	05/25/2023 08:50
CCal Filename(s)	L230610A_06	Extracted	06/02/2023 15:12
Method Blank ID	BLANK-106604	Analyzed	06/10/2023 23:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	7.6	-----	1.0		2,3,7,8-TCDF-13C	2.00	84	
Total TCDF	13	-----	1.0		2,3,7,8-TCDD-13C	2.00	38	
					1,2,3,7,8-PeCDF-13C	2.00	99	
2,3,7,8-TCDD	2.0	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	98	
Total TCDD	3.6	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97	
					1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	91	
Total PeCDF	7.1	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	97	
					1,2,3,4,7,8-HxCDD-13C	2.00	82	
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	68	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76	
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	77	
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	76	
2,3,4,6,7,8-HxCDF	ND	-----	5.0					
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	34	R
1,2,3,6,7,8-HxCDD	ND	-----	5.0					
1,2,3,7,8,9-HxCDD	ND	-----	5.0					
Total HxCDD	19	-----	5.0					
1,2,3,4,6,7,8-HpCDF	8.6	-----	5.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 5.4 ng/Kg			
Total HpCDF	19	-----	5.0		(Lower-bound - Using 2005 WHO Factors)			
1,2,3,4,6,7,8-HpCDD	66	-----	5.0					
Total HpCDD	220	-----	5.0					
OCDF	19	-----	10					
OCDD	6200	-----	10	E				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-2		
Lab Sample ID	10654728002		
Filename	L230610A_19		
Injected By	CVS		
Total Amount Extracted	10.1 g	Matrix	Solid
% Moisture	2.2	Dilution	NA
Dry Weight Extracted	9.89 g	Collected	04/24/2023 14:20
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 00:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.2	-----	1.0		2,3,7,8-TCDF-13C	2.00	82
Total TCDF	12	-----	1.0		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	-----	2.0	1.0	I	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	7.0	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	-----	5.0				
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	5.0				
1,2,3,7,8,9-HxCDD	ND	-----	5.0				
Total HxCDD	23	-----	5.0				
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 6.1 ng/Kg		
Total HpCDF	18	-----	5.0		(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	85	-----	5.0				
Total HpCDD	270	-----	5.0				
OCDF	21	-----	10				
OCDD	8200	-----	10	E			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = Exceeds calibration range
I = Isotope ratio out of specification

REPORT OF LABORATORY ANALYSIS

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Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-3		
Lab Sample ID	10654728003		
Filename	L230610A_20		
Injected By	CVS		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	2.1	Dilution	NA
Dry Weight Extracted	9.97 g	Collected	04/24/2023 16:50
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.5	-----	1.0	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	11	-----	1.0	2,3,7,8-TCDD-13C	2.00	62
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	2.0	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	3.2	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	6.6	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	67
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	21	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.6	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 5.3 ng/Kg		
Total HpCDF	16	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	70	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	6100	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
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Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTO		
Lab Sample ID	BLANK-106604	Matrix	Solid
Filename	U230608A_04	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	06/02/2023 15:12
ICAL ID	U230524	Analyzed	06/08/2023 04:57
CCal Filename(s)	U230608A_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	47
				1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	95
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	88
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	89
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	39
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTS		
Lab Sample ID	BLANK-106615	Matrix	Solid
Filename	U230608B_10	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	06/05/2023 14:25
ICAL ID	U230524	Analyzed	06/09/2023 04:58
CCal Filename(s)	U230608B_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	66
				1,2,3,7,8-PeCDF-13C	2.00	89
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	94
				1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106605		
Filename	U230608A_02	Matrix	Solid
Total Amount Extracted	10.2 g	Dilution	NA
ICAL ID	U230524	Extracted	06/02/2023 15:12
CCal Filename	U230608A_01	Analyzed	06/08/2023 03:25
Method Blank ID	BLANK-106604	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.	
2,3,7,8-TCDF	10	9.7	7.5	15.8	97	
2,3,7,8-TCDD	10	9.6	6.7	15.8	96	
1,2,3,7,8-PeCDF	50	48	40.0	67.0	95	
2,3,4,7,8-PeCDF	50	48	34.0	80.0	96	
1,2,3,7,8-PeCDD	50	43	35.0	71.0	86	
1,2,3,4,7,8-HxCDF	50	47	36.0	67.0	95	
1,2,3,6,7,8-HxCDF	50	49	42.0	65.0	98	
2,3,4,6,7,8-HxCDF	50	48	35.0	78.0	96	
1,2,3,7,8,9-HxCDF	50	51	39.0	65.0	102	
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	102	
1,2,3,6,7,8-HxCDD	50	47	38.0	67.0	94	
1,2,3,7,8,9-HxCDD	50	50	32.0	81.0	101	
1,2,3,4,6,7,8-HpCDF	50	49	41.0	61.0	97	
1,2,3,4,7,8,9-HpCDF	50	51	39.0	69.0	102	
1,2,3,4,6,7,8-HpCDD	50	43	35.0	70.0	87	
OCDF	100	100	63.0	170.0	100	
OCDD	100	100	78.0	144.0	101	
2,3,7,8-TCDD-37Cl4	10	2.7	3.1	19.1	27	R
2,3,7,8-TCDF-13C	100	82	22.0	152.0	82	
2,3,7,8-TCDD-13C	100	33	20.0	175.0	33	
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89	
2,3,4,7,8-PeCDF-13C	100	93	13.0	328.0	93	
1,2,3,7,8-PeCDD-13C	100	100	21.0	227.0	101	
1,2,3,4,7,8-HxCDF-13C	100	94	19.0	202.0	94	
1,2,3,6,7,8-HxCDF-13C	100	94	21.0	159.0	94	
2,3,4,6,7,8-HxCDF-13C	100	88	22.0	176.0	88	
1,2,3,7,8,9-HxCDF-13C	100	80	17.0	205.0	80	
1,2,3,4,7,8-HxCDD-13C	100	80	21.0	193.0	80	
1,2,3,6,7,8-HxCDD-13C	100	94	25.0	163.0	94	
1,2,3,4,6,7,8-HpCDF-13C	100	65	21.0	158.0	65	
1,2,3,4,7,8,9-HpCDF-13C	100	57	20.0	186.0	57	
1,2,3,4,6,7,8-HpCDD-13C	100	70	26.0	166.0	70	
OCDD-13C	200	100	26.0	397.0	52	

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106616		
Filename	U230608B_06	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	U230524	Extracted	06/05/2023 14:25
CCal Filename	U230608B_01	Analyzed	06/09/2023 01:53
Method Blank ID	BLANK-106615	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	106
2,3,7,8-TCDD	10	11	6.7	15.8	107
1,2,3,7,8-PeCDF	50	52	40.0	67.0	103
2,3,4,7,8-PeCDF	50	53	34.0	80.0	107
1,2,3,7,8-PeCDD	50	48	35.0	71.0	95
1,2,3,4,7,8-HxCDF	50	51	36.0	67.0	102
1,2,3,6,7,8-HxCDF	50	54	42.0	65.0	109
2,3,4,6,7,8-HxCDF	50	50	35.0	78.0	100
1,2,3,7,8,9-HxCDF	50	54	39.0	65.0	108
1,2,3,4,7,8-HxCDD	50	53	35.0	82.0	106
1,2,3,6,7,8-HxCDD	50	52	38.0	67.0	103
1,2,3,7,8,9-HxCDD	50	53	32.0	81.0	106
1,2,3,4,6,7,8-HpCDF	50	53	41.0	61.0	105
1,2,3,4,7,8,9-HpCDF	50	50	39.0	69.0	100
1,2,3,4,6,7,8-HpCDD	50	48	35.0	70.0	96
OCDF	100	110	63.0	170.0	108
OCDD	100	110	78.0	144.0	109
2,3,7,8-TCDD-37Cl4	10	5.7	3.1	19.1	57
2,3,7,8-TCDF-13C	100	72	22.0	152.0	72
2,3,7,8-TCDD-13C	100	65	20.0	175.0	65
1,2,3,7,8-PeCDF-13C	100	79	21.0	192.0	79
2,3,4,7,8-PeCDF-13C	100	81	13.0	328.0	81
1,2,3,7,8-PeCDD-13C	100	84	21.0	227.0	84
1,2,3,4,7,8-HxCDF-13C	100	78	19.0	202.0	78
1,2,3,6,7,8-HxCDF-13C	100	76	21.0	159.0	76
2,3,4,6,7,8-HxCDF-13C	100	74	22.0	176.0	74
1,2,3,7,8,9-HxCDF-13C	100	69	17.0	205.0	69
1,2,3,4,7,8-HxCDD-13C	100	66	21.0	193.0	66
1,2,3,6,7,8-HxCDD-13C	100	75	25.0	163.0	75
1,2,3,4,6,7,8-HpCDF-13C	100	51	21.0	158.0	51
1,2,3,4,7,8,9-HpCDF-13C	100	48	20.0	186.0	48
1,2,3,4,6,7,8-HpCDD-13C	100	53	26.0	166.0	53
OCDD-13C	200	82	26.0	397.0	41

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Client Services
Pace Analytical National
12065 Lebanon Rd

Mt. Juliet TN 37122

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Prepared Date:
July 3, 2023

Report Information:

Pace Project #: 10654728
Sample Receipt Date: 05/25/2023
Client Project #: L1619390 WG2065801
Client Sub PO #: L1619390
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 4 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Kongmeng Vang, your Pace Project Manager.

This report has been reviewed by:

July 03, 2023

Kongmeng Vang, Project Manager
(612) 607-6382
(612) 607-6444 (fax)
kongmeng.vang@pacelabs.com

Report of Laboratory Analysis

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The results relate only to the samples included in this report.

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analysis performed on three samples submitted by a representative of Pace Analytical National. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration points and a nominal 10-gram sample amount, and the sensitivity was verified by signal-to-noise measurements. The quantitation limits, adjusted for sample extraction amount, may be somewhat higher or lower than the reporting limits provided in this report. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 38-99%. Except for two low values, which were flagged "R" on the results tables, the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations above the calibration range were flagged "E" and should also be regarded as estimates.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to be free of PCDDs and PCDFs at the reporting limits.

A laboratory spike sample was also prepared with each sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 86-109%. These results were within the target ranges for the method. Matrix spikes were prepared with the sample batches using sample materials from separate projects; results from these analyses will be provided upon request.

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Missouri	10100
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska-DW	MN00064	Nevada	MN00064
Alaska-UST	17-009	New Hampshire	2081
Arizona	AZ0014	New Jersey	MN002
Arkansas - WW	88-0680	New York	11647
Arkansas-DW	MN00064	North Carolina-	27700
California	2929	North Carolina-	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio-DW	41244
Florida	E87605	Ohio-VAP (170	CL101
Georgia	959	Ohio-VAP (180	CL110
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon-Primary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Report No.....10654728

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Fax: 612.607.6444
www.pacelabs.com

Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

H2 = Extracted outside of holding time

I = Isotope ratio out of specification

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

2,3,7,8-TCDD Equivalency Factors (TEFs) for the Polychlorinated Dibenzo-p-dioxins and Dibenzofurans

WHO2005 Factors

Compound	TEF
2,3,7,8-TCDD	1.000000
1,2,3,7,8-PeCDD	1.000000
1,2,3,4,7,8-HxCDD	0.100000
1,2,3,6,7,8-HxCDD	0.100000
1,2,3,7,8,9-HxCDD	0.100000
1,2,3,4,6,7,8-HpCDD	0.010000
OCDD	0.000300
Total TCDD	0.000000
Total PeCDD	0.000000
Total HxCDD	0.000000
Total HpCDD	0.000000
2,3,7,8-TCDF	0.100000
1,2,3,7,8-PeCDF	0.030000
2,3,4,7,8-PeCDF	0.300000
1,2,3,4,7,8-HxCDF	0.100000
1,2,3,6,7,8-HxCDF	0.100000
2,3,4,6,7,8-HxCDF	0.100000
1,2,3,7,8,9-HxCDF	0.100000
1,2,3,4,6,7,8-HpCDF	0.010000
1,2,3,4,7,8,9-HpCDF	0.010000
OCDF	0.000300
Total TCDF	0.000000
Total PeCDF	0.000000
Total HxCDF	0.000000
Total HpCDF	0.000000

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Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Sample ID Cross Reference

Client Sample ID	Pace Sample ID	Date Received	Sample Type
12599404-042423-S-NE-RELEASE-1	10654728001	05/25/2023	Solid
12599404-042423-S-NE-RELEASE-2	10654728002	05/25/2023	Solid
12599404-042423-S-NE-RELEASE-3	10654728003	05/25/2023	Solid

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WO# : 10654728

10654728

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Pace Analytical
Address:	12065 Lebanon Rd.
	Mt. Juliet, TN 37122
Email:	MTJLSuboutTeam@pacelabs.com
Phone:	(615) 773-9756 Fax: (615) 758-5859
Requested Due Date:	1-Jun

Section B — Required Project Information:

Report To:	Pace Analytical Subout Team
Copy To:	
Purchase Order #:	L1619390
Project Name:	San Jacinto Waste Pits S. Impoundment
Project #:	

Section C — Invoice Information:

Attention:	Jackie Brewster
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	Kongmeng Vang
Pace Profile #:	38076

Regulatory Agency:

State / Location: MN 55414, MN 55414

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Dioxins and Furans 1613	Residual Chlorine (Y/N)	
1	12599404-042423-S-NE-RELEASE-1	SL				24-Apr	11:20		1	1									X		001
2	12599404-042423-S-NE-RELEASE-2	SL				24-Apr	14:20		1	1									X		002
3	12599404-042423-S-NE-RELEASE-3	SL				24-Apr	16:50		1	1									X		003
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Angela Ford	24-May	11:28	PACE	5.25.23	850	0.9	Y	Y	Y
Pace Analytical Batch: WG2065801										
Pace Analytical SDGs: L1619390										
Location: Minneapolis, MN 55414										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

DC#_Title: ENV-FRM-MIN4-0150 v13_Sample Condition Upon Receipt (SCUR)
Effective Date: 4/14/2023

Sample Condition Upon Receipt

Client Name: PACE NATIONALS

Project #: **WO#: 10654728**

PM: KV **Due Date: 06/19/23**

CLIENT: ESC_TN

Courier: [X] FedEx [ ] UPS [ ] USPS [ ] Client [ ] Pace [ ] SpeeDee [ ] Commercial

Tracking Number: 6491 5472 8006 [ ] See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? [X] Yes [ ] No **Seals Intact?** [X] Yes [ ] No **Biological Tissue Frozen?** [ ] Yes [ ] No [X] N/A

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [ ] Other **Temp Blank?** [X] Yes [ ] No

Thermometer: [ ] T1 (0461) [ ] T2 (0436) [X] T3 (0459) [ ] T4 (0402) [ ] T5 (0178) [ ] T6 (0235) [ ] T7 (0042) [ ] T8 (0775) [ ] T9(0727) [ ] 01339252/1710 **Type of Ice:** [X] Wet [ ] Blue [ ] Dry [ ] None [ ] Melted

Did Samples Originate in West Virginia? [ ] Yes [X] No **Were All Container Temps Taken?** [ ] Yes [X] No [ ] N/A

Temp should be above freezing to 6 °C **Cooler temp Read w/Temp Blank:** 0.9 °C

Correction Factor: TRUE **Cooler Temp Corrected w/temp blank:** 0.9 °C

Average Corrected Temp (no temp blank only): ____ °C [ ] See Exceptions ENV-FRM-MIN4-0142 [ ] 1 Container

USDA Regulated Soil: ([X] N/A, water sample/other: Soil)

Date/Initials of Person Examining Contents: 5.25.23 CM2

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? [X] Yes [ ] No PMM 5/25/23

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? [ ] Yes [X] No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): [ ] Duluth [ ] Minneapolis [ ] Virginia

				COMMENTS
Chain of Custody Present and Filled Out?	[X] Yes	[ ] No		1.
Chain of Custody Relinquished?	[X] Yes	[ ] No		2.
Sampler Name and/or Signature on COC?	[ ] Yes	[X] No	[ ] N/A	3. 5.25.23 CM7
Samples Arrived within Hold Time?	[X] Yes	[ ] No		4. If fecal: [ ] <8 hrs [ ] >8 hr, <24 [ ] No
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No		5. [ ] Fecal Coliform [ ] HPC [ ] Total Coliform/E.coli [ ] BOD/cBOD [ ] Hex Chrom [ ] Turbidity [ ] Nitrate [ ] Nitrite [ ] Orthophos [ ] Other ____
Rush Turn Around Time Requested?	[ ] Yes	[X] No		6.
Sufficient Sample Volume?	[X] Yes	[ ] No		7.
Correct Containers Used?	[X] Yes	[ ] No	[ ] N/A	8.
-Pace Containers Used?	[X] Yes	[ ] No		
Containers Intact?	[X] Yes	[ ] No		9.
Field Filtered Volume Received for Dissolved Tests?	[ ] Yes	[X] No	[ ] N/A	10. Is sediment visible in the dissolved container? [ ] Yes [ ] No
Is sufficient information available to reconcile the samples to the COC?	[X] Yes	[ ] No		11. **If no, write ID/Date/Time of container below:** [ ] See Exceptions ENV-FRM-MIN4-0142
Matrix: [ ] Water [X] Soil [ ] Oil [ ] Other				
All containers needing acid/base preservation have been checked?	[ ] Yes	[ ] No	[X] N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	[ ] Yes	[ ] No	[X] N/A	[ ] NaOH [ ] HNO3 [ ] H2SO4 [ ] Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	[ ] Yes	[ ] No	[X] N/A	Positive for Residual Chlorine? [ ] Yes [ ] No [ ] See Exceptions ENV-FRM-MIN4-0142
				pH Paper Lot #
				Residual Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	[ ] Yes	[ ] No	[X] N/A	13.
Extra labels present on soil VOA or WIDRO containers?	[ ] Yes	[ ] No	[X] N/A	14. [ ] See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	[ ] Yes	[ ] No	[X] N/A	
3 Trip Blanks Present?	[ ] Yes	[ ] No	[X] N/A	15.
Trip Blank Custody Seals Present?	[ ] Yes	[ ] No	[X] N/A	Pace Trip Blank Lot # (if purchased): ____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** [ ] Yes [ ] No

Person Contacted: ____ Date/Time: ____

Comments/Resolution: ____

Project Manager Review: [signature] **Date:** 5/26/23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: CM7 **Line:** 2

	DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist
Pace ANALYTICAL SERVICES	**Effective Date: 08/19/2022**

USDA Regulated Soil Checklist

To be Completed by Sample Receiving:

WO: 10654728 **Date:** 5/25/23 **Initials:** PMM

Sample Origin (check one): ☑ DOMESTIC ☒ QUARANTINED KV 5/26/23 ☐ FOREIGN

NOTE: Soil samples from Hawaii, Guam, Puerto Rico, and the US Virgin Islands are Foreign originated.

If **DOMESTIC**, circle state of origin: AL AR AZ CA FL GA LA MS NC NM NY OK OR SC TN (TX) VA

Includes: IFA, SOD, Golden Nematode, Karnal Bunt, and Witchweed List County: San Jacinto

(USDA Permit/Compliance Agreement authorizes movement of samples from these domestic regulated zones)

If **QUARANTINED**, circle state of origin: CA ID NY TX

Includes: Fruit Fly and Pale Cyst Nematode List County: _____

(Movement is not authorized for Pale Cyst Nematode (ID)—remaining quarantines require additional paperwork)

If **FOREIGN**, list country of origin: _____

(Movement from some Canadian Provinces is not allowed. Refer to ENV-FRM-MIN4-0137 *Regulated Soil Flow Chart*)

REQUIREMENT	ACTION	COMPLETED		
PPQ-530 Paperwork must be included for any samples from counties with a Fruit Fly Quarantine in CA, NY, and TX. Reference ENV-SOP-MIN4-0095.	Scan PPQ-530 to the corresponding Project folder on the X:drive. If PPQ-530 is not present, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)
Samples from ID may not be moved from the quarantined region. Reference ENV-SOP-MIN4-0095.	If samples originated in a quarantined zone, contact the laboratory's designated USDA permit holder. **Do NOT continue processing samples.**	YES	NO	(N/A)

REQUIREMENT	ACTION	COMPLETED		
"Special Handling" stickers are to be placed on all samples.	Did "special handling" stickers get placed on all sample containers?	(YES)	NO	N/A
Samples must be segregated and stored in designated bins, shelves, and coolers.	Were samples placed in a designated cooler, containers, and shelves?	(YES)	NO	N/A
Samples must be double contained to prevent accidental release.	Were there any signs of breakage or leakage (check for broken glass and/or loose soil in the cooler)? *NOTE: If NO, ice and melt water can be disposed of by normal process (ex: down the drain).*	YES	(NO)	N/A
	If **YES**, were ice and melt water separated from the cooler and disposed of properly?	YES	NO	(N/A)
	Any broken glass and/or loose soil are to be bagged and placed in a USDA Regulated satellite container or active drum (see Waste Coordinator). **Ice and melt water should be baked at a temperature range of 121-154°F for 2 hours and then cooled before going down the drain.**			
Equipment and supplies that have come into contact samples must be decontaminated.	Was the cooler(s) and/or countertop(s) decontaminated using either a fresh 10% bleach solution or 70% ethanol? (Gloves and other lab supplies will be bagged and placed in the USDA Regulated satellite container or active drum).	(YES)	NO	

COMMENTS:

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-MIN4-0154 v02_USDA Regulated Soil Checklist
	Effective Date: 08/19/2022

To be Completed by Project Management (PM and/or PC):

Sample analysis will be conducted (circle all that apply): MN Subcontract Lab

If **subcontract**, list lab(s): _____

REQUIREMENT	ACTION	COMPLETED		
Permission to ship untreated soil must be on file prior to shipping to any subcontract lab, including IR Pace Labs.	Go to: *S:\CLIENTSVR\10_Client Services Department Documents\Regulated Soils Permits\Permission to Ship* If permission to ship letter is not there, contact the laboratory's designated USDA permit holder.	YES	NO	N/A
Shipment must include a valid copy of the receiving lab's permit as well as permission to ship letter.	Is a copy of all needed paperwork included with the COC? **Do NOT ship samples until all necessary paperwork is compiled.**	YES	NO	N/A

COMMENTS:

_____

PM Signature: _____ **Date:** 5/26/23

Dioxin Solid Soxhlet EB-35531

EB-35531

Extract Solvents:

Extraction On (Date/Time): 06/02/23 15:12

QC Matrix Lot #: Sand 211540/WIPES **Toluene Lot #** EG735-US

Time of Spiking: 06/02/23 14:12 **Hexane Lot #**

Extraction Off (Date/Time): 06/03/23 08:30

Balance: 10BALO **MeCl Lot #**

Standards	Name/ID	Amount	Initial	Witness	Expiration Date	Dispenser
Internal Std.	FL-I-21266-220	100	JEF	EGM	05/26/24	Q763
Native	FL-N-21266-200	50	JEF	EGM	03/30/24	Q763
Cl37 Std.	DWCL4-21266-213	50	MF		05/02/24	Q763
Recovery	FL-R-21266-211	10	CBS		04/28/04	Q763
Tridecane	A0424714	10	CBS			Q763
Others						

#	Sample ID	Internal Standards	Native Standards	Extracted mL or g	Glassware Set	Location	Comments
1	BLANK-106604	x		10.7			
2	LCS-106605	x	x	10.2			
3	10654789002-MS2	x	x	6.1		10-C16-074	
4	10654789002-MSD2	x	x	6.0		10-C16-074	
5	10654789002	x		6.0		10-C16-074	
6	10654728001	x		10.3		10-C16-346	
7	10655466001	x		12.1		10-C29-512	
8	10655466002	x		12.2		10-C29-512	
9	10655466003	x		11.6		10-C29-512	
10	10655466004	x		11.7		10-C29-512	
11	10655466005	x		12.1		10-C29-512	
12	10655466006	x		12.3		10-C29-512	
13	10655466007	x		12.5		10-C29-512	
14	10655466008	x		11.7		10-C29-512	
15	10655466009	x		10.7		10-C29-512	
16	10655467001	x		12.8		10-C29-512	
17	10655467002	x		11.4		10-C29-512	
18	10654637001	x		1.0		10-C16-071	
19	10654638001	x		1.0		10-C16-071	
20	10654632001	x		1.1		10-C16-071	
21	10654633001	x		1.0		10-C16-071	
22	10654634001	x		1.1		10-C16-071	
23	10654635001	x		1.1		10-C16-071	
24	10654636001	x		1.1		10-C16-071	

Relinquished By: C Received By: Date:

Batch Notes:

Silica		Alumina		Carbon		Florisil	
Initials	CBS/CW1	Initials	CBS/CW1	Initials	CBS/CW1	Initials	
Date	6/5/2023	Date	6/5/2023	Date	6/5/2023	Date	
Neutral Batch	760	Alumina Lot #	33XX	Hexane Lot #	EG312-US	Florisil Lot #	
Basic Batch	836	Hexane Lot #	EG312-US	Dispenser	Q771	Hexane Lot #	
Acid Batch	962	Dispenser	Q771	50% Batch		Dispenser	
Hexane Lot #	EG312-US	60% Batch	2025	Dispenser		6% Batch	
Dispenser	Q771	Dispenser	Q899	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	225553
Base Batch	

MK in training 6/5/23

Dioxin Solid Soxhlet EB-35536

EB-35536

Extract Solvents:

Extraction On (Date/Time): 06/05/23 14:25

QC Matrix Lot #: Sand 211540/WIPES **Toluene Lot #** EG735-US

Time of Spiking: 06/05/23 13:25 **Hexane Lot #**

Extraction Off (Date/Time): 06/06/23 07:00

Balance: 10BALO **MeCl Lot #**

Standards	Name/ID	Amount	Initial	Witness	Expiration Date	Dispenser
Internal Std.	FL-I-21266-220	100	JEF	EGM	05/26/24	Q763
Native	FL-N-21266-200	50	JEF	EGM	03/30/24	Q763
Cl37 Std.	DWCL4-21266-213	50	CW1		05/02/24	Q763
Recovery	FL-R-21266-211	10	MF		06/07/24	Q763
Tridecane	A0424714	10	MF			Q763
Others						

#	Sample ID	Internal Standards	Native Standards	Extracted mL or g	Glassware Set	Location	Comments
1	BLANK-106615	x		10.3			
2	LCS-106616	x	x	10.3			
3	10655587012-MS	x	x	11.9			
4	10655587012-MSD	x	x	12.1			
5	10655587012	x		11.9		10-C16-101	
6	10655587020	x		11.8		10-C16-103	
7	10655587022	x		10.6		10-C16-103	
8	10655587023	x		10.6		10-C16-101	
9	60427877001-R	x		4.3		10-C16-101	
10	10654728002	x		10.1		10-C16-346	
11	10654728003	x		10.2		10-C16-346	
12	10655564001	x		10.6		10-C16-108	
13	10655564002	x		12.0		10-C16-108	
14	10655420001	x		15.2		10-C16-347	
15	10655422001	x		15.1		10-C16-095	
16	10655422002	x		14.1		10-C16-095	
17	10655422003	x		12.1		10-C16-095	
18	10655422004	x		14.3		10-C16-095	
19	10655423001	x		10.6		10-C16-347	
20	10655423002	x		10.5		10-C16-347	
21	10655423003	x		10.4		10-C16-347	
22	10655423004	x		10.4		10-C16-347	
23	10655423005	x		10.5		10-C16-347	
24	10655423006	x		10.3		10-C16-347	

Relinquished By: M Felea Received By: S Hannan Date: 6/8/2023

Batch Notes:

Silica		Alumina		Carbon		Florisil	
Initials	CW1/CBS	Initials	CW1/CBS	Initials	CW1/CBS	Initials	
Date	6/7/2023	Date	6/7/2023	Date	6/7/2023	Date	
Neutral Batch	760	Alumina Lot #	33XX	Hexane Lot #	EG312-US	Florisil Lot #	
Basic Batch	836	Hexane Lot #	EG312-US	Dispenser	Q899	Hexane Lot #	
Acid Batch	962	Dispenser	Q899	50% Batch		Dispenser	
Hexane Lot #	EG312-US	60% Batch	2026	Dispenser		6% Batch	
Dispenser	Q899	Dispenser	Q771	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	225553
Base Batch	

MK in training 6/6/23

Silica		Alumina		Carbon		Florisil	
Initials	CBS	Initials	CBS	Initials	CBS	Initials	
Date	6/12/2023	Date	6/12/2023	Date	6/12/2023	Date	
Neutral Batch	760	Alumina Lot #	33XX	Hexane Lot #	EG312-US	Florisil Lot #	
Basic Batch	836	Hexane Lot #	EG312-US	Dispenser	Q899	Hexane Lot #	
Acid Batch	962	Dispenser	Q899	50% Batch		Dispenser	
Hexane Lot #	EG312-US	60% Batch	2026	Dispenser		6% Batch	
Dispenser	Q899	Dispenser	Q771	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	
Base Batch	

Silica		Alumina		Carbon		Florisil	
Initials	CBS	Initials	CBS	Initials	CBS	Initials	
Date	6/21/2023	Date	6/21/2023	Date	6/21/2023	Date	
Neutral Batch	761	Alumina Lot #	33XX	Hexane Lot #	221554	Florisil Lot #	
Basic Batch	838	Hexane Lot #	221554	Dispenser	Q899	Hexane Lot #	
Acid Batch	964	Dispenser	Q899	50% Batch		Dispenser	
Hexane Lot #	221554	60% Batch	2026	Dispenser		6% Batch	
Dispenser	Q899	Dispenser	Q771	75% Batch		Dispenser	
				Dispenser			
				Toluene Lot #	EG735-US		
				Dispenser	Q757		
				Methanol Lot #			
				Dispenser			

Acid Base

Sulphuric Acid Lot #	
Base Batch	

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Solid Sample Moisture Log

Sample ID	Container Weight	Wet Weight	Dry Weight	% Moisture	% Solids	Assayed
10654728001	1.2531	9.2376	9.0498	2.352	97.648	6/13/2023
10654728002	1.2391	9.8227	9.6314	2.2286	97.7714	6/14/2023
10654728003	1.2481	9.7581	9.5831	2.0564	97.9436	6/14/2023

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
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www.pacelabs.com

Client names have been blacked out on notebook pages in order to preserve client confidentiality

REPORT OF LABORATORY ANALYSIS

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Analysis Key Code List

- = Not used

✔ = Worked up

= See comment # below

Li = Liner, replace or clean

Ba = Baseplate, change

SyB = Syringe, replace – bent

SyP = Syringe, replace – plugged

SyO = Syringe, replace – other

IS = Injector Septum, replace

BS = Batch Septum, replace

Fi = Filament, replace

Co = Contacts, adjust

Ca = re-Calibrate

Tu = Tune

TC = Tune and Calibrate

CC () = Cut Column (length cut)

CO = Carry-Over possible

RRM = ReRun - Matrix

RRLM = ReRun – Lock Mass

RRBI = ReRun – Bad Injection

RRRT = ReRun – Retention Time shift

RR>S = Rerun – need better Sensitivity

Re = Re-extract

AS = Adjust Slits

LC = Leak Check

RB = Re-Boot system

CiS = Cleaned inner Source

CoS = Cleaned outer Source

AiS = Alternate inner Source

AoS = Alternate outer Source

<Y = Adjust Y focus down

>Y = Adjust Y focus up

Di () = Dilution needed (amount needed)

FE = Front End – liner, baseplate and septum

Sample List Report **MassLynx 4.2 SCN992** 10 MSHR15 6/10/23

Sample List: C:\MassLynx\PaceNew.PRO\SampleDB\L230610A.SPL
Last Modified: Saturday, June 10, 2023 15:54:18 Central Daylight Time
Printed: Sunday, June 11, 2023 09:14:31 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Stnd Exp.	Method	MS File	Inlet File	VIAL	VOL	Control
1	L230610A_01	Blank Nonane - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:2	1.000000	—
2	L230610A_02	CAL CS1-22-171-033 - CVS TC, col:US3225411H	240419	8290/1613B	dioxfurL	dioxfur	Tray1:4	1.000000	—
3	L230610A_03	CAL CS2-22-171-006 - CVS	231005	8290/1613B	dioxfurL	dioxfur	Tray1:3	1.000000	—
4	L230610A_04	CAL CS5-22-171-008 - CVS	231005	8290/1613B	dioxfurL	dioxfur	Tray1:5	1.000000	—
5	L230610A_05	CAL CS4-22-171-007 - CVS	231005	8290/1613B	dioxfurL	dioxfur	Tray1:6	1.000000	—
6	L230610A_06	CAL CS3/CPM-22-171-036 - CVS	240514	8290/1613B	dioxfurL	dioxfur	Tray1:1	1.000000	—
7	L230610A_07	Blank Nonane - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:2	1.000000	—
8	L230610A_08	CAL ICV-102062 - CVS	231025	8290/1613B	dioxfurL	dioxfur	Tray1:7	1.000000	—
9	L230610A_09	LCS LCS-106632 - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:57	1.000000	—
10	L230610A_10	LCS LCSD-106633 - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:58	1.000000	—
11	L230610A_11	Blank Nonane - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:2	1.000000	—
12	L230610A_12	Blank Blank-106631 - CVS	—	8290/1613B	dioxfurL	dioxfur	Tray1:59	1.000000	— reshoot
13	L230610A_13	Samp 10652618001 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:60	1.000000	—
14	L230610A_14	Samp 10652618002 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:61	1.000000	—
15	L230610A_15	Samp 10653864001 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:62	1.000000	—
16	L230610A_16	Samp 10653866001 - CVS [redacted]	—	8290	dioxfurL	dioxfur	Tray1:63	1.000000	—
17	L230610A_17	Samp 10654611002 - CVS [redacted] 6/14	—	1613B	dioxfurL	dioxfur	Tray1:64	1.000000	—
18	L230610A_18	Samp 10654728001 - CVS ESC	—	1613B	dioxfurL	dioxfur	Tray1:65	1.000000	—
19	L230610A_19	Samp 10654728002 - CVS ESC 6/14	—	1613B	dioxfurL	dioxfur	Tray1:66	1.000000	—
20	L230610A_20	Samp 10654728003 - CVS ESC	—	1613B	dioxfurL	dioxfur	Tray1:67	1.000000	—
21	L230610A_21	CAL CS3/CPM-22-171-036 - CVS	240514	8290/1613B	dioxfurL	dioxfur	Tray1:1	1.000000	— not needed

ver 6/11/23 JRH

JRH 6/11/23

Sample List Report **MassLynx 4.2 SCN992** 10MSHR06 5/24/23

Sample List: C:\MassLynx\Default.pro\Sampledb\U230524B.SPL
Last Modified: Wednesday, May 24, 2023 17:13:16 Central Daylight Time
Printed: Wednesday, May 24, 2023 17:13:27 Central Daylight Time

Page Position (1, 1)

	File Name	File Text		Stnd Exp	Method	MS File	Inlet File	Vial	Vol	Control
1	U230524B_01	BLANK NONANE - AH5 FECC2"		---	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000	---
2	U230524B_02	CAL CS3/CPM-22-171-034 - CVS TC	11:09	240427	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---
3	U230524B_03	CAL CS2-22-171-006 - AH5		231005	8290/1613B	dioxfur	dioxfur	Tray1:4	1.000000	---
4	U230524B_04	CAL CS1-22-171-033 - AH5		240419	8290/1613B	dioxfur	dioxfur	Tray1:5	1.000000	---
5	U230524B_05	CAL CS5-22-171-008 - AH5		231005	8290/1613B	dioxfur	dioxfur	Tray1:6	1.000000	---
6	U230524B_06	CAL CS4-22-171-007 - AH5		231005	8290/1613B	dioxfur	dioxfur	Tray1:7	1.000000	---
7	U230524B_07	BLANK NONANE - AH5		---	HOUSE	dioxfur	dioxfur	Tray1:2	1.000000	---
8	U230524B_08	CAL ICV-102062		231025	8290/1613B	dioxfur	dioxfur	Tray1:8	1.000000	---
9	U230524B_09	LCS LCS-106163 - CVS		---	8290/1613B	dioxfur	dioxfur	Tray1:9	1.000000	---
10	U230524B_10	Samp 10651870005-MS - CVS[redacted]	5/25	---	8290	dioxfur	dioxfur	Tray1:10	1.000000	---
11	U230524B_11	Samp 10651870005-MSD - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:11	1.000000	---
12	U230524B_12	Blank Nonane - CVS		---	8290	dioxfur	dioxfur	Tray1:2	1.000000	---
13	U230524B_13	Samp 10651870005 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:12	1.000000	---
14	U230524B_14	Samp 10651870001 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:13	1.000000	---
15	U230524B_15	Samp 10651870002 - CVS[redacted]	5/25	---	8290	dioxfur	dioxfur	Tray1:14	1.000000	---
16	U230524B_16	Samp 10651870003 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:15	1.000000	---
17	U230524B_17	Samp 10651870004 - CVS[redacted]		---	8290	dioxfur	dioxfur	Tray1:16	1.000000	---
18	U230524B_18	Samp 20276478001 - CVS[redacted]		---	1613TD	dioxfur	dioxfur	Tray1:30	1.000000	---
19	U230524B_19	CAL CS3/CPM-22-171-034 - CVS		240427	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---

Ver 05/25/23

pass all

5/25/23

Sample List Report **MassLynx 4.2 SCN992** 10 MSHR 06 6/8/23

Sample List: C:\MassLynx\Default.pro\Sampledb\U230608A.SPL
Last Modified: Thursday, June 08, 2023 15:49:43 Central Daylight Time
Printed: Thursday, June 08, 2023 15:49:58 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Stnd Exp	Method	MS File	Inlet File	Vial	Vol	Control
1	U230608A_01	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---
2	U230608A_02	LCS LCS-106605 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:4	1.000000	---
3	U230608A_03	BLANK BLANK-105861-10X - SMT	---	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000	---
4	U230608A_04	BLANK BLANK-106604 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:5	1.000000	---
5	U230608A_05	SAMP 10653698007 - SMT [redacted]	---	1613B	dioxfur	dioxfur	Tray1:6	1.000000	---
6	U230608A_06	SAMP 10653661001 - SMT ESC	6/9	8290	dioxfur	dioxfur	Tray1:7	1.000000	---
7	U230608A_07	SAMP 10653661002 - SMT ESC	---	8290	dioxfur	dioxfur	Tray1:8	1.000000	---
8	U230608A_08	SAMP 10653661003 - SMT ESC	---	8290	dioxfur	dioxfur	Tray1:9	1.000000	---
9	U230608A_09	SAMP 10654051001 - SMT [redacted]	6/12	1613B	dioxfur	dioxfur	Tray1:10	1.000000	---
10	U230608A_10	SAMP 10654052001 - SMT [redacted]	6/12	1613B	dioxfur	dioxfur	Tray1:11	1.000000	---
11	U230608A_11	SAMP 10654054001 - SMT [redacted]	6/12	1613B	dioxfur	dioxfur	Tray1:12	1.000000	---
12	U230608A_12	SAMP 10654227001 - SMT ESC	6/13	8290	dioxfur	dioxfur	Tray1:13	1.000000	---
13	U230608A_13	SAMP 10654227002 - SMT ESC	---	8290	dioxfur	dioxfur	Tray1:14	1.000000	---
14	U230608A_14	SAMP 10654909001 - SMT [redacted]	6/12	8290	dioxfur	dioxfur	Tray1:15	1.000000	---
15	U230608A_15	SAMP 10654911001 - SMT [redacted]	---	8290	dioxfur	dioxfur	Tray1:16	1.000000	---
16	U230608A_16	SAMP 10654823001 - SMT [redacted]	---	1613B-TD	dioxfur	dioxfur	Tray1:17	1.000000	---
17	U230608A_17	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	--- empty
18	U230608A_18	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	--- pass all

6/9/23

Sample List Report **MassLynx 4.2 SCN992** 10MS HR 06 6/8/23

Sample List: C:\MassLynx\Default.pro\Sampledb\U230608B.SPL
Last Modified: Thursday, June 08, 2023 22:06:02 Central Daylight Time
Printed: Thursday, June 08, 2023 22:27:10 Central Daylight Time

Page Position (1, 1)

	File Name	File Text	Stnd Exp	Method	MS File	Inlet File	Vial	Vol	Control	
1	U230608B_01	CAL CS3/CPM-22-171-036 - SM TC	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---	pass ver
2	U230608B_02	LCS LCS-106589 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:15	1.000000	---	
3	U230608B_03	LCS LCSD-106590 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:16	1.000000	---	
4	U230608B_04	LCS LCS-106598 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:17	1.000000	---	
5	U230608B_05	LCS LCSD-106599 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:18	1.000000	---	
6	U230608B_06	LCS LCS-106616 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:19	1.000000	---	
7	U230608B_07	BLANK BLANK-105861-10X - SMT	---	HOUSE	dioxfur	dioxfur	Tray1:3	1.000000	---	
8	U230608B_08	BLANK BLANK-106588 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:20	1.000000	---	
9	U230608B_09	BLANK BLANK-106597 - SMT	---	8290/1613B	dioxfur	dioxfur	Tray1:21	1.000000	---	ver 6/9/23 sm
10	U230608B_10	BLANK BLANK-106615 - SMT	---	DoD/1613B	dioxfur	dioxfur	Tray1:22	1.000000	---	
11	U230608B_11	SAMP 10654093001 - SMT [redacted] 6/13	---	1613B	dioxfur	dioxfur	Tray1:23	1.000000	---	
12	U230608B_12	SAMP 10654093002 - SMT [redacted]	---	1613B	dioxfur	dioxfur	Tray1:24	1.000000	---	
13	U230608B_13	SAMP 10654093003 - SMT [redacted]	---	1613B	dioxfur	dioxfur	Tray1:25	1.000000	---	
14	U230608B_14	SAMP 10654087001 - SMT [redacted] 6/13	---	1613B	dioxfur	dioxfur	Tray1:26	1.000000	---	
15	U230608B_15	SAMP 10655307001 - SMT [redacted] 6/13	---	1613B	dioxfur	dioxfur	Tray1:27	1.000000	---	
16	U230608B_16	SAMP 10655343001 - SMT [redacted]	---	8290	dioxfur	dioxfur	Tray1:28	1.000000	---	
17	U230608B_17	CAL CS3/CPM-22-171-036 - SMT	240514	8290/1613B	dioxfur	dioxfur	Tray1:1	1.000000	---	all

sm 6/9/23

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Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-1		
Lab Sample ID	10654728001		
Filename	L230610A_18		
Injected By	CVS		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	2.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	04/24/2023 11:20
ICAL ID	L230610	Received	05/25/2023 08:50
CCal Filename(s)	L230610A_06	Extracted	06/02/2023 15:12
Method Blank ID	BLANK-106604	Analyzed	06/10/2023 23:53

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	7.6	-----	1.0		2,3,7,8-TCDF-13C	2.00	84	
Total TCDF	13	-----	1.0		2,3,7,8-TCDD-13C	2.00	38	
					1,2,3,7,8-PeCDF-13C	2.00	99	
2,3,7,8-TCDD	2.0	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	98	
Total TCDD	3.6	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97	
					1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	91	
Total PeCDF	7.1	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	97	
					1,2,3,4,7,8-HxCDD-13C	2.00	82	
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	68	
					1,2,3,4,7,8,9-HpCDF-13C	2.00	76	
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	77	
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	76	
2,3,4,6,7,8-HxCDF	ND	-----	5.0					
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	34	R
1,2,3,6,7,8-HxCDD	ND	-----	5.0					
1,2,3,7,8,9-HxCDD	ND	-----	5.0					
Total HxCDD	19	-----	5.0					
1,2,3,4,6,7,8-HpCDF	8.6	-----	5.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 5.4 ng/Kg			
Total HpCDF	19	-----	5.0		(Lower-bound - Using 2005 WHO Factors)			
1,2,3,4,6,7,8-HpCDD	66	-----	5.0					
Total HpCDD	220	-----	5.0					
OCDF	19	-----	10					
OCDD	6200	-----	10	E				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-2		
Lab Sample ID	10654728002		
Filename	L230610A_19		
Injected By	CVS		
Total Amount Extracted	10.1 g	Matrix	Solid
% Moisture	2.2	Dilution	NA
Dry Weight Extracted	9.89 g	Collected	04/24/2023 14:20
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 00:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.2	-----	1.0		2,3,7,8-TCDF-13C	2.00	82
Total TCDF	12	-----	1.0		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	-----	2.0	1.0	I	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	7.0	-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	5.0		OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	-----	5.0				
1,2,3,7,8,9-HxCDF	ND	-----	5.0		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	5.0				
1,2,3,7,8,9-HxCDD	ND	-----	5.0				
Total HxCDD	23	-----	5.0				
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0		Equivalence: 6.1 ng/Kg		
Total HpCDF	18	-----	5.0		(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	85	-----	5.0				
Total HpCDD	270	-----	5.0				
OCDF	21	-----	10				
OCDD	8200	-----	10	E			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = Exceeds calibration range
I = Isotope ratio out of specification

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-3		
Lab Sample ID	10654728003		
Filename	L230610A_20		
Injected By	CVS		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	2.1	Dilution	NA
Dry Weight Extracted	9.97 g	Collected	04/24/2023 16:50
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.5	-----	1.0	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	11	-----	1.0	2,3,7,8-TCDD-13C	2.00	62
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	2.0	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	3.2	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	6.6	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	67
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	21	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.6	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 5.3 ng/Kg		
Total HpCDF	16	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	70	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	6100	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Appendix C

QC and Calibration Results Summary

REPORT OF LABORATORY ANALYSIS

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Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTO		
Lab Sample ID	BLANK-106604	Matrix	Solid
Filename	U230608A_04	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	06/02/2023 15:12
ICAL ID	U230524	Analyzed	06/08/2023 04:57
CCal Filename(s)	U230608A_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	78
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	47
				1,2,3,7,8-PeCDF-13C	2.00	84
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	95
				1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	88
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	77
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	89
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	69
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	51
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	39
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Blank Analysis Results

Lab Sample Name	DFBLKTS		
Lab Sample ID	BLANK-106615	Matrix	Solid
Filename	U230608B_10	Dilution	NA
Total Amount Extracted	10.3 g	Extracted	06/05/2023 14:25
ICAL ID	U230524	Analyzed	06/09/2023 04:58
CCal Filename(s)	U230608B_01	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.0	2,3,7,8-TCDF-13C	2.00	81
Total TCDF	ND	-----	1.0	2,3,7,8-TCDD-13C	2.00	66
				1,2,3,7,8-PeCDF-13C	2.00	89
2,3,7,8-TCDD	ND	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	94
				1,2,3,4,7,8-HxCDF-13C	2.00	89
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	79
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	47
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	64
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	ND	-----	5.0			
1,2,3,4,6,7,8-HpCDF	ND	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 0.00 ng/Kg		
Total HpCDF	ND	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0			
Total HpCDD	ND	-----	5.0			
OCDF	ND	-----	10			
OCDD	ND	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106605		
Filename	U230608A_02	Matrix	Solid
Total Amount Extracted	10.2 g	Dilution	NA
ICAL ID	U230524	Extracted	06/02/2023 15:12
CCal Filename	U230608A_01	Analyzed	06/08/2023 03:25
Method Blank ID	BLANK-106604	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.	
2,3,7,8-TCDF	10	9.7	7.5	15.8	97	
2,3,7,8-TCDD	10	9.6	6.7	15.8	96	
1,2,3,7,8-PeCDF	50	48	40.0	67.0	95	
2,3,4,7,8-PeCDF	50	48	34.0	80.0	96	
1,2,3,7,8-PeCDD	50	43	35.0	71.0	86	
1,2,3,4,7,8-HxCDF	50	47	36.0	67.0	95	
1,2,3,6,7,8-HxCDF	50	49	42.0	65.0	98	
2,3,4,6,7,8-HxCDF	50	48	35.0	78.0	96	
1,2,3,7,8,9-HxCDF	50	51	39.0	65.0	102	
1,2,3,4,7,8-HxCDD	50	51	35.0	82.0	102	
1,2,3,6,7,8-HxCDD	50	47	38.0	67.0	94	
1,2,3,7,8,9-HxCDD	50	50	32.0	81.0	101	
1,2,3,4,6,7,8-HpCDF	50	49	41.0	61.0	97	
1,2,3,4,7,8,9-HpCDF	50	51	39.0	69.0	102	
1,2,3,4,6,7,8-HpCDD	50	43	35.0	70.0	87	
OCDF	100	100	63.0	170.0	100	
OCDD	100	100	78.0	144.0	101	
2,3,7,8-TCDD-37Cl4	10	2.7	3.1	19.1	27	R
2,3,7,8-TCDF-13C	100	82	22.0	152.0	82	
2,3,7,8-TCDD-13C	100	33	20.0	175.0	33	
1,2,3,7,8-PeCDF-13C	100	89	21.0	192.0	89	
2,3,4,7,8-PeCDF-13C	100	93	13.0	328.0	93	
1,2,3,7,8-PeCDD-13C	100	100	21.0	227.0	101	
1,2,3,4,7,8-HxCDF-13C	100	94	19.0	202.0	94	
1,2,3,6,7,8-HxCDF-13C	100	94	21.0	159.0	94	
2,3,4,6,7,8-HxCDF-13C	100	88	22.0	176.0	88	
1,2,3,7,8,9-HxCDF-13C	100	80	17.0	205.0	80	
1,2,3,4,7,8-HxCDD-13C	100	80	21.0	193.0	80	
1,2,3,6,7,8-HxCDD-13C	100	94	25.0	163.0	94	
1,2,3,4,6,7,8-HpCDF-13C	100	65	21.0	158.0	65	
1,2,3,4,7,8,9-HpCDF-13C	100	57	20.0	186.0	57	
1,2,3,4,6,7,8-HpCDD-13C	100	70	26.0	166.0	70	
OCDD-13C	200	100	26.0	397.0	52	

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1613B Laboratory Control Spike Results

Lab Sample ID	LCS-106616		
Filename	U230608B_06	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	U230524	Extracted	06/05/2023 14:25
CCal Filename	U230608B_01	Analyzed	06/09/2023 01:53
Method Blank ID	BLANK-106615	Injected By	SMT

Compound	Cs	Cr	Lower Limit	Upper Limit	% Rec.
2,3,7,8-TCDF	10	11	7.5	15.8	106
2,3,7,8-TCDD	10	11	6.7	15.8	107
1,2,3,7,8-PeCDF	50	52	40.0	67.0	103
2,3,4,7,8-PeCDF	50	53	34.0	80.0	107
1,2,3,7,8-PeCDD	50	48	35.0	71.0	95
1,2,3,4,7,8-HxCDF	50	51	36.0	67.0	102
1,2,3,6,7,8-HxCDF	50	54	42.0	65.0	109
2,3,4,6,7,8-HxCDF	50	50	35.0	78.0	100
1,2,3,7,8,9-HxCDF	50	54	39.0	65.0	108
1,2,3,4,7,8-HxCDD	50	53	35.0	82.0	106
1,2,3,6,7,8-HxCDD	50	52	38.0	67.0	103
1,2,3,7,8,9-HxCDD	50	53	32.0	81.0	106
1,2,3,4,6,7,8-HpCDF	50	53	41.0	61.0	105
1,2,3,4,7,8,9-HpCDF	50	50	39.0	69.0	100
1,2,3,4,6,7,8-HpCDD	50	48	35.0	70.0	96
OCDF	100	110	63.0	170.0	108
OCDD	100	110	78.0	144.0	109
2,3,7,8-TCDD-37Cl4	10	5.7	3.1	19.1	57
2,3,7,8-TCDF-13C	100	72	22.0	152.0	72
2,3,7,8-TCDD-13C	100	65	20.0	175.0	65
1,2,3,7,8-PeCDF-13C	100	79	21.0	192.0	79
2,3,4,7,8-PeCDF-13C	100	81	13.0	328.0	81
1,2,3,7,8-PeCDD-13C	100	84	21.0	227.0	84
1,2,3,4,7,8-HxCDF-13C	100	78	19.0	202.0	78
1,2,3,6,7,8-HxCDF-13C	100	76	21.0	159.0	76
2,3,4,6,7,8-HxCDF-13C	100	74	22.0	176.0	74
1,2,3,7,8,9-HxCDF-13C	100	69	17.0	205.0	69
1,2,3,4,7,8-HxCDD-13C	100	66	21.0	193.0	66
1,2,3,6,7,8-HxCDD-13C	100	75	25.0	163.0	75
1,2,3,4,6,7,8-HpCDF-13C	100	51	21.0	158.0	51
1,2,3,4,7,8,9-HpCDF-13C	100	48	20.0	186.0	48
1,2,3,4,6,7,8-HpCDD-13C	100	53	26.0	166.0	53
OCDD-13C	200	82	26.0	397.0	41

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion

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Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**L230610**	Data Files:		Time	Injected
Calibration Date	06/10/2023	CS-1	L230610A_02	11:31	CVS
Instrument	10MSHR15 (L)	CS-2	L230610A_03	12:14	CVS
Column Phase	DB-5MS 0.25mm	CS-3	L230610A_06	14:39	CVS
Column ID No.	US3225411H	CS-4	L230610A_05	13:53	CVS
		CS-5	L230610A_04	13:10	CVS

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.5047	0.5260	0.5492	0.5391	0.5620	0.5362	4.10
2,3,7,8-TCDD	0.6406	0.6418	0.6670	0.6707	0.6933	0.6627	3.32
1,2,3,7,8-PeCDF	0.5468	0.5421	0.5654	0.5785	0.5938	0.5653	3.82
2,3,4,7,8-PeCDF	0.5835	0.5747	0.6085	0.6290	0.6605	0.6112	5.70
1,2,3,7,8-PeCDD	0.5721	0.5592	0.5972	0.6002	0.6140	0.5886	3.79
1,2,3,4,7,8-HxCDF	0.6802	0.6939	0.7218	0.7556	0.7647	0.7233	5.12
1,2,3,6,7,8-HxCDF	0.7049	0.6924	0.7140	0.7491	0.7410	0.7203	3.34
2,3,4,6,7,8-HxCDF	0.7027	0.6923	0.7439	0.7806	0.7707	0.7380	5.36
1,2,3,7,8,9-HxCDF	0.6769	0.6584	0.6745	0.7233	0.7268	0.6920	4.49
1,2,3,4,7,8-HxCDD	0.5960	0.6102	0.6138	0.6562	0.6751	0.6303	5.34
1,2,3,6,7,8-HxCDD	0.5931	0.6191	0.6201	0.6575	0.6516	0.6283	4.20
1,2,3,7,8,9-HxCDD	0.5884	0.5702	0.6210	0.6206	0.6541	0.6108	5.32
1,2,3,4,6,7,8-HpCDF	0.9541	1.0105	0.9989	1.0629	1.0662	1.0185	4.62
1,2,3,4,7,8,9-HpCDF	0.9857	1.0216	1.0415	1.0528	1.0540	1.0311	2.77
1,2,3,4,6,7,8-HpCDD	0.8476	0.8974	0.9164	0.9497	0.9512	0.9125	4.69
OCDF	0.3642	0.3619	0.4437	0.4774	0.4829	0.4260	13.94
OCDD	0.6388	0.6414	0.7015	0.7217	0.7092	0.6825	5.77
Total PeCDF	0.5652	0.5584	0.5869	0.6037	0.6272	0.5883	4.79
Total HxCDF	0.6912	0.6842	0.7136	0.7522	0.7508	0.7184	4.47
Total HxCDD	0.5925	0.5998	0.6183	0.6447	0.6603	0.6231	4.65
Total HpCDF	0.9699	1.0160	1.0202	1.0579	1.0601	1.0248	3.60
2,3,7,8-TCDF-13C	0.8007	0.7840	0.7939	0.8142	0.8927	0.8171	5.35
2,3,7,8-TCDD-13C	1.1338	1.0593	1.1038	1.0946	1.2234	1.1230	5.53
2,3,7,8-TCDD-37Cl4	0.7885	0.7732	0.8611	0.8669	0.9898	0.8559	10.03
1,2,3,7,8-PeCDF-13C	0.4721	0.4373	0.4767	0.4676	0.5786	0.4865	11.05
2,3,4,7,8-PeCDF-13C	0.4625	0.4204	0.4548	0.4532	0.5665	0.4715	11.78
1,2,3,7,8-PeCDD-13C	0.5738	0.5263	0.5537	0.5652	0.7080	0.5854	12.10
1,2,3,4,7,8-HxCDF-13C	0.5606	0.6802	0.6139	0.6034	0.5785	0.6073	7.54
1,2,3,6,7,8-HxCDF-13C	0.6000	0.7189	0.6830	0.6543	0.6347	0.6582	6.90
2,3,4,6,7,8-HxCDF-13C	0.5758	0.6296	0.6120	0.5818	0.5897	0.5978	3.76
1,2,3,7,8,9-HxCDF-13C	0.4515	0.4447	0.4764	0.4341	0.4735	0.4560	4.03
1,2,3,4,7,8-HxCDD-13C	0.9152	0.9938	0.9530	0.9146	0.9094	0.9372	3.85
1,2,3,6,7,8-HxCDD-13C	0.9753	1.0425	1.0331	0.9946	0.9755	1.0042	3.17
1,2,3,4,6,7,8-HpCDF-13C	1.4020	1.4515	1.3988	1.3601	1.3817	1.3988	2.42
1,2,3,4,7,8,9-HpCDF-13C	0.9971	0.9272	0.9403	0.8763	0.9674	0.9416	4.81
1,2,3,4,6,7,8-HpCDD-13C	1.3523	1.3096	1.2664	1.1927	1.2699	1.2782	4.63
OCDD-13C	0.8985	0.8238	0.7557	0.6976	0.8849	0.8121	10.52

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Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**L230610**	Data Files:		Time	Injected
Calibration Date	06/10/2023	CS-1	L230610A_02	11:31	CVS
Instrument	10MSHR15 (L)	CS-2	L230610A_03	12:14	CVS
Column Phase	DB-5MS 0.25mm	CS-3	L230610A_06	14:39	CVS
Column ID No.	US3225411H	CS-4	L230610A_05	13:53	CVS
		CS-5	L230610A_04	13:10	CVS

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.79	0.74	0.69	0.74	0.74	0.65 - 0.89
2,3,7,8-TCDD	0.70	0.77	0.72	0.73	0.72	0.65 - 0.89
1,2,3,7,8-PeCDF	1.34	1.43	1.38	1.38	1.42	1.32 - 1.78
2,3,4,7,8-PeCDF	1.32	1.37	1.36	1.39	1.42	1.32 - 1.78
1,2,3,7,8-PeCDD	0.57	0.58	0.57	0.57	0.56	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.13	1.13	1.16	1.14	1.14	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.11	1.17	1.15	1.14	1.15	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.19	1.19	1.17	1.12	1.15	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.13	1.18	1.23	1.17	1.14	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.13	1.18	1.16	1.15	1.13	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.07	1.11	1.14	1.14	1.13	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.19	1.15	1.11	1.13	1.14	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.00	1.01	0.99	1.01	1.00	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	0.93	1.00	1.01	1.00	1.01	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.00	1.07	1.02	1.03	1.01	0.88 - 1.20
OCDF	0.83	0.83	0.84	0.82	0.83	0.76 - 1.02
OCDD	0.80	0.82	0.84	0.84	0.85	0.76 - 1.02
1,2,3,4-TCDD-13C	0.83	0.81	0.82	0.80	0.81	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.15	1.17	1.20	1.15	1.20	1.05 - 1.43
2,3,7,8-TCDF-13C	0.70	0.70	0.72	0.71	0.71	0.65 - 0.89
2,3,7,8-TCDD-13C	0.80	0.80	0.82	0.81	0.81	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.44	1.42	1.45	1.46	1.46	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.42	1.44	1.44	1.45	1.44	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.51	1.56	1.49	1.50	1.52	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.48	0.47	0.47	0.48	0.47	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.49	0.48	0.49	0.48	0.49	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.49	0.47	0.48	0.48	0.48	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.48	0.47	0.47	0.47	0.48	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.19	1.20	1.20	1.22	1.23	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.17	1.18	1.18	1.18	1.17	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.44	0.44	0.43	0.45	0.44	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.45	0.44	0.43	0.44	0.44	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.06	1.05	1.05	1.05	1.07	0.88 - 1.20
OCDD-13C	0.81	0.84	0.81	0.81	0.83	0.76 - 1.02

REPORT OF LABORATORY ANALYSIS

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Method 1613B
Initial Calibration (ICAL) - Response Factor Summary

ICAL ID	**U230524**	Data Files:		Time	Injected
Calibration Date	05/24/2023	CS-1	U230524B_04	12:45	AH5
Instrument	10MSHR06 (U)	CS-2	U230524B_03	12:00	AH5
Column Phase	DB-5MS 0.25mm	CS-3	U230524B_02	11:09	CVS
Column ID No.	US1246423H	CS-4	U230524B_06	14:27	AH5
		CS-5	U230524B_05	13:43	AH5

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Ave RF	%RSD
2,3,7,8-TCDF	0.9953	0.9137	0.9038	0.8826	0.8483	0.9087	6.00
2,3,7,8-TCDD	1.0770	0.9863	1.0142	0.9478	0.9152	0.9881	6.31
1,2,3,7,8-PeCDF	0.9276	0.9087	0.8553	0.8372	0.8655	0.8789	4.31
2,3,4,7,8-PeCDF	0.9938	0.9552	0.9167	0.9057	0.9490	0.9441	3.69
1,2,3,7,8-PeCDD	0.9704	0.9190	0.8966	0.8871	0.8749	0.9096	4.14
1,2,3,4,7,8-HxCDF	1.0868	1.1221	1.0566	1.0776	1.0391	1.0764	2.93
1,2,3,6,7,8-HxCDF	1.0126	1.1107	0.9960	1.0114	0.9981	1.0258	4.69
2,3,4,6,7,8-HxCDF	1.1834	1.0838	1.0786	1.0488	1.0529	1.0895	5.02
1,2,3,7,8,9-HxCDF	1.0617	1.0410	0.9654	0.9687	0.9559	0.9985	4.91
1,2,3,4,7,8-HxCDD	1.0422	0.9668	0.9220	0.9242	0.9125	0.9535	5.64
1,2,3,6,7,8-HxCDD	0.9897	0.9375	0.9173	0.9067	0.9322	0.9367	3.42
1,2,3,7,8,9-HxCDD	0.9340	0.9221	0.9902	0.8915	0.9250	0.9326	3.86
1,2,3,4,6,7,8-HpCDF	1.2734	1.2575	1.1881	1.2479	1.2594	1.2453	2.67
1,2,3,4,7,8,9-HpCDF	1.1862	1.2903	1.1526	1.2041	1.1918	1.2050	4.26
1,2,3,4,6,7,8-HpCDD	1.0950	1.1424	0.9866	1.0529	1.0262	1.0606	5.70
OCDF	0.9499	0.9382	0.8886	0.9323	0.9920	0.9402	3.95
OCDD	0.9807	0.9618	0.9212	0.9033	0.9407	0.9416	3.28
Total PeCDF	0.9607	0.9319	0.8860	0.8715	0.9072	0.9115	3.92
Total HxCDF	1.0861	1.0894	1.0241	1.0266	1.0115	1.0475	3.55
Total HxCDD	0.9886	0.9421	0.9432	0.9075	0.9232	0.9409	3.24
Total HpCDF	1.2298	1.2739	1.1704	1.2260	1.2256	1.2251	3.00
2,3,7,8-TCDF-13C	1.2317	1.2906	1.2368	1.3198	1.3355	1.2829	3.68
2,3,7,8-TCDD-13C	1.0599	1.0792	1.1090	1.1019	1.1575	1.1015	3.34
2,3,7,8-TCDD-37Cl4	1.1913	1.0866	1.0484	1.0386	1.0334	1.0797	6.09
1,2,3,7,8-PeCDF-13C	0.8274	0.8262	0.9790	0.9183	1.0968	0.9295	12.23
2,3,4,7,8-PeCDF-13C	0.8173	0.8398	0.9375	0.9089	0.9866	0.8980	7.76
1,2,3,7,8-PeCDD-13C	0.6145	0.6504	0.7342	0.6856	0.7459	0.6861	8.08
1,2,3,4,7,8-HxCDF-13C	0.9154	0.9649	0.8634	1.0046	1.0261	0.9549	6.94
1,2,3,6,7,8-HxCDF-13C	1.0657	1.0616	0.9992	1.1612	1.1568	1.0889	6.36
2,3,4,6,7,8-HxCDF-13C	0.9725	1.0130	0.9160	1.0591	1.0373	0.9996	5.67
1,2,3,7,8,9-HxCDF-13C	0.8320	0.8317	0.7930	0.9207	0.9069	0.8569	6.37
1,2,3,4,7,8-HxCDD-13C	0.8257	0.8471	0.8113	0.9098	0.9052	0.8598	5.28
1,2,3,6,7,8-HxCDD-13C	0.9499	1.0107	0.9494	1.0282	1.0063	0.9889	3.72
1,2,3,4,6,7,8-HpCDF-13C	1.1103	1.1509	1.0946	1.1824	1.1518	1.1380	3.10
1,2,3,4,7,8,9-HpCDF-13C	0.9095	0.8714	0.8484	0.9366	0.9403	0.9013	4.48
1,2,3,4,6,7,8-HpCDD-13C	0.9442	0.9478	0.9275	0.9576	0.9673	0.9489	1.58
OCDD-13C	0.7887	0.7484	0.6949	0.8624	0.8647	0.7918	9.28

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Method 1613B
Initial Calibration (ICAL) - Isotope Ratio Summary

ICAL ID	**U230524**	Data Files:		Time	Injected
Calibration Date	05/24/2023	CS-1	U230524B_04	12:45	AH5
Instrument	10MSHR06 (U)	CS-2	U230524B_03	12:00	AH5
Column Phase	DB-5MS 0.25mm	CS-3	U230524B_02	11:09	CVS
Column ID No.	US1246423H	CS-4	U230524B_06	14:27	AH5
		CS-5	U230524B_05	13:43	AH5

Isomer	CS-1	CS-2	CS-3	CS-4	CS-5	Limits
2,3,7,8-TCDF	0.89	0.79	0.83	0.77	0.73	0.65 - 0.89
2,3,7,8-TCDD	0.82	0.75	0.75	0.78	0.76	0.65 - 0.89
1,2,3,7,8-PeCDF	1.48	1.57	1.51	1.55	1.51	1.32 - 1.78
2,3,4,7,8-PeCDF	1.57	1.55	1.45	1.52	1.50	1.32 - 1.78
1,2,3,7,8-PeCDD	0.69	0.60	0.61	0.62	0.62	0.52 - 0.70
1,2,3,4,7,8-HxCDF	1.24	1.27	1.24	1.24	1.27	1.05 - 1.43
1,2,3,6,7,8-HxCDF	1.27	1.15	1.28	1.21	1.26	1.05 - 1.43
2,3,4,6,7,8-HxCDF	1.27	1.22	1.23	1.24	1.20	1.05 - 1.43
1,2,3,7,8,9-HxCDF	1.11	1.21	1.29	1.26	1.26	1.05 - 1.43
1,2,3,4,7,8-HxCDD	1.32	1.21	1.23	1.21	1.22	1.05 - 1.43
1,2,3,6,7,8-HxCDD	1.17	1.27	1.25	1.21	1.22	1.05 - 1.43
1,2,3,7,8,9-HxCDD	1.07	1.30	1.22	1.19	1.21	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF	1.03	1.04	1.01	1.02	1.03	0.88 - 1.20
1,2,3,4,7,8,9-HpCDF	1.04	0.99	1.01	1.07	1.05	0.88 - 1.20
1,2,3,4,6,7,8-HpCDD	1.04	1.03	1.05	1.04	1.05	0.88 - 1.20
OCDF	0.86	0.90	0.91	0.85	0.90	0.76 - 1.02
OCDD	0.82	0.87	0.88	0.89	0.91	0.76 - 1.02
1,2,3,4-TCDD-13C	0.77	0.79	0.81	0.80	0.79	0.65 - 0.89
1,2,3,7,8,9-HxCDD-13C	1.22	1.24	1.25	1.19	1.22	1.05 - 1.43
2,3,7,8-TCDF-13C	0.78	0.76	0.76	0.77	0.77	0.65 - 0.89
2,3,7,8-TCDD-13C	0.78	0.78	0.78	0.77	0.77	0.65 - 0.89
1,2,3,7,8-PeCDF-13C	1.56	1.51	1.46	1.50	1.52	1.32 - 1.78
2,3,4,7,8-PeCDF-13C	1.47	1.52	1.55	1.49	1.53	1.32 - 1.78
1,2,3,7,8-PeCDD-13C	1.51	1.54	1.51	1.57	1.53	1.32 - 1.78
1,2,3,4,7,8-HxCDF-13C	0.52	0.51	0.53	0.53	0.52	0.43 - 0.59
1,2,3,6,7,8-HxCDF-13C	0.52	0.52	0.50	0.52	0.50	0.43 - 0.59
2,3,4,6,7,8-HxCDF-13C	0.51	0.52	0.52	0.53	0.52	0.43 - 0.59
1,2,3,7,8,9-HxCDF-13C	0.52	0.54	0.51	0.52	0.52	0.43 - 0.59
1,2,3,4,7,8-HxCDD-13C	1.26	1.23	1.27	1.25	1.25	1.05 - 1.43
1,2,3,6,7,8-HxCDD-13C	1.22	1.23	1.26	1.22	1.23	1.05 - 1.43
1,2,3,4,6,7,8-HpCDF-13C	0.45	0.45	0.46	0.45	0.45	0.37 - 0.51
1,2,3,4,7,8,9-HpCDF-13C	0.44	0.46	0.47	0.47	0.45	0.37 - 0.51
1,2,3,4,6,7,8-HpCDD-13C	1.03	1.07	1.04	1.02	1.06	0.88 - 1.20
OCDD-13C	0.88	0.90	0.93	0.88	0.84	0.76 - 1.02

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Pace Analytical Services, LLC
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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Labeled Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608A_01	Instrument ID	10MSHR06 (U)
Injected By	SMT	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
Labeled Compounds					
1,2,3,4-TCDD-13C	M/M+2	0.78	0.65 - 0.89	-----	-----
2,3,7,8-TCDD-13C	M/M+2	0.76	0.65 - 0.89	100.0	82 - 121
1,2,3,7,8-PeCDD-13C	M+2/M+4	1.56	1.32 - 1.78	117.1	62 - 160
1,2,3,4,7,8-HxCDD-13C	M+2/M+4	1.28	1.05 - 1.43	100.2	85 - 117
1,2,3,6,7,8-HxCDD-13C	M+2/M+4	1.26	1.05 - 1.43	102.0	85 - 118
1,2,3,7,8,9-HxCDD-13C	M+2/M+4	1.25	1.05 - 1.43	-----	-----
1,2,3,4,6,7,8-HpCDD-13C	M+2/M+4	1.06	0.88 - 1.20	85.2	72 - 138
OCDD-13C	M+2/M+4	0.87	0.76 - 1.02	165.5	96 - 415
2,3,7,8-TCDF-13C	M/M+2	0.76	0.65 - 0.89	100.9	71 - 140
1,2,3,7,8-PeCDF-13C	M+2/M+4	1.57	1.32 - 1.78	104.9	76 - 130
2,3,4,7,8-PeCDF-13C	M+2/M+4	1.55	1.32 - 1.78	117.1	77 - 130
1,2,3,4,7,8-HxCDF-13C	M/M+2	0.54	0.43 - 0.59	105.1	76 - 131
1,2,3,6,7,8-HxCDF-13C	M/M+2	0.53	0.43 - 0.59	105.5	70 - 143
2,3,4,6,7,8-HxCDF-13C	M/M+2	0.52	0.43 - 0.59	98.6	73 - 137
1,2,3,7,8,9-HxCDF-13C	M/M+2	0.51	0.43 - 0.59	100.6	74 - 135
1,2,3,4,6,7,8-HpCDF-13C	M/M+2	0.45	0.37 - 0.51	82.5	78 - 129
1,2,3,4,7,8,9-HpCDF-13C	M/M+2	0.46	0.37 - 0.51	81.6	77 - 129
Cleanup Standard					
2,3,7,8-TCDD-37Cl4	M+2/M+4	(4)		9.4	7.9 - 12.7

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

4. No ion abundance ratio; report concentration found.

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Native Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608A_01	Instrument ID	10MSHR06 (U)
Injected By	SMT	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
2,3,7,8-TCDD	M/M+2	0.79	0.65 - 0.89	10.1	7.8 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	0.61	0.52 - 0.70	49.6	39 - 65
1,2,3,4,7,8-HxCDD	M+2/M+4	1.22	1.05 - 1.43	48.1	39 - 64
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05 - 1.43	49.4	39 - 64
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05 - 1.43	51.6	41 - 61
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88 - 1.20	45.7	43 - 58
OCDD	M+2/M+4	0.92	0.76 - 1.02	97.4	79 - 126
2,3,7,8-TCDF	M/M+2	0.78	0.65 - 0.89	10.3	8.4 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32 - 1.78	51.1	41 - 60
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32 - 1.78	51.2	41 - 61
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05 - 1.43	51.9	45 - 56
1,2,3,6,7,8-HxCDF	M+2/M+4	1.21	1.05 - 1.43	50.7	44 - 57
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05 - 1.43	51.7	44 - 57
1,2,3,7,8,9-HxCDF	M+2/M+4	1.22	1.05 - 1.43	51.5	45 - 56
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88 - 1.20	49.1	45 - 55
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88 - 1.20	50.0	43 - 58
OCDF	M+2/M+4	0.90	0.76 - 1.02	96.5	63 - 159

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Labeled Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608B_01	Instrument ID	10MSHR06 (U)
Injected By	SM	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
Labeled Compounds					
1,2,3,4-TCDD-13C	M/M+2	0.79	0.65 - 0.89	-----	-----
2,3,7,8-TCDD-13C	M/M+2	0.80	0.65 - 0.89	100.5	82 - 121
1,2,3,7,8-PeCDD-13C	M+2/M+4	1.58	1.32 - 1.78	96.7	62 - 160
1,2,3,4,7,8-HxCDD-13C	M+2/M+4	1.31	1.05 - 1.43	87.3	85 - 117
1,2,3,6,7,8-HxCDD-13C	M+2/M+4	1.25	1.05 - 1.43	99.2	85 - 118
1,2,3,7,8,9-HxCDD-13C	M+2/M+4	1.29	1.05 - 1.43	-----	-----
1,2,3,4,6,7,8-HpCDD-13C	M+2/M+4	1.08	0.88 - 1.20	89.4	72 - 138
OCDD-13C	M+2/M+4	0.87	0.76 - 1.02	170.4	96 - 415
2,3,7,8-TCDF-13C	M/M+2	0.77	0.65 - 0.89	105.7	71 - 140
1,2,3,7,8-PeCDF-13C	M+2/M+4	1.58	1.32 - 1.78	100.8	76 - 130
2,3,4,7,8-PeCDF-13C	M+2/M+4	1.46	1.32 - 1.78	100.2	77 - 130
1,2,3,4,7,8-HxCDF-13C	M/M+2	0.53	0.43 - 0.59	88.2	76 - 131
1,2,3,6,7,8-HxCDF-13C	M/M+2	0.52	0.43 - 0.59	97.8	70 - 143
2,3,4,6,7,8-HxCDF-13C	M/M+2	0.51	0.43 - 0.59	98.3	73 - 137
1,2,3,7,8,9-HxCDF-13C	M/M+2	0.52	0.43 - 0.59	101.7	74 - 135
1,2,3,4,6,7,8-HpCDF-13C	M/M+2	0.44	0.37 - 0.51	88.8	78 - 129
1,2,3,4,7,8,9-HpCDF-13C	M/M+2	0.48	0.37 - 0.51	86.9	77 - 129
Cleanup Standard					
2,3,7,8-TCDD-37Cl4	M+2/M+4	(4)		9.8	7.9 - 12.7

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

4. No ion abundance ratio; report concentration found.

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Method 1613B Analysis Results
PCDD/PCDF Calibration Verification
Native Analytes

Lab Name	CS3/CPM-22-171-036		
Filename	U230608B_01	Instrument ID	10MSHR06 (U)
Injected By	SM	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Native Isomers	m/z's Forming Ratio (1)	Ion Abund. Ratio	QC Limits (2)	Conc Found	Conc. Range (ng/ml) (3)
2,3,7,8-TCDD	M/M+2	0.77	0.65 - 0.89	10.5	7.8 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	0.63	0.52 - 0.70	51.5	39 - 65
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05 - 1.43	49.1	39 - 64
1,2,3,6,7,8-HxCDD	M+2/M+4	1.19	1.05 - 1.43	50.6	39 - 64
1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05 - 1.43	56.2	41 - 61
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88 - 1.20	48.2	43 - 58
OCDD	M+2/M+4	0.87	0.76 - 1.02	98.8	79 - 126
2,3,7,8-TCDF	M/M+2	0.82	0.65 - 0.89	10.3	8.4 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32 - 1.78	49.7	41 - 60
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32 - 1.78	54.2	41 - 61
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05 - 1.43	53.1	45 - 56
1,2,3,6,7,8-HxCDF	M+2/M+4	1.18	1.05 - 1.43	54.0	44 - 57
2,3,4,6,7,8-HxCDF	M+2/M+4	1.16	1.05 - 1.43	51.9	44 - 57
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05 - 1.43	51.6	45 - 56
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88 - 1.20	48.3	45 - 55
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88 - 1.20	51.3	43 - 58
OCDF	M+2/M+4	0.90	0.76 - 1.02	102.8	63 - 159

1. See Table 8, Method 1613, for m/z specifications.

2. Ion Abundance Ratio Control Limits from Table 9, Method 1613.

3. Contract-required concentration range as specified in Table 6, Method 1613, under VER (10/94 Revision).

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
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www.pacelabs.com

Appendix D

Sample Raw Data

REPORT OF LABORATORY ANALYSIS

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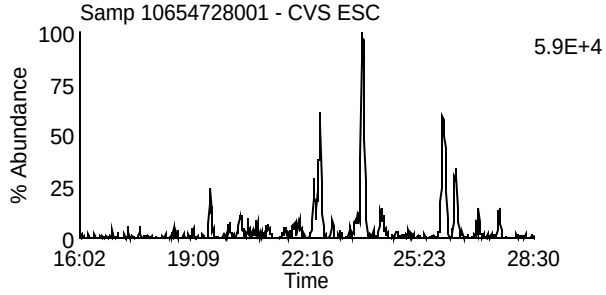
without the written consent of Pace Analytical Services, LLC.

Homologue Group: Tetras

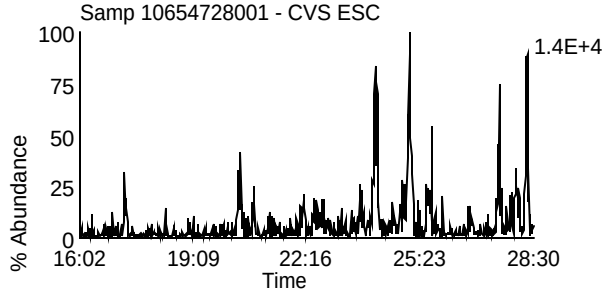
Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

Data File: L230610A_18 G1 C1 - 303.9016
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C7 - 319.8965
Samp 10654728001 - CVS ESC



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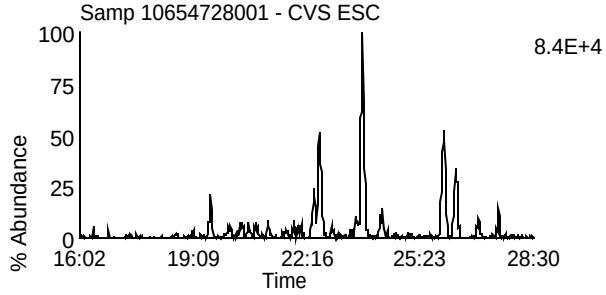
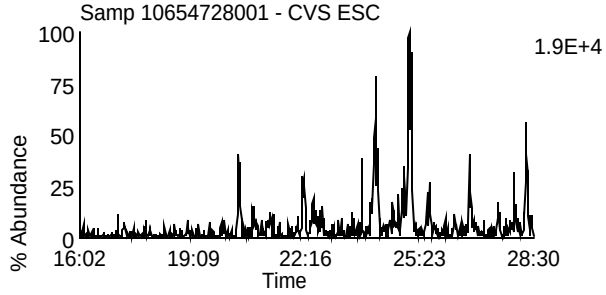
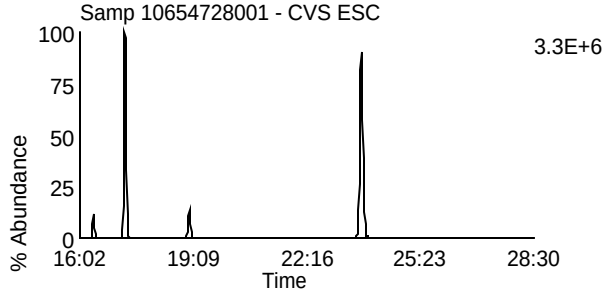
Samp 10654728001 - CVS ESC



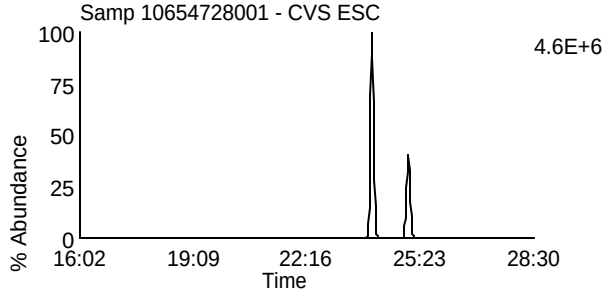
Data File: L230610A_18 G1 C8 - 321.8936
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C3 - 315.9418
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G1 C10 - 331.9367
Samp 10654728001 - CVS ESC



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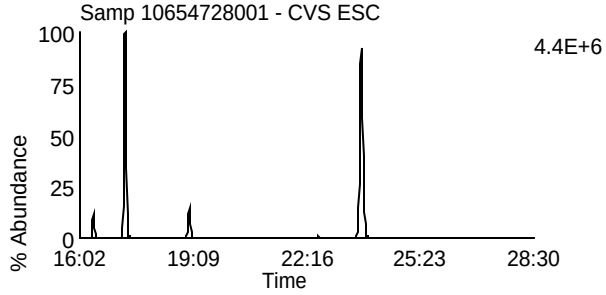
Samp 10654728001 - CVS ESC



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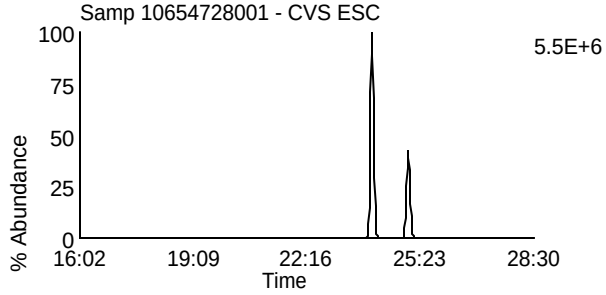

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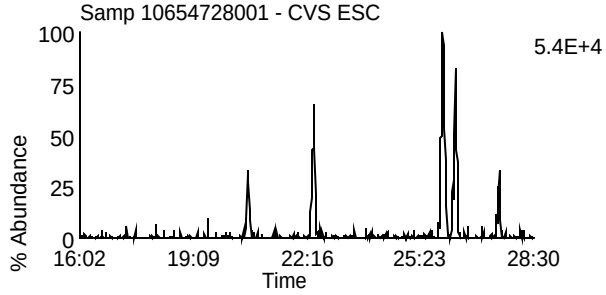
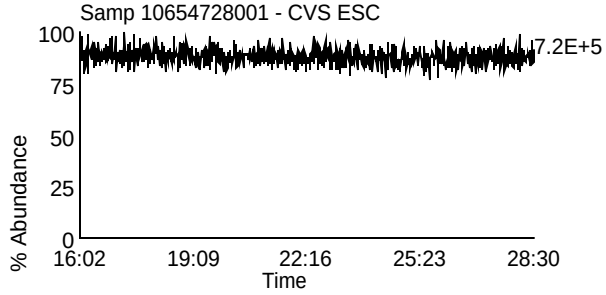
Samp 10654728001 - CVS ESC

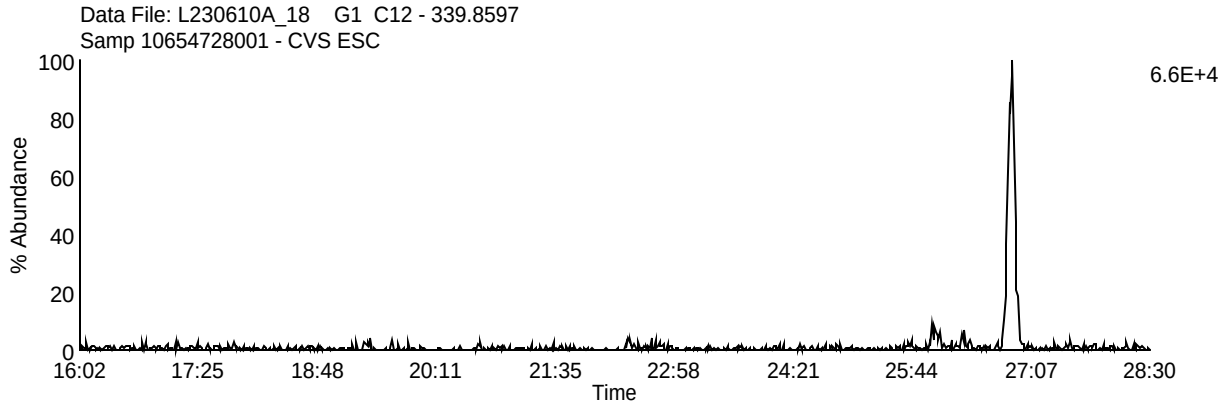


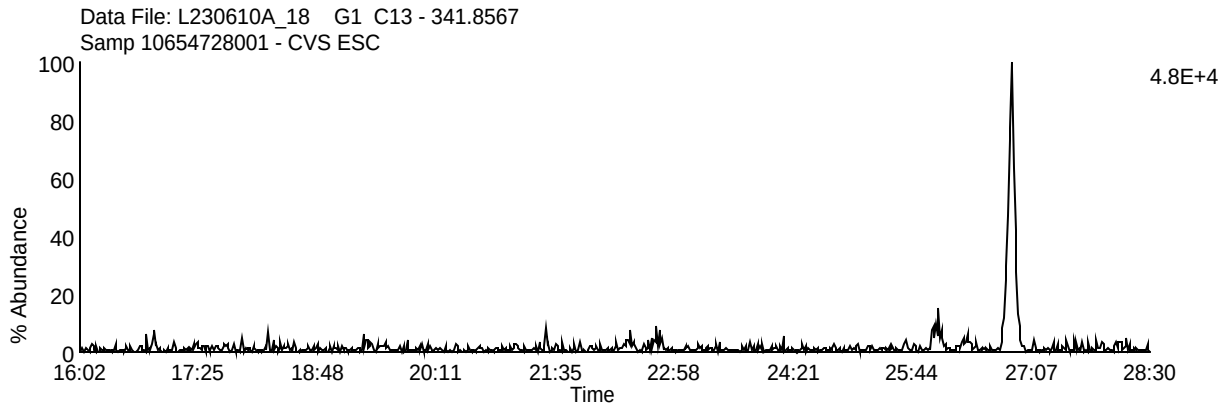
Data File: L230610A_18 G1 C5 - 318.9792
Samp 10654728001 - CVS ESC

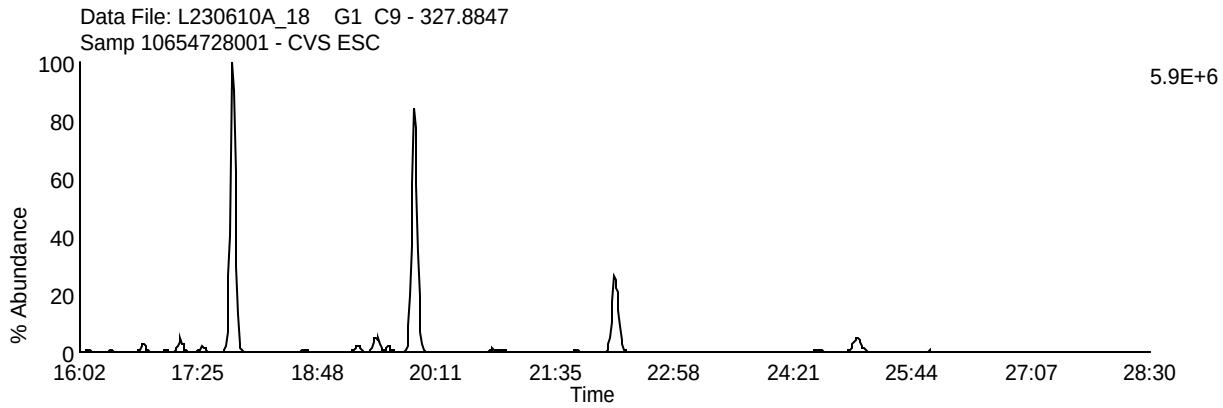


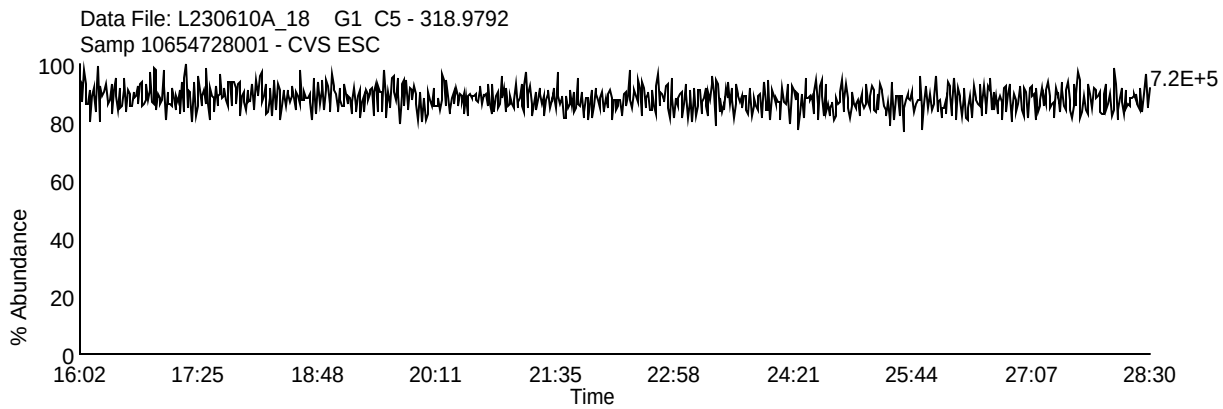
Homologue Group: Penta & Cleanup

Data File Name: L230610A_18
Lab Sample ID: 10654728001
Date Acquired: 6/10/2023
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Sample Description: Samp 10654728001 - CVS ESC
Instrument: 10MSHR15 (L)









Homologue Group: Pentas

Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

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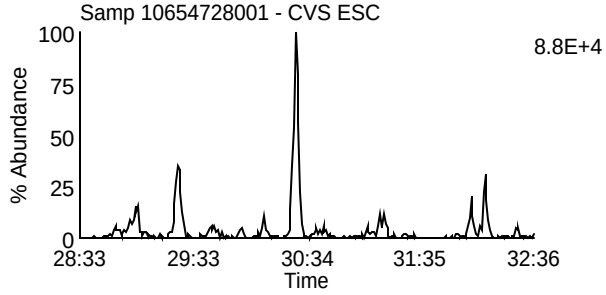
Samp 10654728001 - CVS ESC



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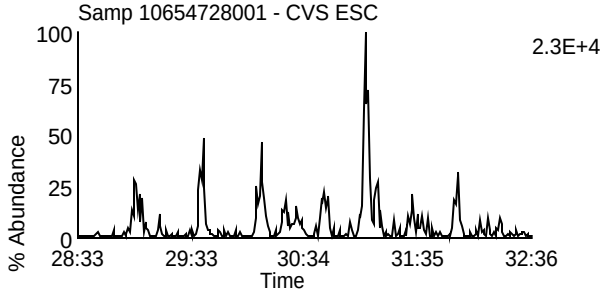

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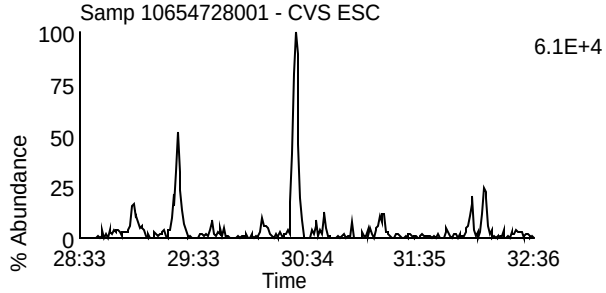
Samp 10654728001 - CVS ESC



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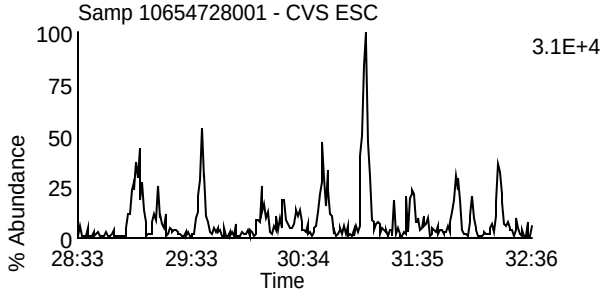

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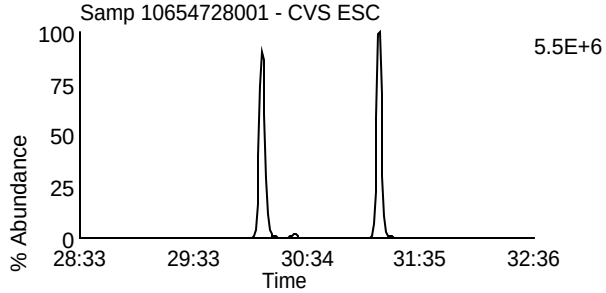
Samp 10654728001 - CVS ESC



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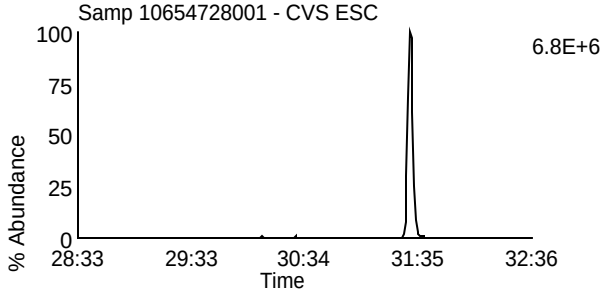
Samp 10654728001 - CVS ESC



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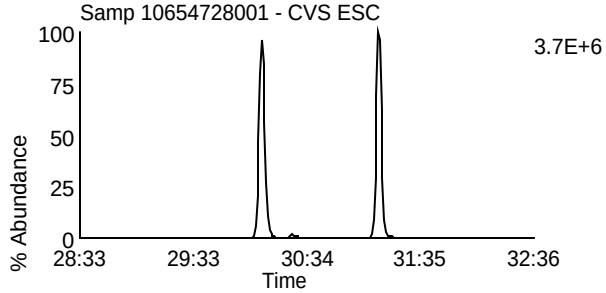
Samp 10654728001 - CVS ESC



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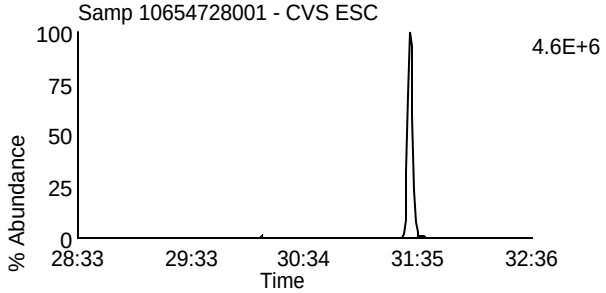
Samp 10654728001 - CVS ESC



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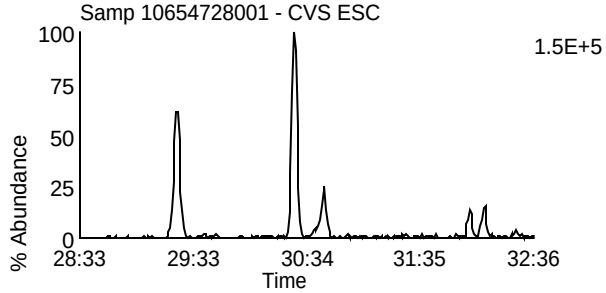
Samp 10654728001 - CVS ESC



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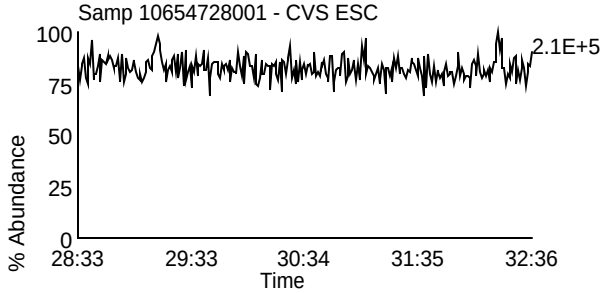
Samp 10654728001 - CVS ESC



Homologue Group: Hexas

Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

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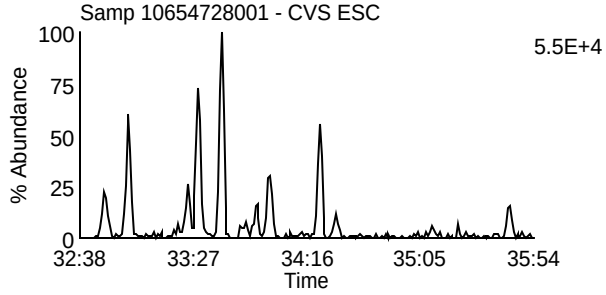
Samp 10654728001 - CVS ESC



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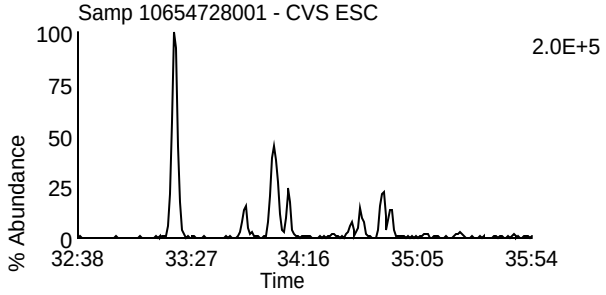

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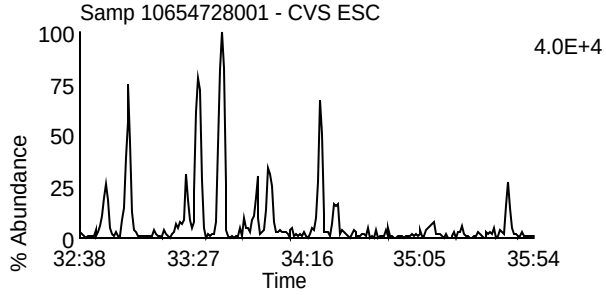

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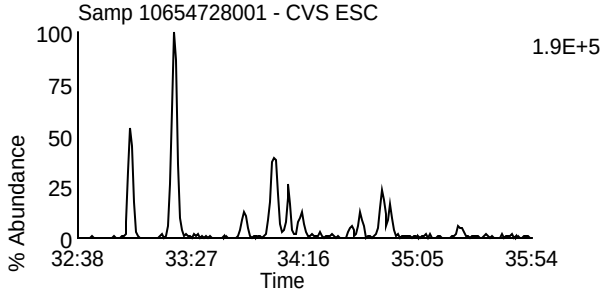
Samp 10654728001 - CVS ESC



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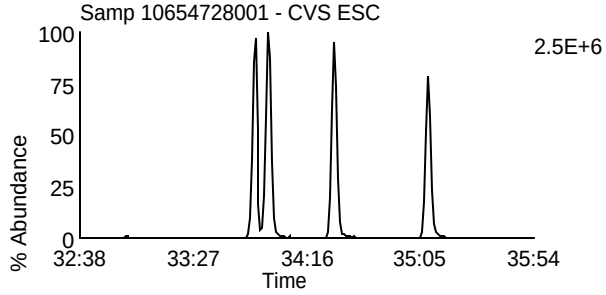

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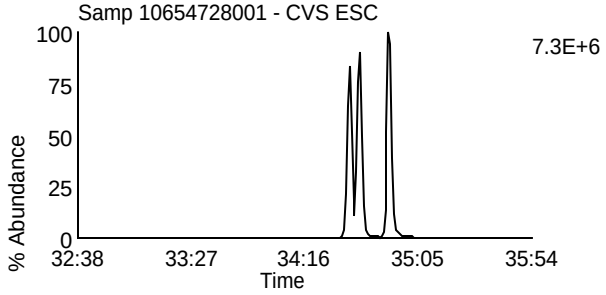
Samp 10654728001 - CVS ESC



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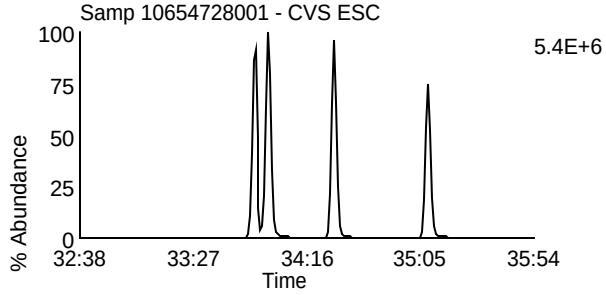

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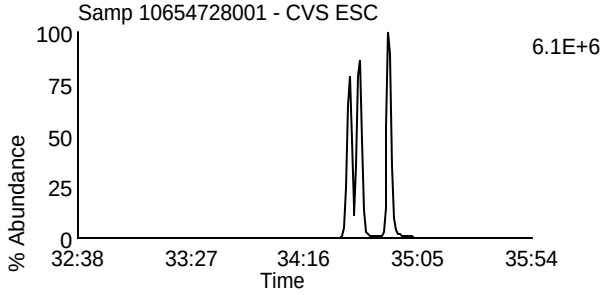

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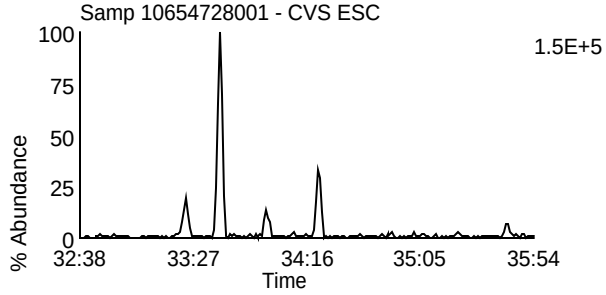

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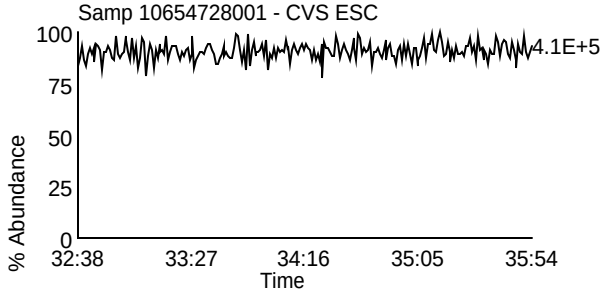
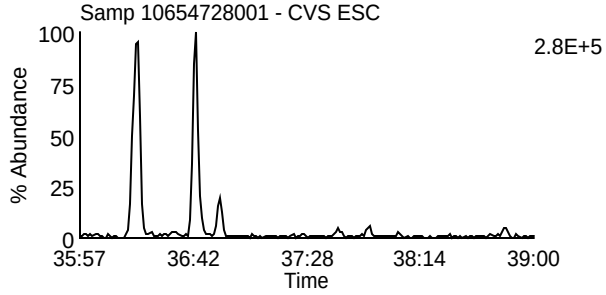


Homologue Group: Heptas

Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

Data File: L230610A_18 G4 C3 - 407.7818
Samp 10654728001 - CVS ESC



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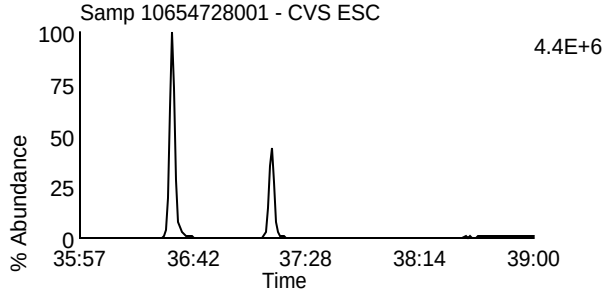
Samp 10654728001 - CVS ESC



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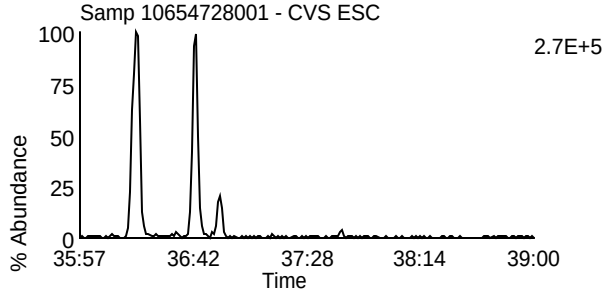
Samp 10654728001 - CVS ESC



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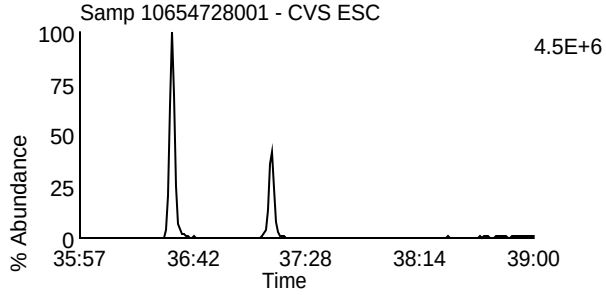
Samp 10654728001 - CVS ESC



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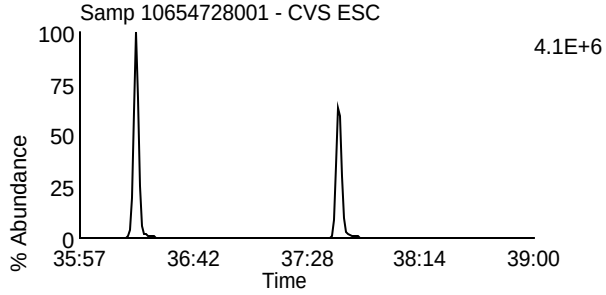
Samp 10654728001 - CVS ESC



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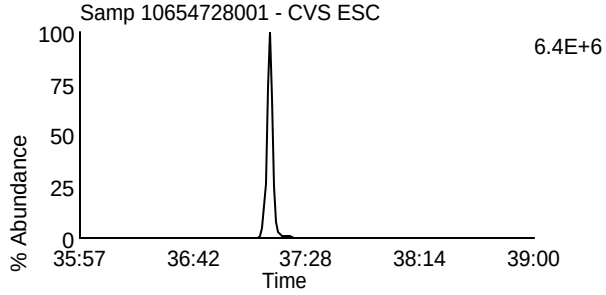
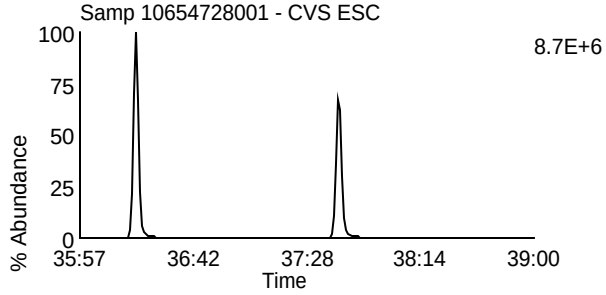
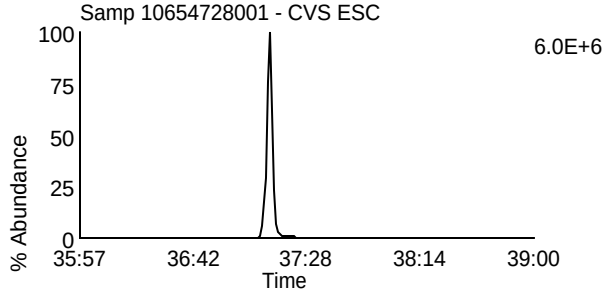
Samp 10654728001 - CVS ESC



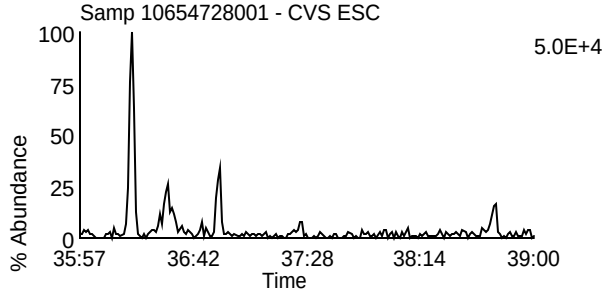
Data File: L230610A_18 G4 C7 - 419.822
Samp 10654728001 - CVS ESC



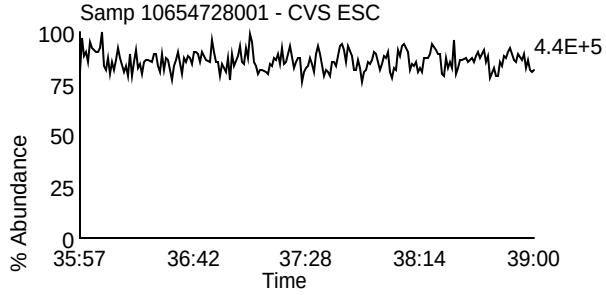
Data File: L230610A_18 G4 C12 - 437.814
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C13 - 479.7165
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G4 C1 - 380.976
Samp 10654728001 - CVS ESC

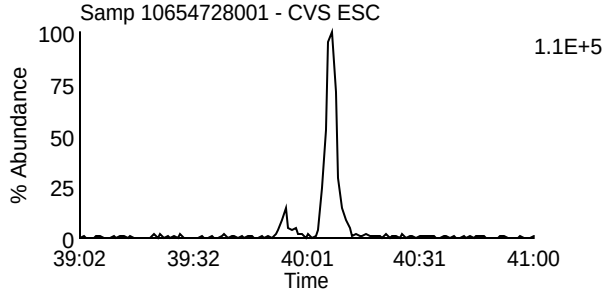


Homologue Group: Octas

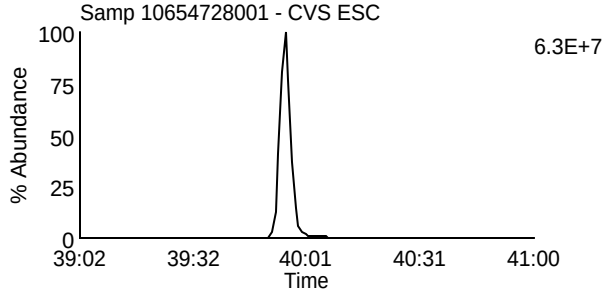
Data File Name: L230610A_18
Date Acquired: 6/10/2023
Sample Description: Samp 10654728001 - CVS ESC

Lab Sample ID: 10654728001
Client Sample ID: 12599404-042423-S-NE-RELEASE-1
Instrument: 10MSHR15 (L)

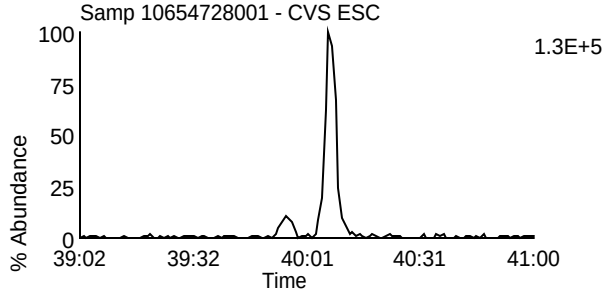
Data File: L230610A_18 G5 C4 - 441.7428
Samp 10654728001 - CVS ESC



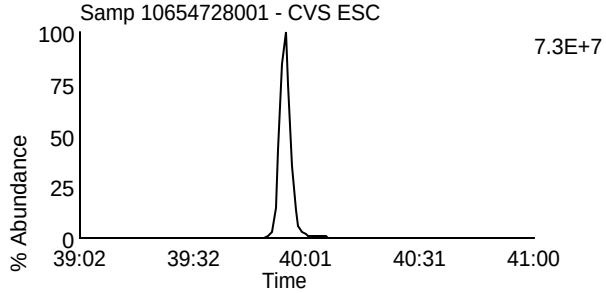
Data File: L230610A_18 G5 C8 - 457.7377
Samp 10654728001 - CVS ESC



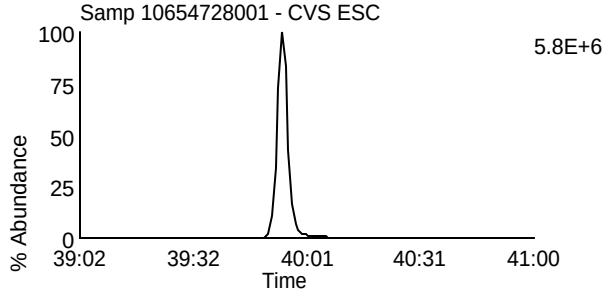
Data File: L230610A_18 G5 C5 - 443.7398
Samp 10654728001 - CVS ESC



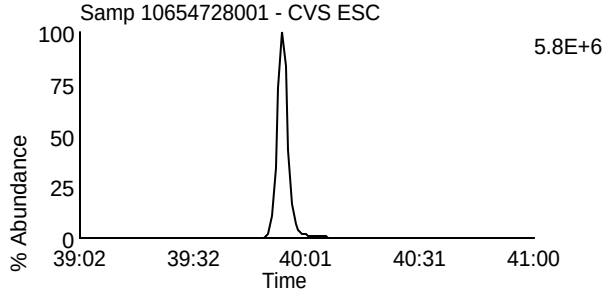
Data File: L230610A_18 G5 C9 - 459.7347
Samp 10654728001 - CVS ESC



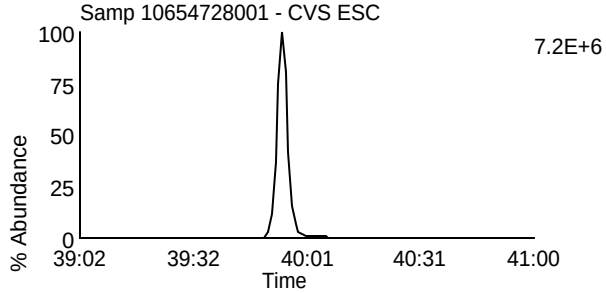
Data File: L230610A_18 G5 C11 - 469.7779
Samp 10654728001 - CVS ESC



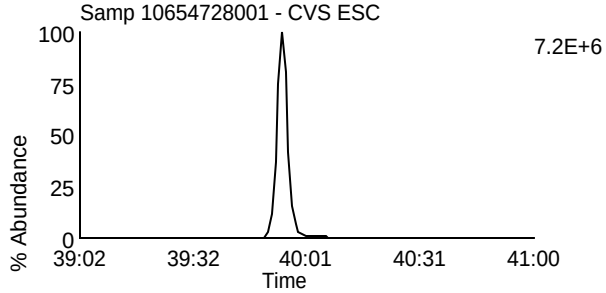
Data File: L230610A_18 G5 C11 - 469.7779
Samp 10654728001 - CVS ESC



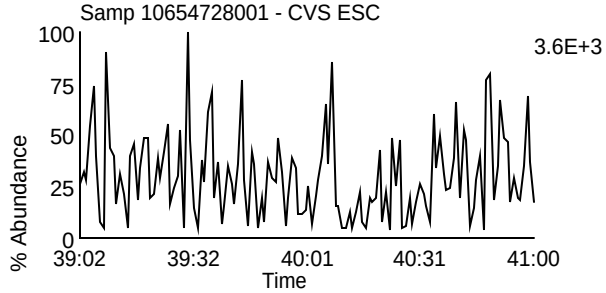
Data File: L230610A_18 G5 C12 - 471.7749
Samp 10654728001 - CVS ESC



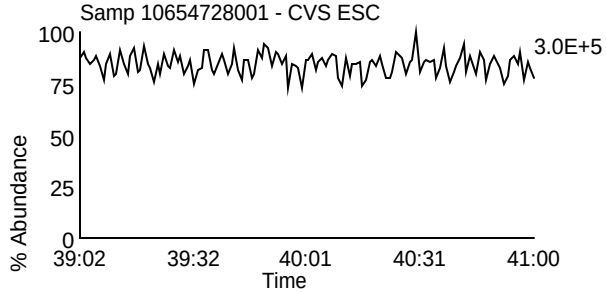
Data File: L230610A_18 G5 C12 - 471.7749
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G5 C13 - 513.6775
Samp 10654728001 - CVS ESC



Data File: L230610A_18 G5 C2 - 430.9728
Samp 10654728001 - CVS ESC

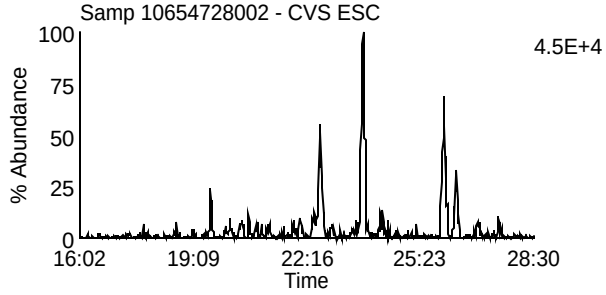


Homologue Group: Tetras

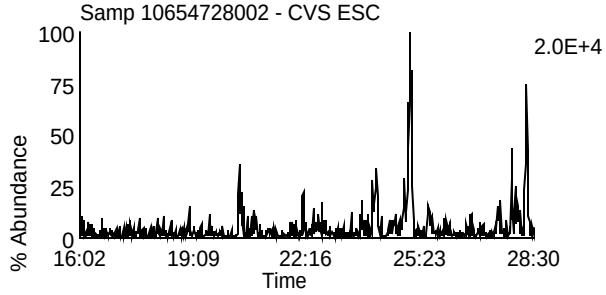
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

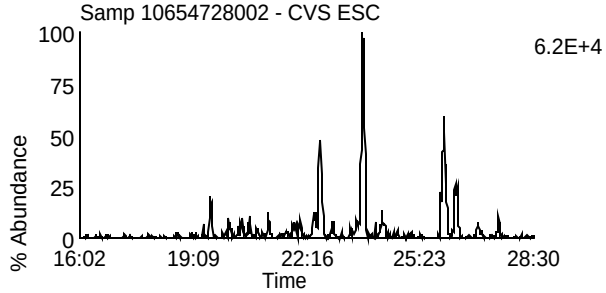
Data File: L230610A_19 G1 C1 - 303.9016
Samp 10654728002 - CVS ESC



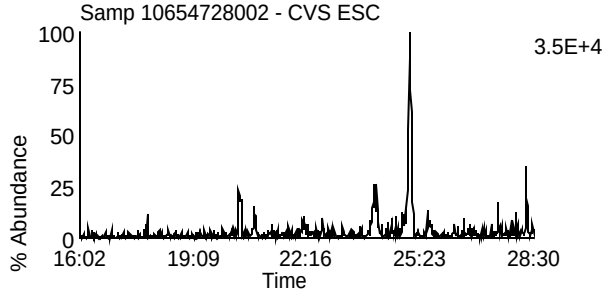
Data File: L230610A_19 G1 C7 - 319.8965
Samp 10654728002 - CVS ESC



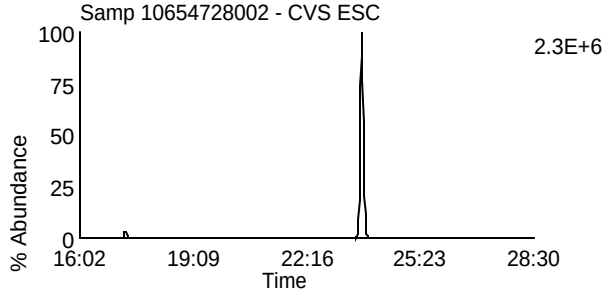
Data File: L230610A_19 G1 C2 - 305.8987
Samp 10654728002 - CVS ESC



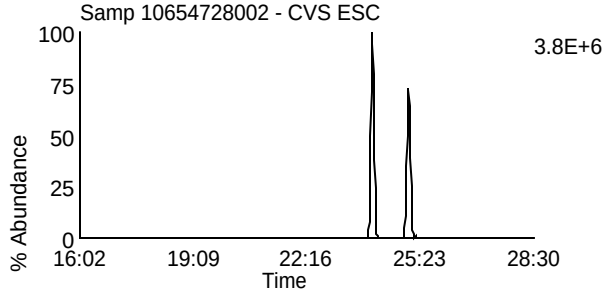
Data File: L230610A_19 G1 C8 - 321.8936
Samp 10654728002 - CVS ESC



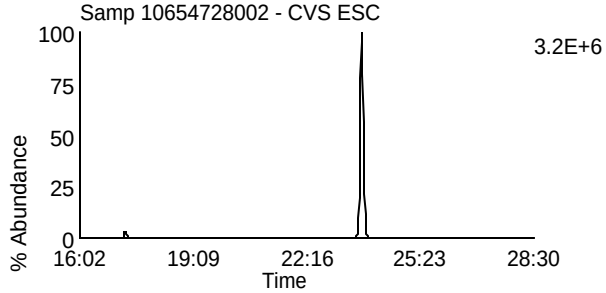
Data File: L230610A_19 G1 C3 - 315.9418
Samp 10654728002 - CVS ESC



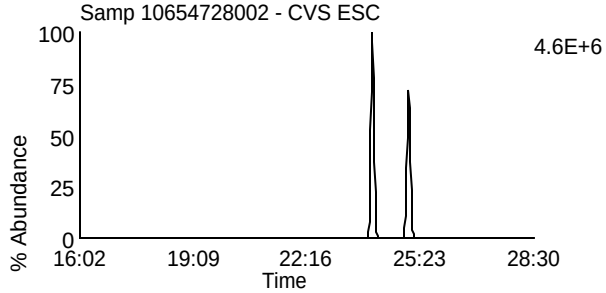
Data File: L230610A_19 G1 C10 - 331.9367
Samp 10654728002 - CVS ESC



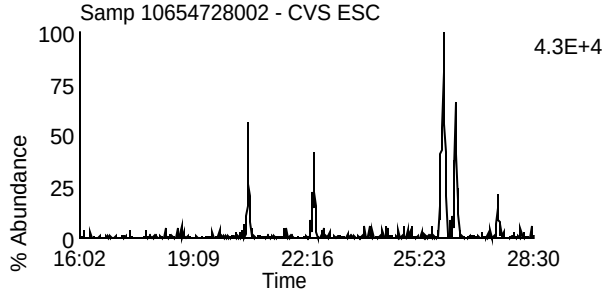
Data File: L230610A_19 G1 C4 - 317.9389
Samp 10654728002 - CVS ESC



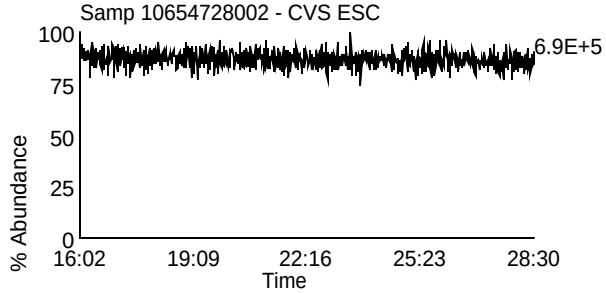
Data File: L230610A_19 G1 C11 - 333.9338
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G1 C14 - 375.8364
Samp 10654728002 - CVS ESC



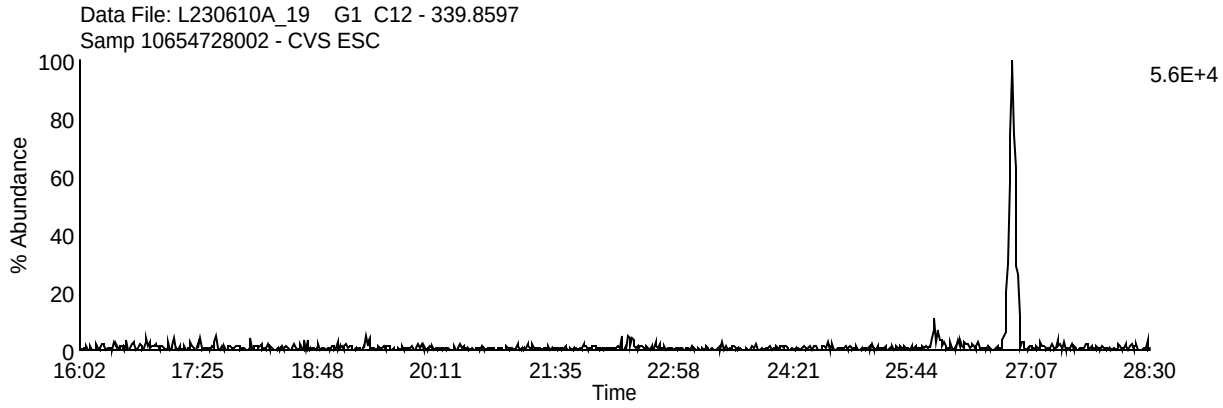
Data File: L230610A_19 G1 C5 - 318.9792
Samp 10654728002 - CVS ESC

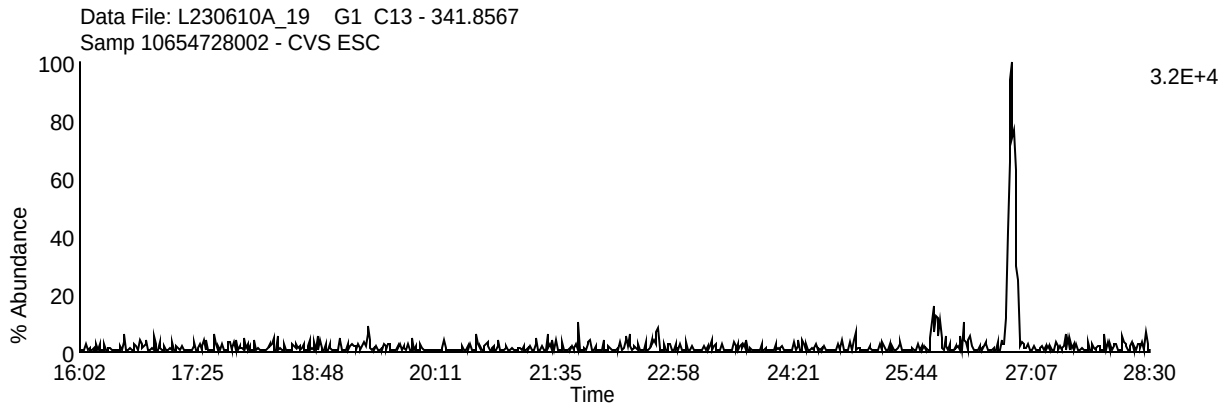


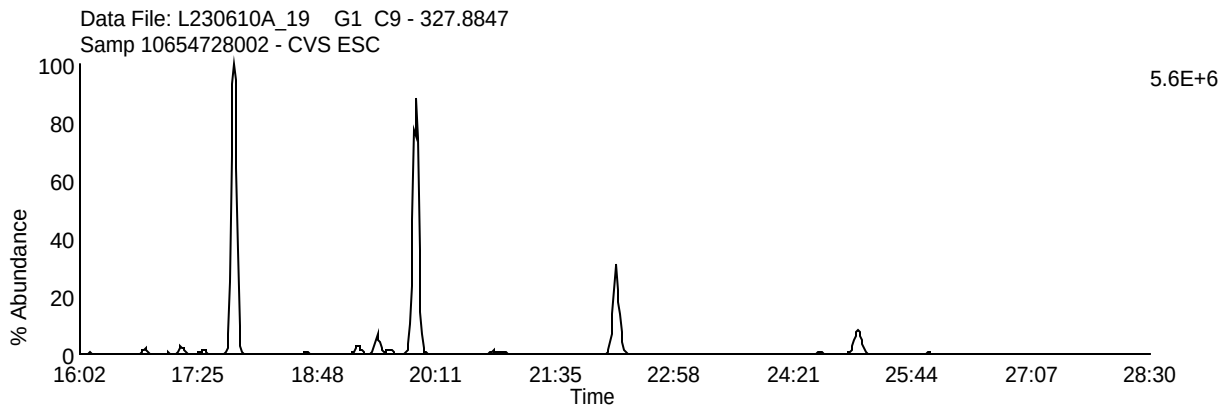
Homologue Group: Penta & Cleanup

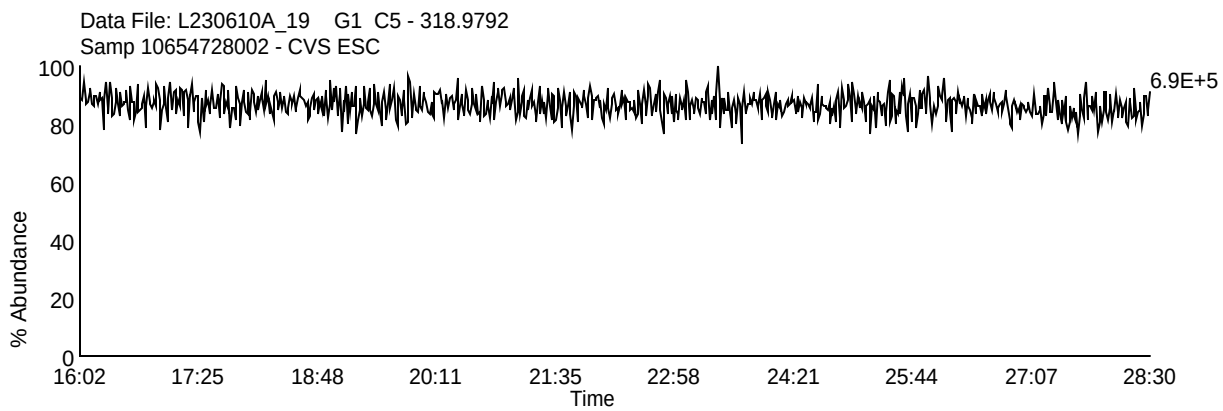
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)







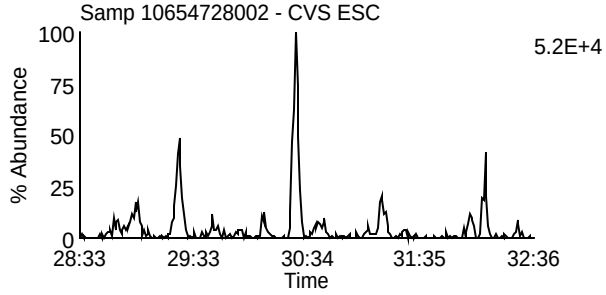


Homologue Group: Pentas

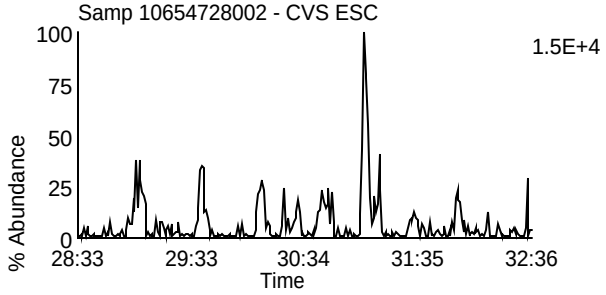
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

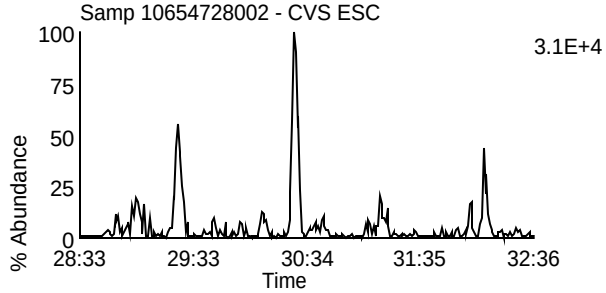
Data File: L230610A_19 G2 C1 - 339.8597
Samp 10654728002 - CVS ESC



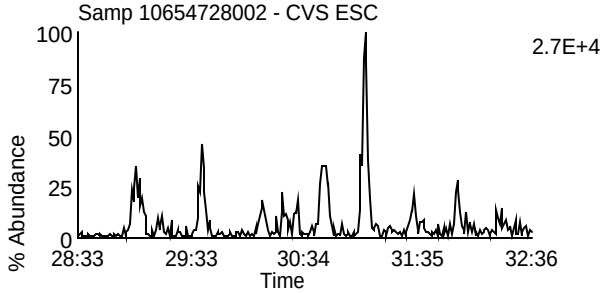
Data File: L230610A_19 G2 C4 - 353.8576
Samp 10654728002 - CVS ESC



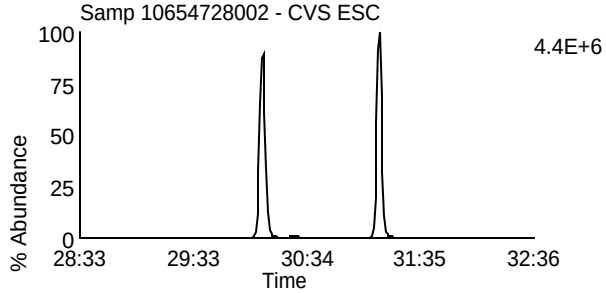
Data File: L230610A_19 G2 C2 - 341.8567
Samp 10654728002 - CVS ESC



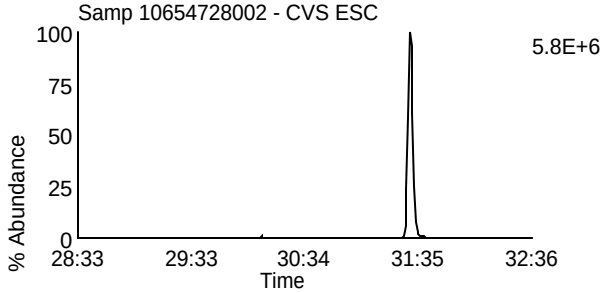
Data File: L230610A_19 G2 C8 - 355.8546
Samp 10654728002 - CVS ESC



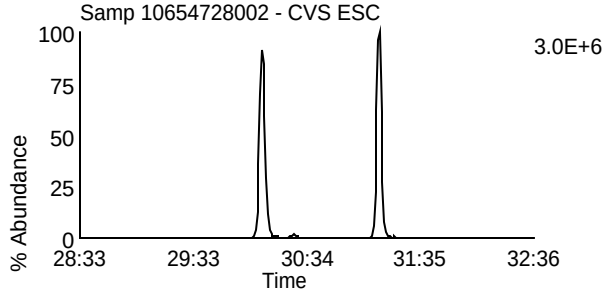
Data File: L230610A_19 G2 C3 - 351.8999
Samp 10654728002 - CVS ESC



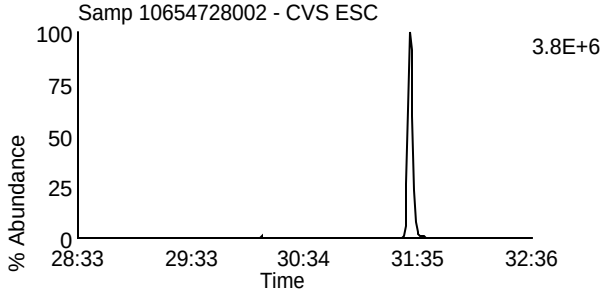
Data File: L230610A_19 G2 C10 - 367.8948
Samp 10654728002 - CVS ESC



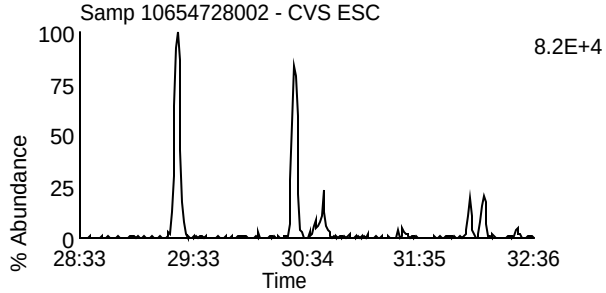
Data File: L230610A_19 G2 C5 - 353.8969
Samp 10654728002 - CVS ESC



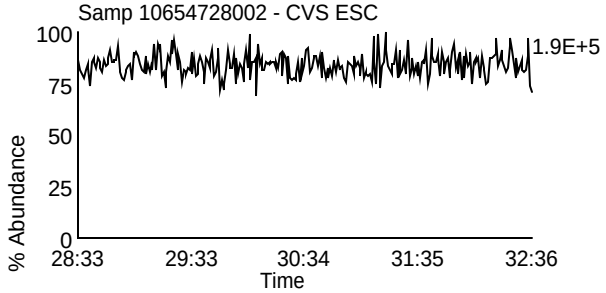
Data File: L230610A_19 G2 C11 - 369.8918
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G2 C12 - 409.7974
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G2 C6 - 354.9792
Samp 10654728002 - CVS ESC

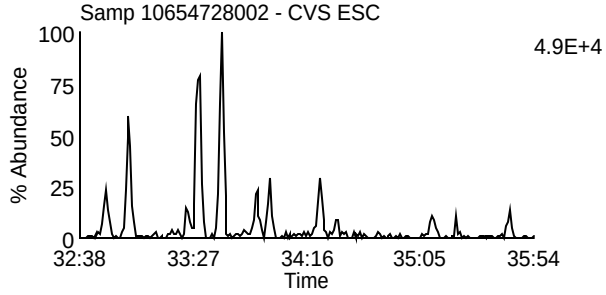


Homologue Group: Hexas

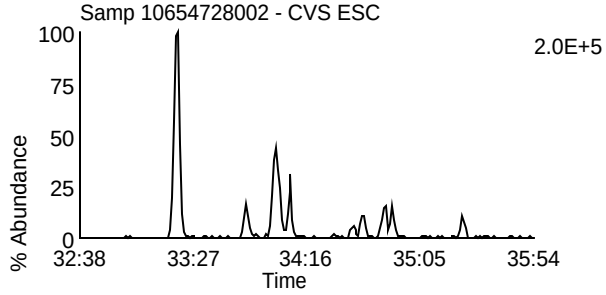
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

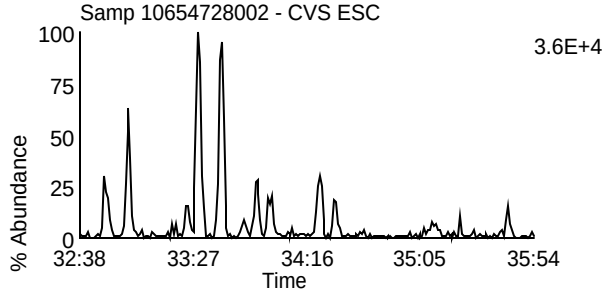
Data File: L230610A_19 G3 C1 - 373.8207
Samp 10654728002 - CVS ESC



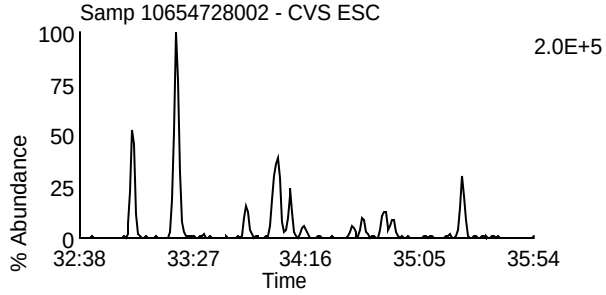
Data File: L230610A_19 G3 C7 - 389.8156
Samp 10654728002 - CVS ESC



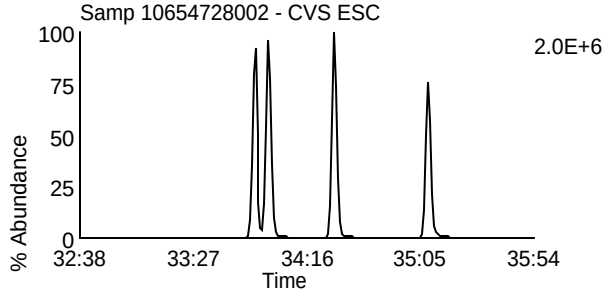
Data File: L230610A_19 G3 C2 - 375.8178
Samp 10654728002 - CVS ESC



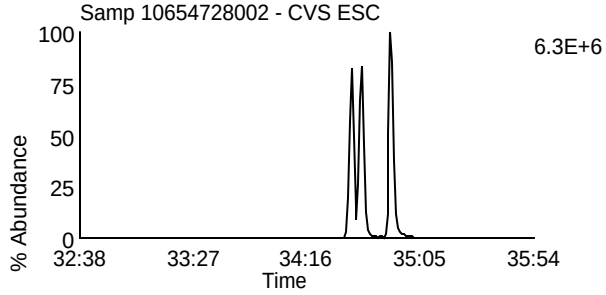
Data File: L230610A_19 G3 C8 - 391.8127
Samp 10654728002 - CVS ESC



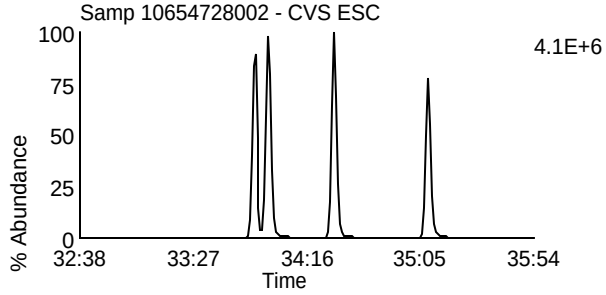
Data File: L230610A_19 G3 C5 - 383.8639
Samp 10654728002 - CVS ESC



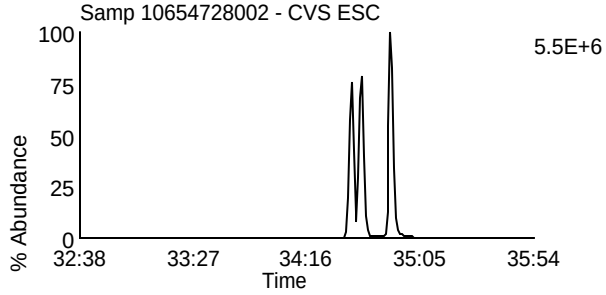
Data File: L230610A_19 G3 C9 - 401.8559
Samp 10654728002 - CVS ESC



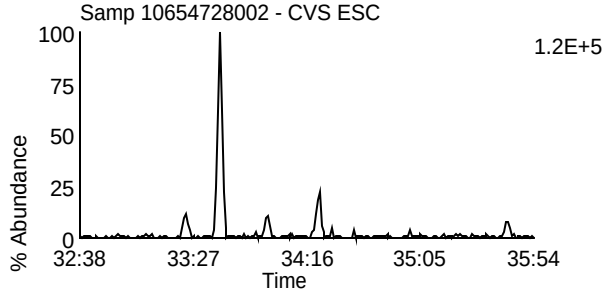
Data File: L230610A_19 G3 C6 - 385.861
Samp 10654728002 - CVS ESC



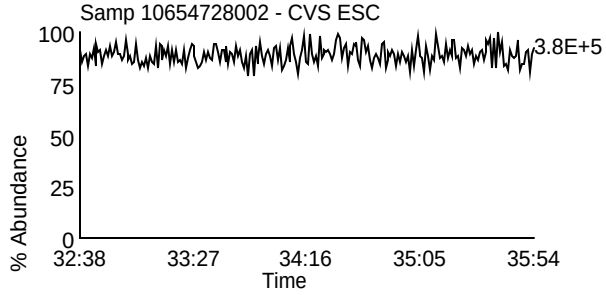
Data File: L230610A_19 G3 C10 - 403.8529
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G3 C11 - 445.7555
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G3 C3 - 380.976
Samp 10654728002 - CVS ESC

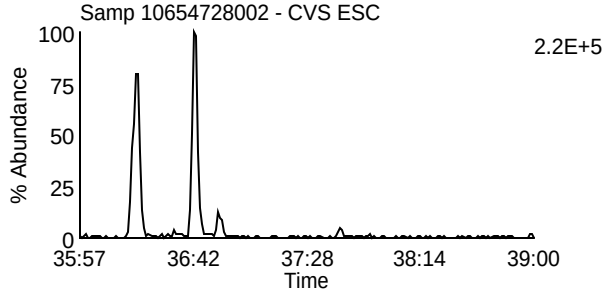


Homologue Group: Heptas

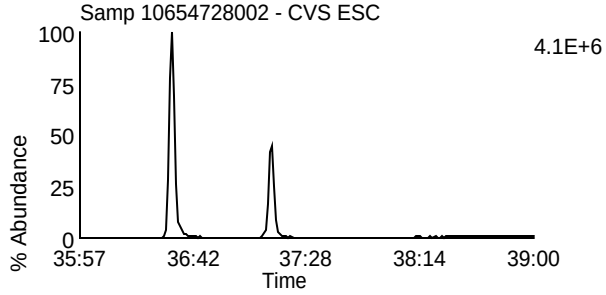
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

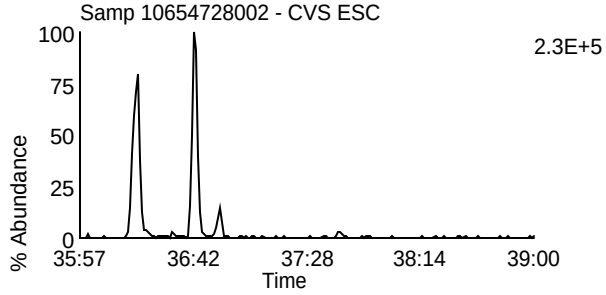
Data File: L230610A_19 G4 C3 - 407.7818
Samp 10654728002 - CVS ESC



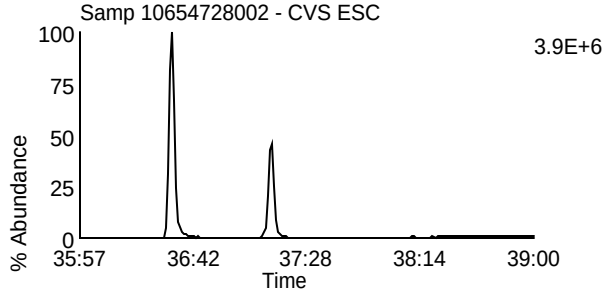
Data File: L230610A_19 G4 C8 - 423.7767
Samp 10654728002 - CVS ESC



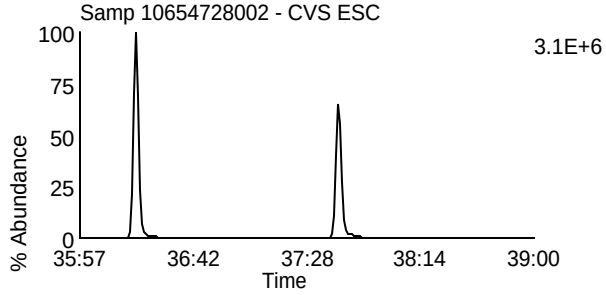
Data File: L230610A_19 G4 C4 - 409.7788
Samp 10654728002 - CVS ESC



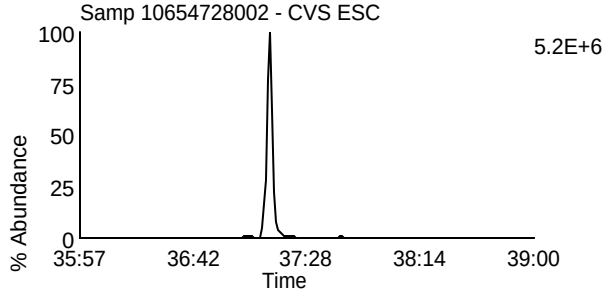
Data File: L230610A_19 G4 C9 - 425.7737
Samp 10654728002 - CVS ESC



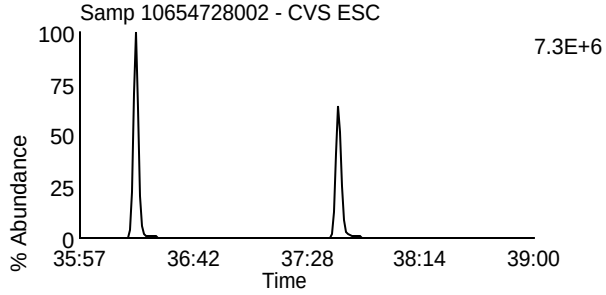
Data File: L230610A_19 G4 C6 - 417.825
Samp 10654728002 - CVS ESC



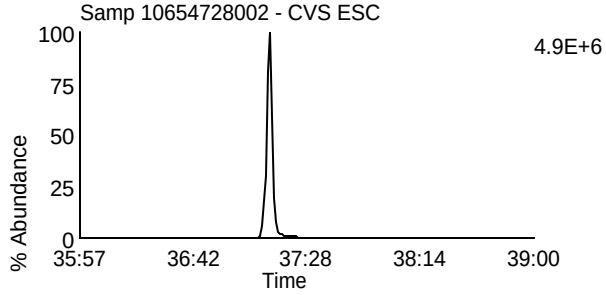
Data File: L230610A_19 G4 C11 - 435.8169
Samp 10654728002 - CVS ESC



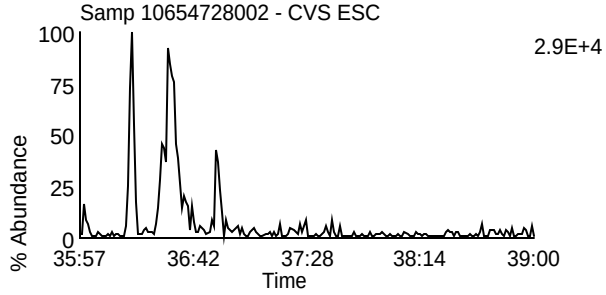
Data File: L230610A_19 G4 C7 - 419.822
Samp 10654728002 - CVS ESC



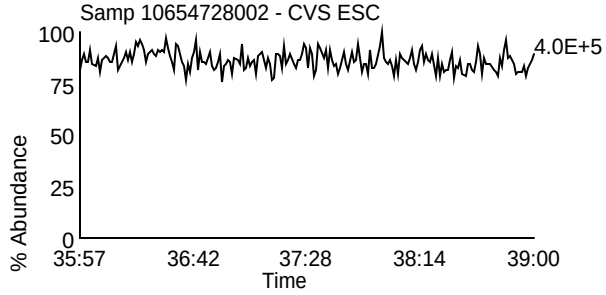
Data File: L230610A_19 G4 C12 - 437.814
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G4 C13 - 479.7165
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G4 C1 - 380.976
Samp 10654728002 - CVS ESC

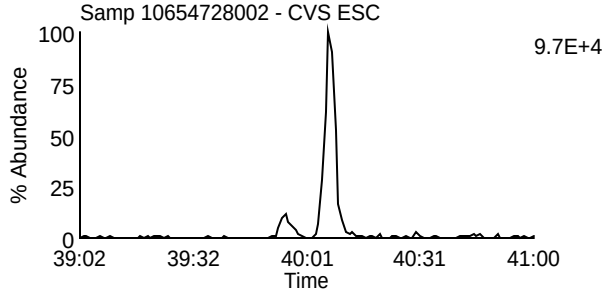


Homologue Group: Octas

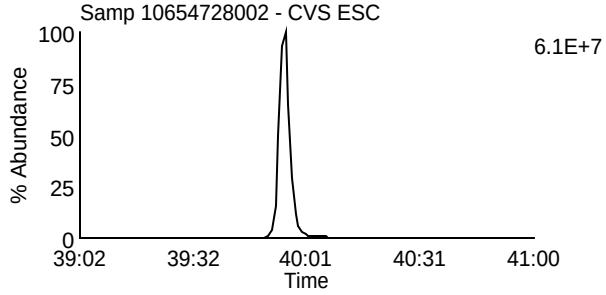
Data File Name: L230610A_19
Date Acquired: 6/11/2023
Sample Description: Samp 10654728002 - CVS ESC

Lab Sample ID: 10654728002
Client Sample ID: 12599404-042423-S-NE-RELEASE-2
Instrument: 10MSHR15 (L)

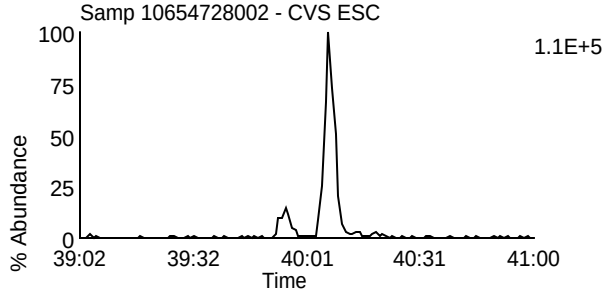
Data File: L230610A_19 G5 C4 - 441.7428
Samp 10654728002 - CVS ESC



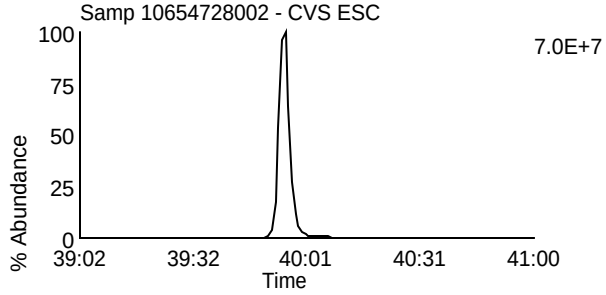
Data File: L230610A_19 G5 C8 - 457.7377
Samp 10654728002 - CVS ESC



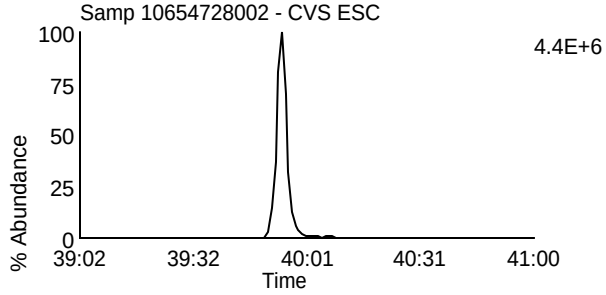
Data File: L230610A_19 G5 C5 - 443.7398
Samp 10654728002 - CVS ESC



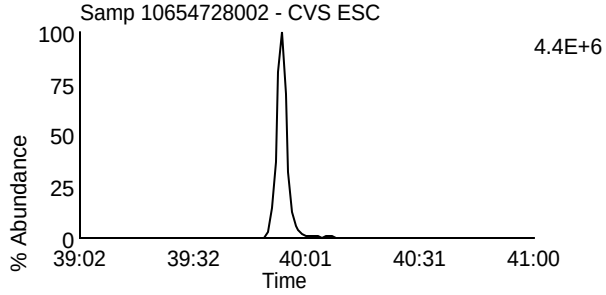
Data File: L230610A_19 G5 C9 - 459.7347
Samp 10654728002 - CVS ESC



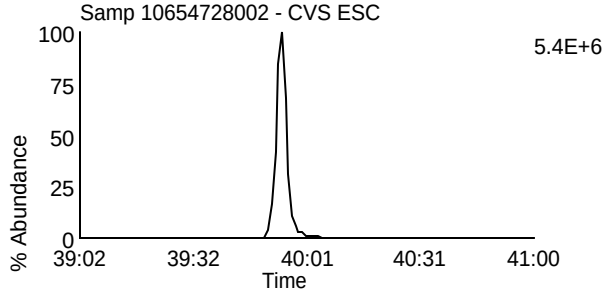
Data File: L230610A_19 G5 C11 - 469.7779
Samp 10654728002 - CVS ESC



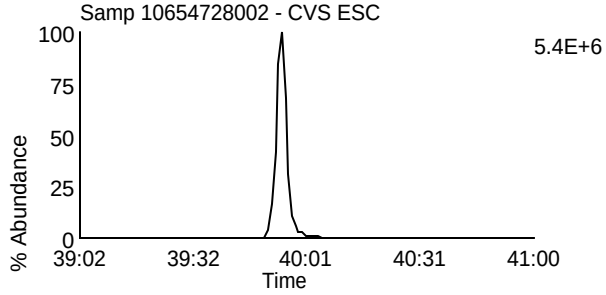
Data File: L230610A_19 G5 C11 - 469.7779
Samp 10654728002 - CVS ESC



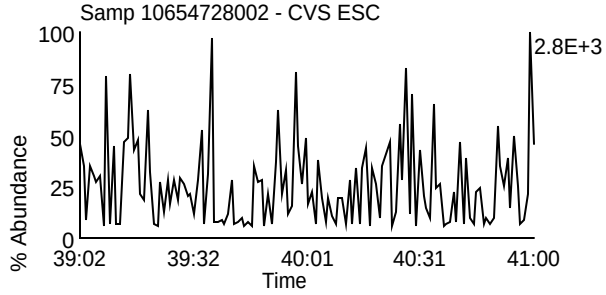
Data File: L230610A_19 G5 C12 - 471.7749
Samp 10654728002 - CVS ESC



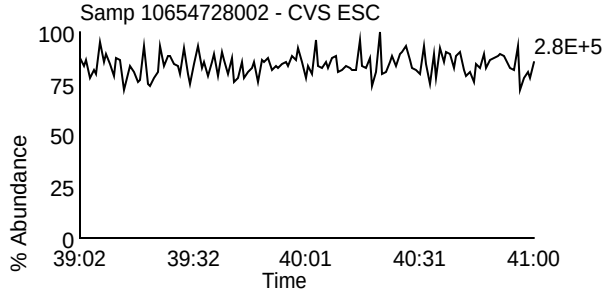
Data File: L230610A_19 G5 C12 - 471.7749
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G5 C13 - 513.6775
Samp 10654728002 - CVS ESC



Data File: L230610A_19 G5 C2 - 430.9728
Samp 10654728002 - CVS ESC

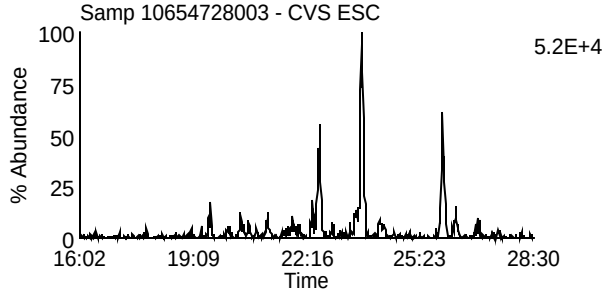


Homologue Group: Tetras

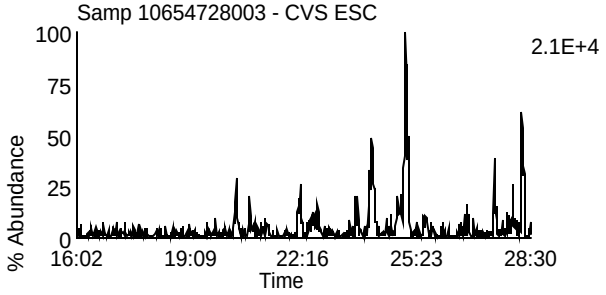
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

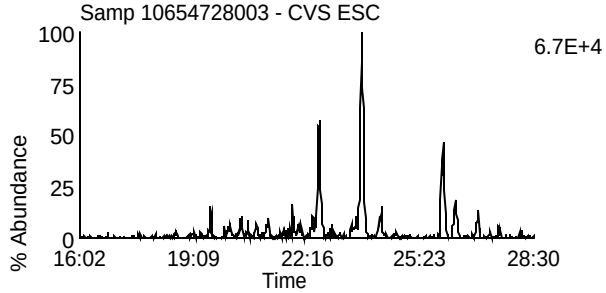
Data File: L230610A_20 G1 C1 - 303.9016
Samp 10654728003 - CVS ESC



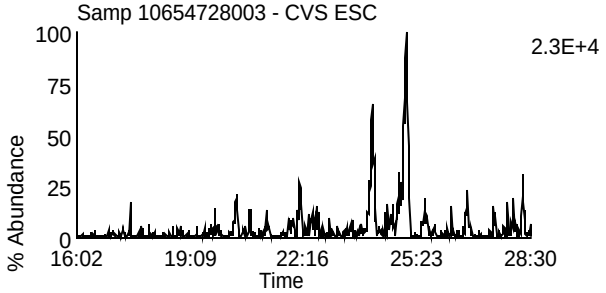
Data File: L230610A_20 G1 C7 - 319.8965
Samp 10654728003 - CVS ESC



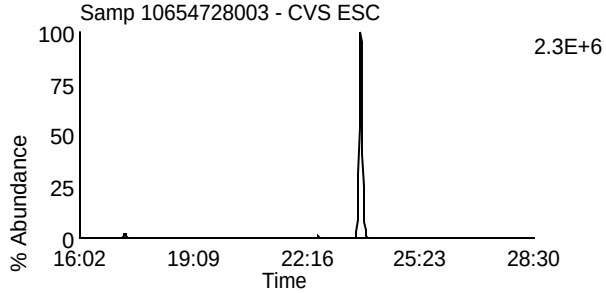
Data File: L230610A_20 G1 C2 - 305.8987
Samp 10654728003 - CVS ESC



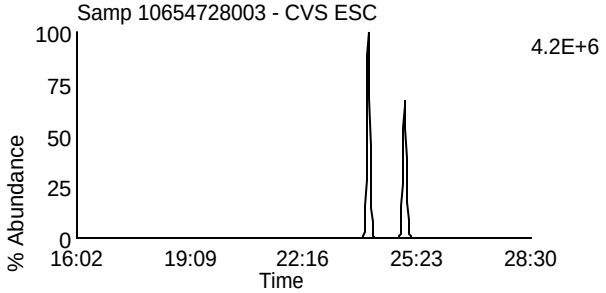
Data File: L230610A_20 G1 C8 - 321.8936
Samp 10654728003 - CVS ESC



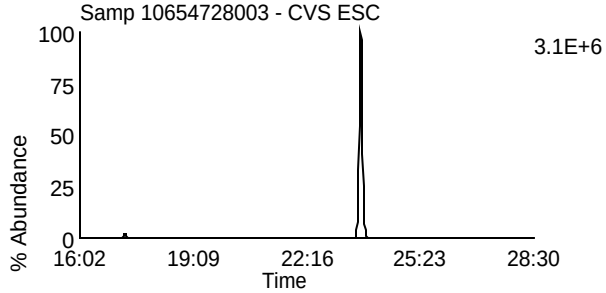
Data File: L230610A_20 G1 C3 - 315.9418
Samp 10654728003 - CVS ESC



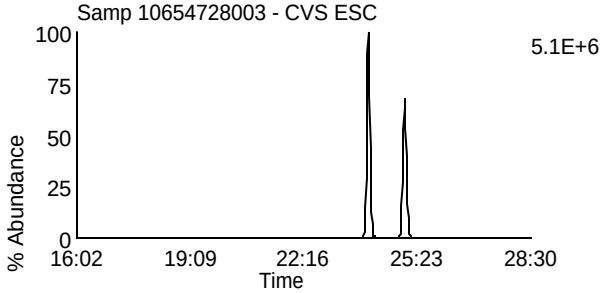
Data File: L230610A_20 G1 C10 - 331.9367
Samp 10654728003 - CVS ESC



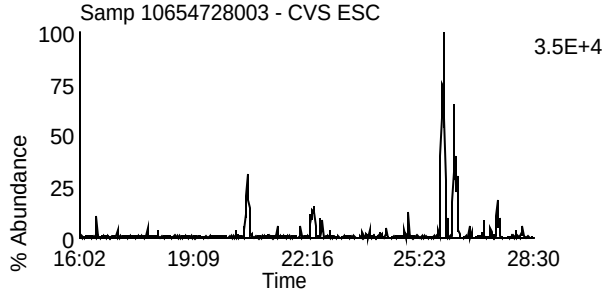
Data File: L230610A_20 G1 C4 - 317.9389
Samp 10654728003 - CVS ESC



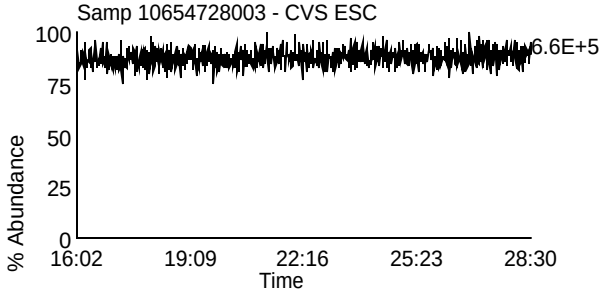
Data File: L230610A_20 G1 C11 - 333.9338
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G1 C14 - 375.8364
Samp 10654728003 - CVS ESC



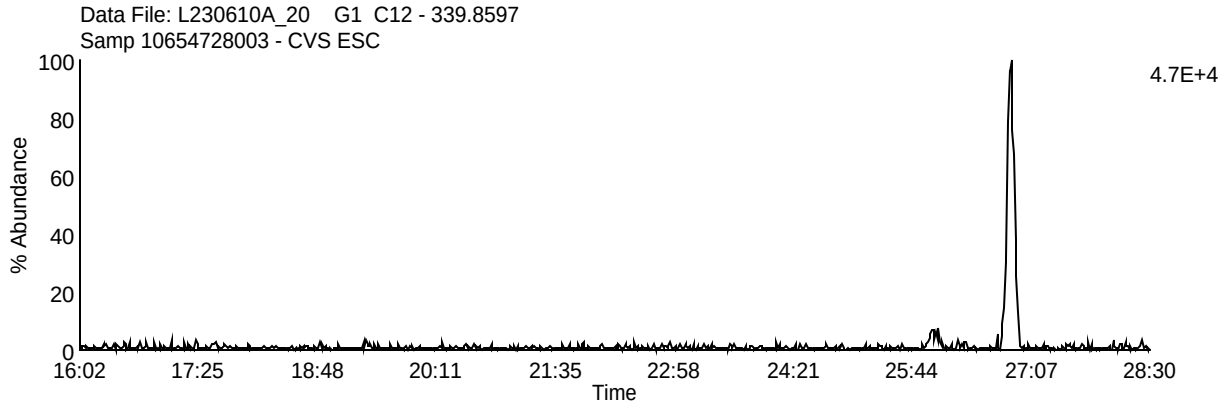
Data File: L230610A_20 G1 C5 - 318.9792
Samp 10654728003 - CVS ESC

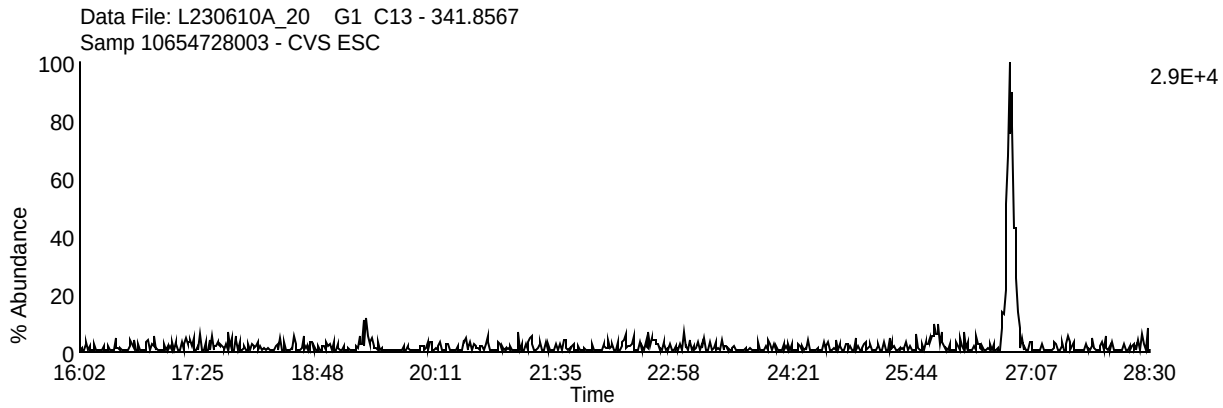


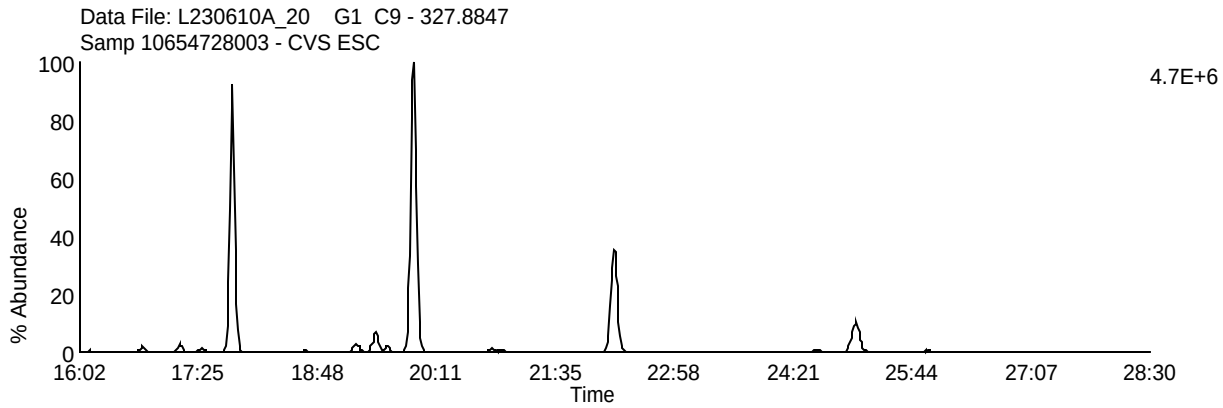
Homologue Group: Penta & Cleanup

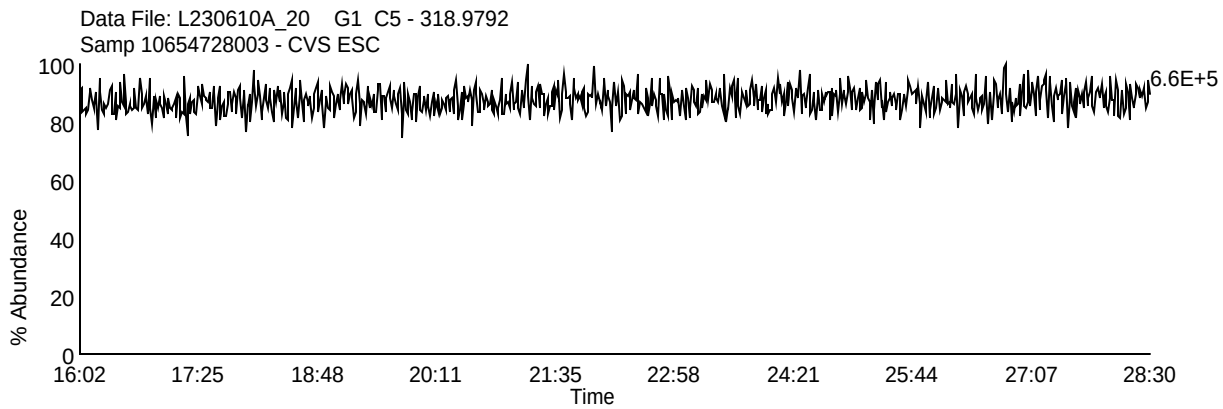
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)







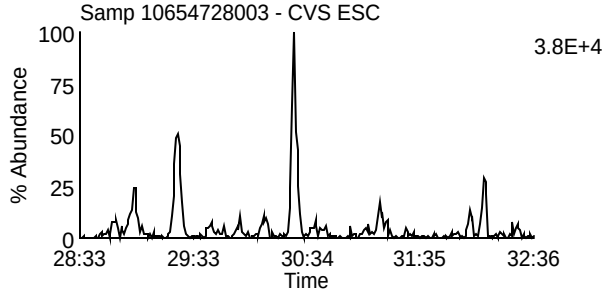


Homologue Group: Pentas

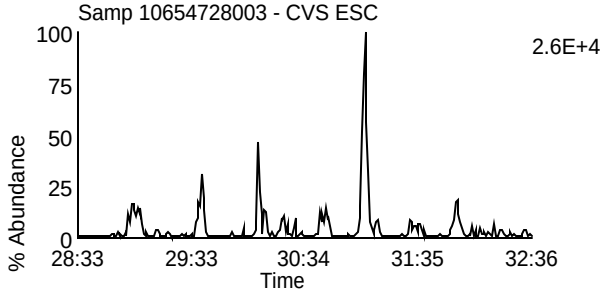
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

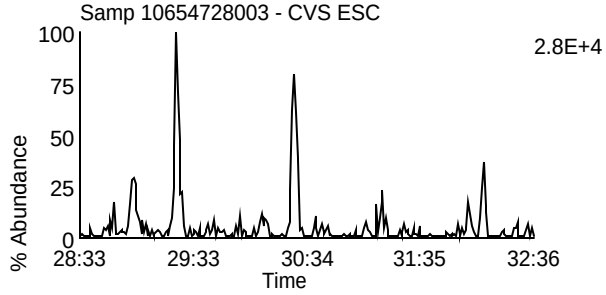
Data File: L230610A_20 G2 C1 - 339.8597
Samp 10654728003 - CVS ESC



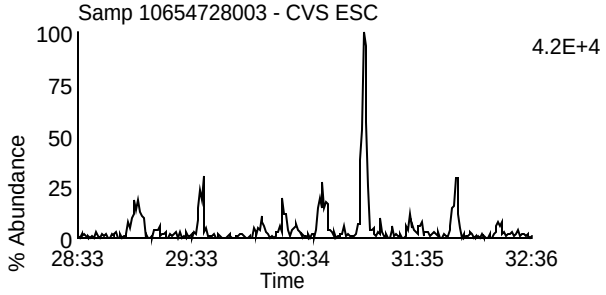
Data File: L230610A_20 G2 C4 - 353.8576
Samp 10654728003 - CVS ESC



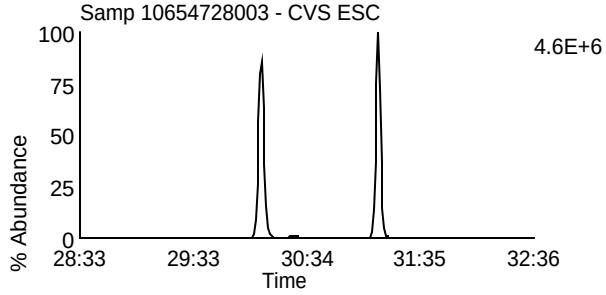
Data File: L230610A_20 G2 C2 - 341.8567
Samp 10654728003 - CVS ESC



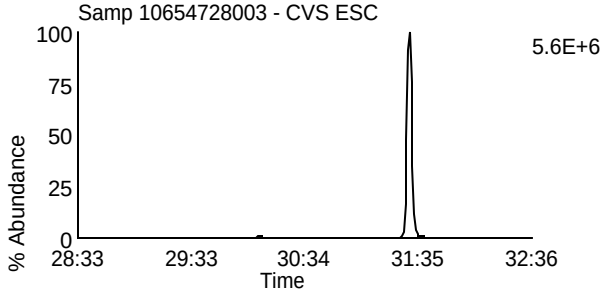
Data File: L230610A_20 G2 C8 - 355.8546
Samp 10654728003 - CVS ESC



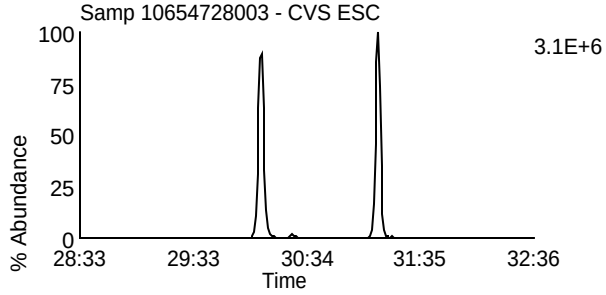
Data File: L230610A_20 G2 C3 - 351.8999
Samp 10654728003 - CVS ESC



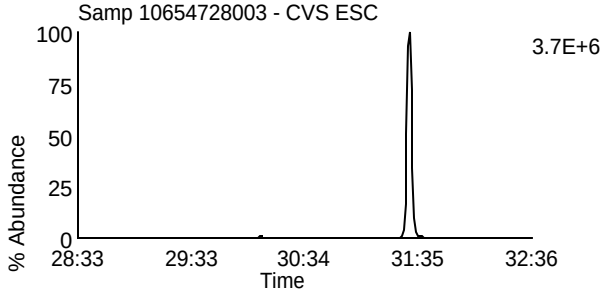
Data File: L230610A_20 G2 C10 - 367.8948
Samp 10654728003 - CVS ESC



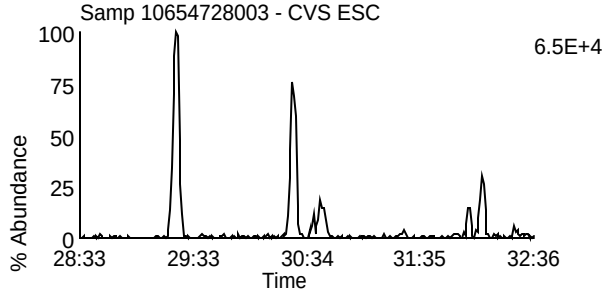
Data File: L230610A_20 G2 C5 - 353.8969
Samp 10654728003 - CVS ESC



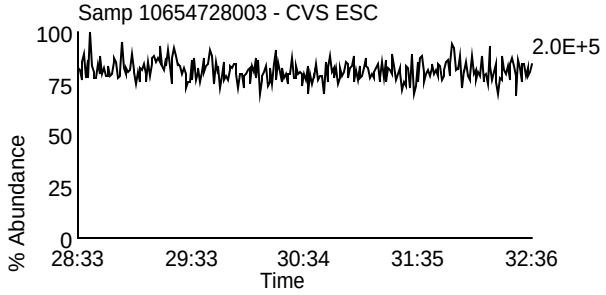
Data File: L230610A_20 G2 C11 - 369.8918
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G2 C12 - 409.7974
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G2 C6 - 354.9792
Samp 10654728003 - CVS ESC

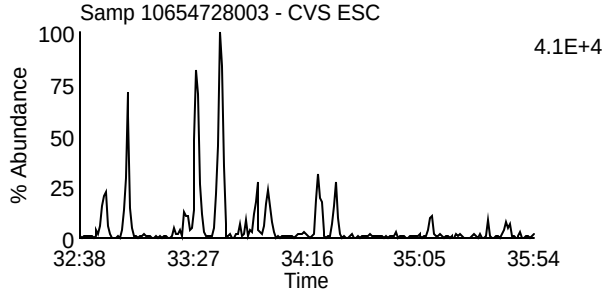


Homologue Group: Hexas

Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

Data File: L230610A_20 G3 C1 - 373.8207
Samp 10654728003 - CVS ESC



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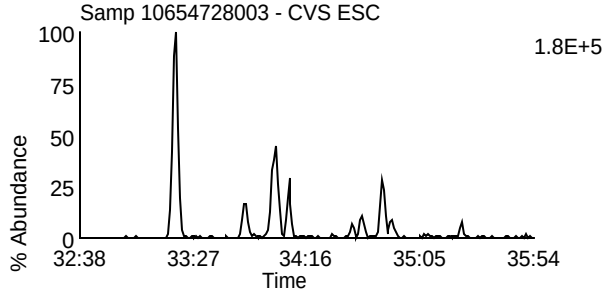
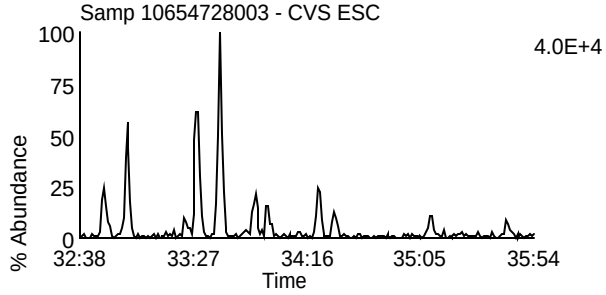
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G3 C2 - 375.8178
Samp 10654728003 - CVS ESC



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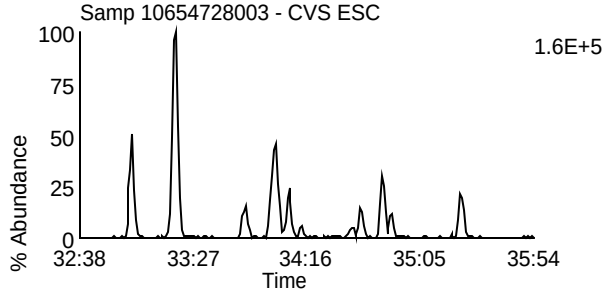
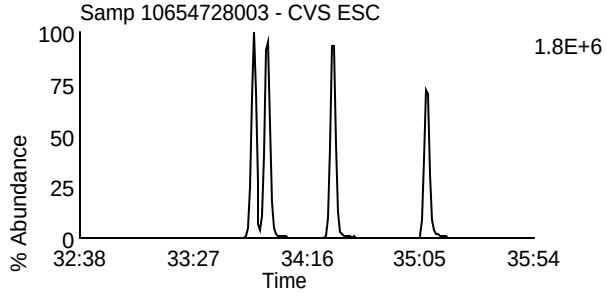
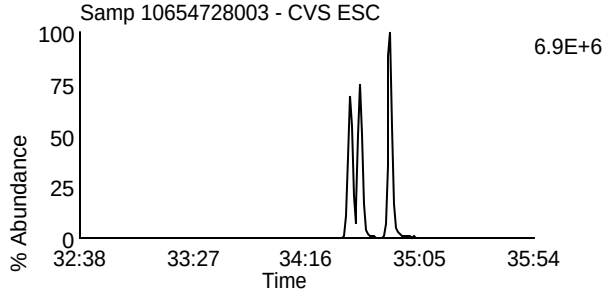
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G3 C5 - 383.8639
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G3 C9 - 401.8559
Samp 10654728003 - CVS ESC



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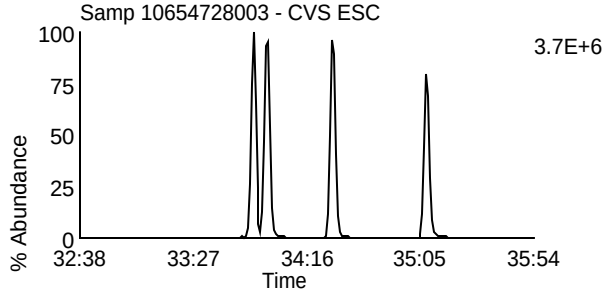
Samp 10654728003 - CVS ESC



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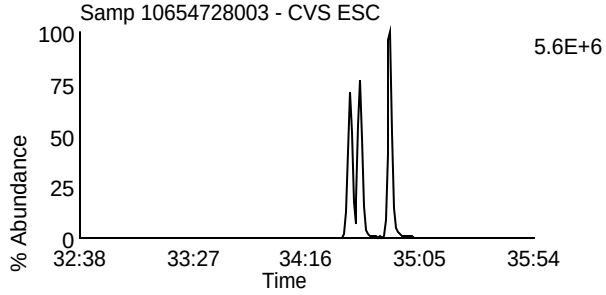
Samp 10654728003 - CVS ESC



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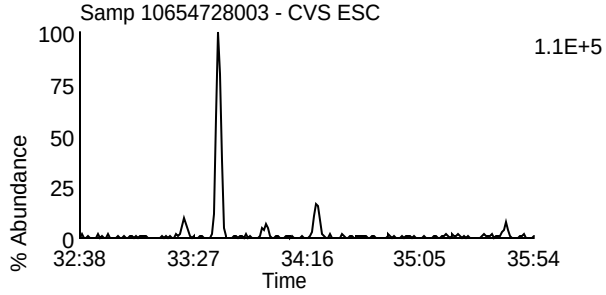
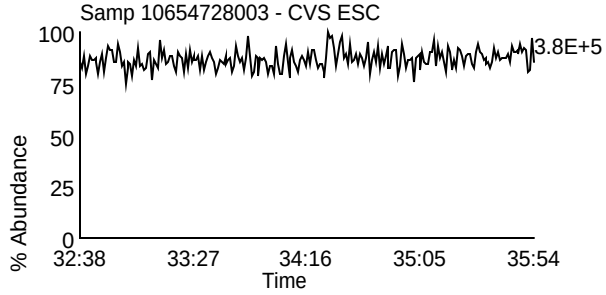
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G3 C3 - 380.976
Samp 10654728003 - CVS ESC

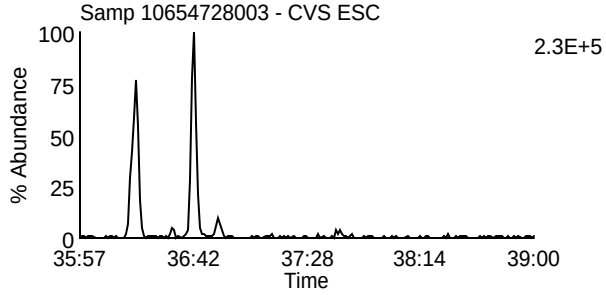


Homologue Group: Heptas

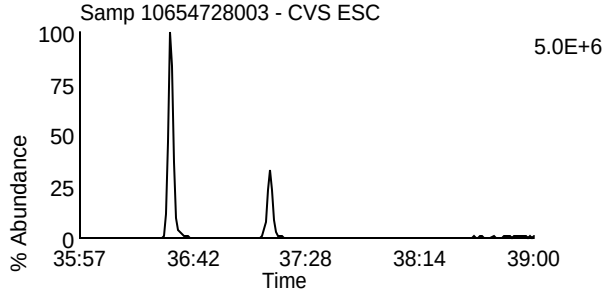
Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

Data File: L230610A_20 G4 C3 - 407.7818
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G4 C8 - 423.7767
Samp 10654728003 - CVS ESC



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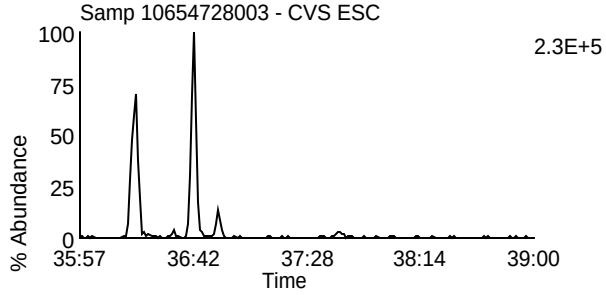
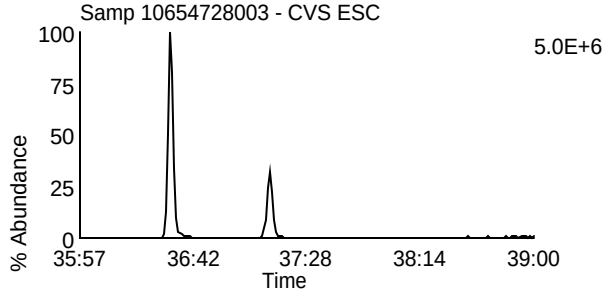
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G4 C9 - 425.7737
Samp 10654728003 - CVS ESC



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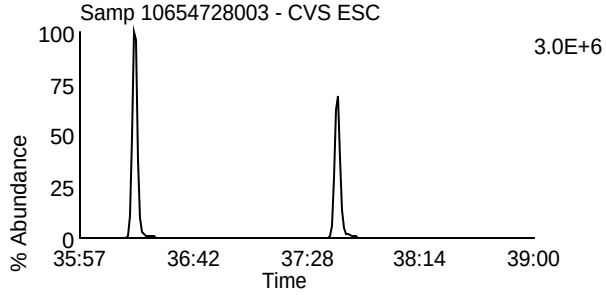
Samp 10654728003 - CVS ESC



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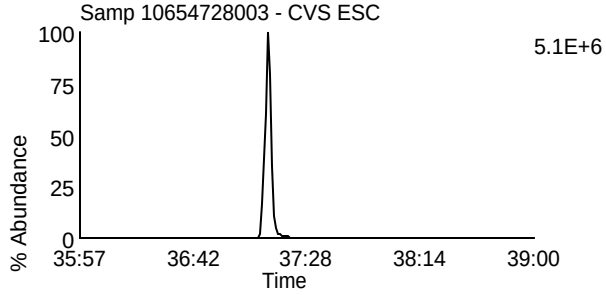
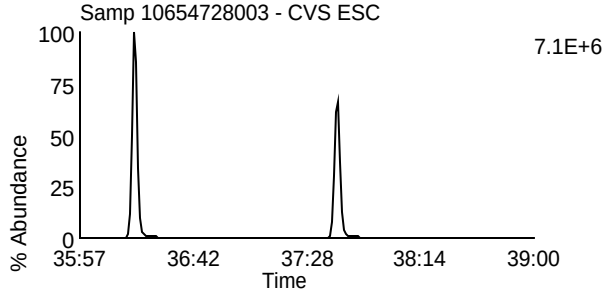
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G4 C7 - 419.822
Samp 10654728003 - CVS ESC



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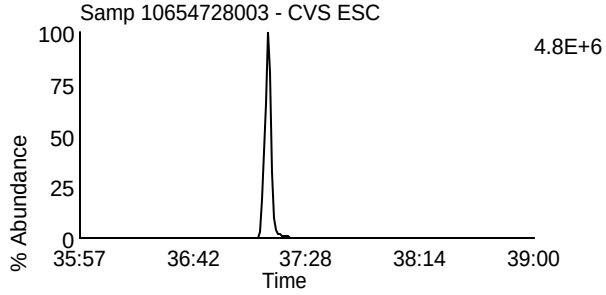
Samp 10654728003 - CVS ESC



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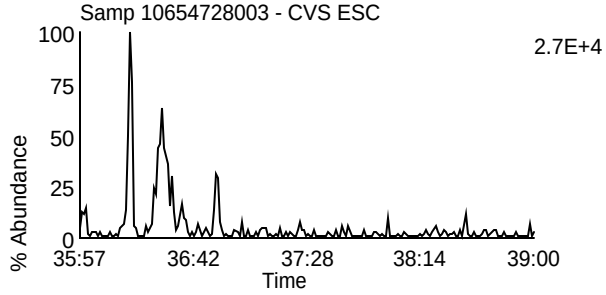
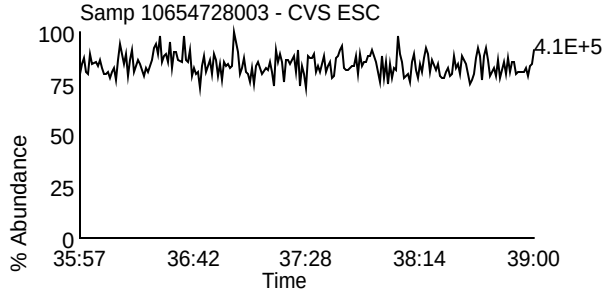
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G4 C1 - 380.976
Samp 10654728003 - CVS ESC

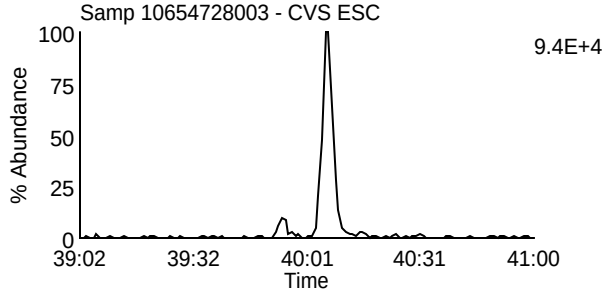


Homologue Group: Octas

Data File Name: L230610A_20
Date Acquired: 6/11/2023
Sample Description: Samp 10654728003 - CVS ESC

Lab Sample ID: 10654728003
Client Sample ID: 12599404-042423-S-NE-RELEASE-3
Instrument: 10MSHR15 (L)

Data File: L230610A_20 G5 C4 - 441.7428
Samp 10654728003 - CVS ESC



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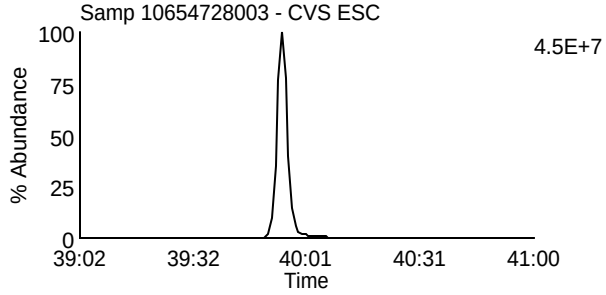
Samp 10654728003 - CVS ESC



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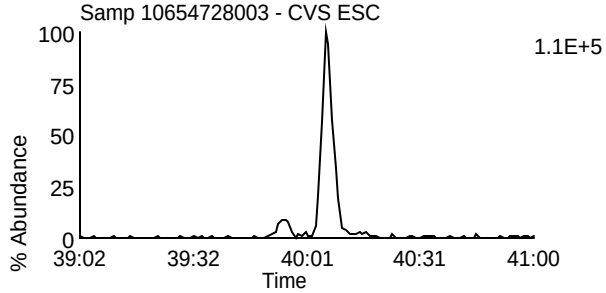
Samp 10654728003 - CVS ESC



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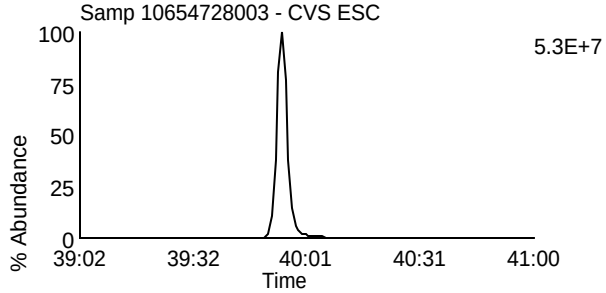
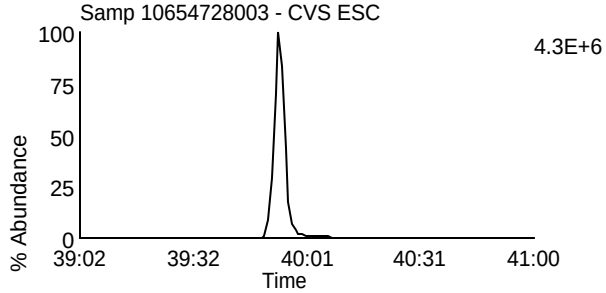
Samp 10654728003 - CVS ESC



Data File: L230610A_20 G5 C11 - 469.7779
Samp 10654728003 - CVS ESC



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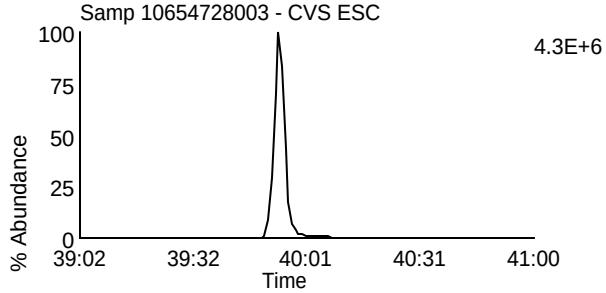

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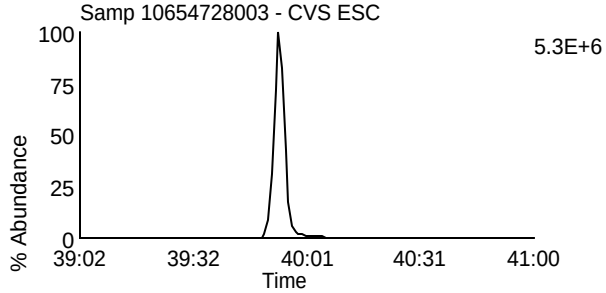
Samp 10654728003 - CVS ESC



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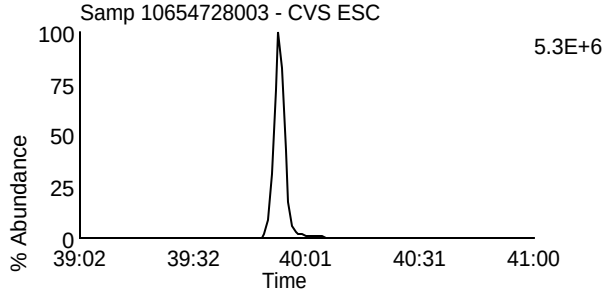

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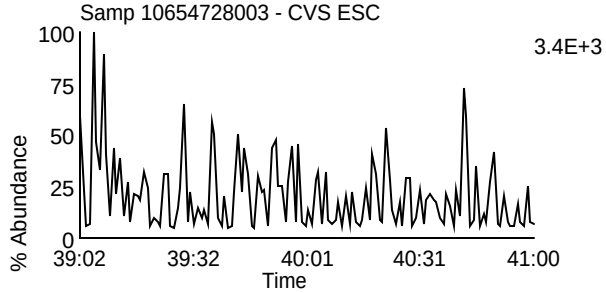
Samp 10654728003 - CVS ESC



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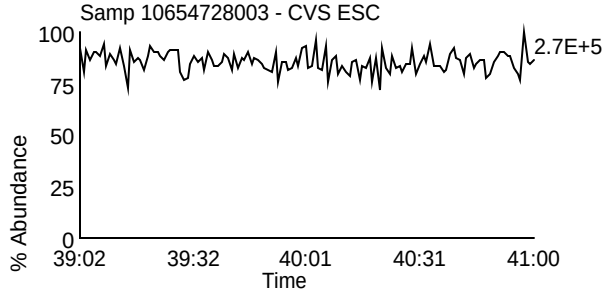

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-1	Injected By	CVS
Lab ID	10654728001	Instrument ID	10MSHR15 (L)
Filename	L230610A_18	GC Column ID	US3225411H
Analyzed	06/10/2023 23:53	ICAL ID	L230610

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		23:46	1.92e7	2.64e7	2.95e6	4.09e6	8.026e3	1.197e3	0.73	
2,3,7,8-TCDF		23:47	(M)4.11e5	5.24e5	5.88e4	8.36e4	4.310e2	8.615e2	0.78	
Other TCDF	1	19:09	8.28e3	1.20e4					0.69	
	2	20:09	2.63e4	3.21e4					0.82	
	3	20:27	3.91e4	4.57e4					0.85	
	4	20:52	2.24e4	2.70e4					0.83	
	5	21:12	2.24e4	2.78e4					0.81	
	6	21:40	1.28e4	1.51e4					0.85	
	7	21:53	2.24e4	2.57e4					0.87	
	8	22:58	1.75e4	2.03e4					0.86	
	9	23:36	2.94e4	3.66e4					0.80	
	10	24:19	5.02e4	6.50e4					0.77	
	11	26:59	3.30e4	4.78e4					0.69	
	12	19:37	6.33e4	8.46e4					0.75	
	13	22:37	2.06e5	2.72e5					0.76	
Ethers	1	20:39	1.96e4	2.89e4					0.68	P
	2	22:28	7.10e4	1.09e5					0.65	P
	3	26:00	2.60e5	2.99e5					0.87	P
	4	26:22	1.18e5	1.77e5					0.67	P

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		24:03	3.03e7	3.61e7	4.59e6	5.48e6	2.956e3	1.119e3	0.84	
2,3,7,8-TCDD-13C		25:03	1.28e7	1.58e7	1.86e6	2.33e6	5.935e3	9.363e3	0.81	
2,3,7,8-TCDD-37Cl4		25:06	1.96e6		3.00e5		4.036e3	-----		
2,3,7,8-TCDD		25:06	(M)7.85e4	1.13e5	1.38e4	1.83e4	6.699e2	8.650e2	0.69	
Other TCDD	1	24:55	1.87e4	2.79e4					0.67	
	2	20:27	2.78e4	3.30e4					0.84	
	3	24:08	6.71e4	8.60e4					0.78	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		30:10	1.89e7	1.33e7	4.96e6	3.53e6	2.585e2	1.495e4	1.42	
2,3,4,7,8-PeCDF-13C		31:13	1.82e7	1.24e7	5.49e6	3.69e6	1.000e3	3.778e3	1.47	
1,2,3,7,8-PeCDF		30:12	(M)2.61e4	(M)1.82e4	9.28e3	5.12e3	1.331e2	7.413e2	1.43	
2,3,4,7,8-PeCDF		31:12	(M)1.55e4	(M)1.35e4	1.01e4	6.09e3	9.302e1	7.413e2	1.15	I
Other PeCDF	1	28:51	2.02e4	1.22e4					1.66	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-1	Injected By	CVS
Lab ID	10654728001	Instrument ID	10MSHR15 (L)
Filename	L230610A_18	GC Column ID	US3225411H
Analyzed	06/10/2023 23:53	ICAL ID	L230610

	2	29:43	2.17e4	1.36e4	1.59	
	3	29:04	6.62e4	4.99e4	1.32	
	4	26:54	3.90e5	2.74e5	1.42	
Ethers	1	32:27	1.18e4	8.71e3	1.35	P
	2	32:09	6.92e4	4.36e4	1.59	P
	3	30:28	2.71e5	1.93e5	1.41	P

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	2.25e7	1.51e7	6.84e6	4.64e6	9.498e3	2.865e3	1.49	
1,2,3,7,8-PeCDD	31:31	(M)1.03e4	(M)2.56e4	6.46e3	6.44e3	9.645e2	1.292e3	0.40	I

Other PeCDD	1	31:56	2.14e4	3.40e4	0.63	
	2	29:40	3.26e4	5.03e4	0.65	
	3	31:06	6.94e4	1.15e5	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:54	6.10e6	1.29e7	2.42e6	4.88e6	9.231e2	1.350e3	0.47	
1,2,3,6,7,8-HxCDF-13C	33:59	6.48e6	1.40e7	2.50e6	5.37e6	9.231e2	9.385e2	0.46	
2,3,4,6,7,8-HxCDF-13C	34:28	6.03e6	1.26e7	2.37e6	5.16e6	3.042e2	1.350e3	0.48	
1,2,3,7,8,9-HxCDF-13C	35:09	4.98e6	1.01e7	1.97e6	4.01e6	2.327e3	6.476e3	0.49	
1,2,3,4,7,8-HxCDF	33:55	(M)2.49e4	(M)2.37e4	8.92e3	1.13e4	5.141e2	1.106e3	1.05	
1,2,3,6,7,8-HxCDF	34:00	(M)4.35e4	(M)3.49e4	1.63e4	1.29e4	5.674e2	7.526e2	1.25	P
2,3,4,6,7,8-HxCDF	34:29	(M)1.35e4	(M)1.79e4	5.80e3	5.80e3	5.674e2	1.120e3	0.76	I
1,2,3,7,8,9-HxCDF	35:10	(M)7.64e3	(M)9.12e3	2.41e3	2.02e3	6.190e2	1.106e3	0.84	I

Other HxCDF	1	32:49	3.24e4	2.74e4	1.18	
	2	32:59	9.68e4	8.28e4	1.17	
	3	33:29	9.89e4	8.62e4	1.15	
Ethers	1	33:24	3.59e4	2.73e4	1.32	P
	2	33:39	1.20e5	1.11e5	1.08	P
	3	34:00	4.35e4	3.49e4	1.25	P
	4	34:21	6.80e4	5.90e4	1.15	P

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:35	(M)1.44e7	1.17e7	6.07e6	4.84e6	1.132e3	3.948e2	1.23	
1,2,3,6,7,8-HxCDD-13C	34:40	(M)1.60e7	1.33e7	6.56e6	5.31e6	6.535e3	1.408e3	1.20	
1,2,3,7,8,9-HxCDD-13C	34:52	1.87e7	1.54e7	7.28e6	6.12e6	3.179e3	2.875e3	1.22	
1,2,3,4,7,8-HxCDD	34:35	(M)3.62e4	(M)2.74e4	1.55e4	1.09e4	5.495e2	6.719e2	1.32	
1,2,3,6,7,8-HxCDD	34:40	(M)6.95e4	5.62e4	2.75e4	2.29e4	1.589e3	1.887e3	1.24	
1,2,3,7,8,9-HxCDD	34:54	6.98e4	6.63e4	4.51e4	4.14e4	1.137e3	2.524e3	1.05	

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-1	Injected By	CVS
Lab ID	10654728001	Instrument ID	10MSHR15 (L)
Filename	L230610A_18	GC Column ID	US3225411H
Analyzed	06/10/2023 23:53	ICAL ID	L230610

Other HxCDD	1	33:20	5.69e5	4.99e5					1.14	
	2	33:50	7.11e4	6.07e4					1.17	
	3	34:03	3.17e5	2.63e5					1.21	
	4	34:09	1.33e5	1.22e5					1.09	
	5	34:49	1.23e5	1.17e5					1.05	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:19	1.02e7	2.23e7	4.06e6	8.68e6	4.103e3	4.719e3	0.46	
1,2,3,4,7,8,9-HpCDF-13C	37:41	7.54e6	1.70e7	2.55e6	5.85e6	4.103e3	4.719e3	0.44	
1,2,3,4,6,7,8-HpCDF	36:19	(M)7.36e5	(M)7.12e5	2.65e5	2.63e5	2.496e3	1.628e3	1.03	
1,2,3,4,7,8,9-HpCDF	37:41	(M)4.01e4	(M)2.08e4	1.18e4	8.56e3	1.172e3	1.628e3	1.93	I

Other HpCDF	1	36:43	7.67e5	7.45e5					1.03	
Ethers	1	36:53	1.38e5	1.49e5					0.93	P

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:13	1.73e7	1.63e7	6.39e6	6.03e6	2.399e4	3.216e3	1.07	
1,2,3,4,6,7,8-HpCDD	37:14	5.17e6	5.13e6	1.93e6	1.86e6	6.075e3	4.782e3	1.01	

Other HpCDD	1	36:34	1.16e7	1.15e7					1.01	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:08	3.83e5	4.56e5	1.07e5	1.31e5	7.521e2	1.109e3	0.84	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:55	1.89e7	2.29e7	5.80e6	7.17e6	3.763e3	3.395e3	0.83	
OCDD	39:56	2.05e8	2.40e8	6.32e7	7.29e7	9.618e2	1.022e3	0.86	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-2	Injected By	CVS
Lab ID	10654728002	Instrument ID	10MSHR15 (L)
Filename	L230610A_19	GC Column ID	US3225411H
Analyzed	06/11/2023 00:38	ICAL ID	L230610

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		23:46	1.47e7	2.04e7	2.33e6	3.18e6	3.046e3	1.205e3	0.72	
2,3,7,8-TCDF		23:49	2.84e5	(M)3.84e5	4.48e4	6.14e4	4.118e2	7.218e2	0.74	
Other TCDF	1	19:36	4.53e4	6.85e4					0.66	
	2	20:28	2.58e4	3.31e4					0.78	
	3	22:05	2.41e4	2.70e4					0.89	
	4	22:38	1.47e5	1.96e5					0.75	
	5	23:37	2.42e4	3.61e4					0.67	
	6	24:21	3.29e4	4.14e4					0.80	
	7	27:01	1.93e4	2.48e4					0.78	
Ethers	1	20:40	1.44e4	2.04e4					0.71	P
	2	27:32	2.03e4	2.55e4					0.79	P
	3	26:01	1.89e5	2.44e5					0.78	P
	4	26:22	7.24e4	1.00e5					0.72	P

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		24:04	2.38e7	2.90e7	3.80e6	4.63e6	3.152e3	1.463e3	0.82	
2,3,7,8-TCDD-13C		25:03	1.88e7	2.25e7	2.75e6	3.31e6	3.537e3	5.128e3	0.84	
2,3,7,8-TCDD-37Cl4		25:06	3.01e6		4.46e5		1.101e3	-----		
2,3,7,8-TCDD		25:06	(M)1.19e5	2.02e5	1.96e4	3.39e4	7.555e2	1.119e3	0.59	I
Other TCDD	1	25:35	1.93e4	2.45e4					0.79	
	2	20:25	3.03e4	4.12e4					0.74	
	3	22:10	1.48e4	1.88e4					0.79	
	4	24:11	4.50e4	6.65e4					0.68	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		30:11	1.44e7	9.91e6	3.92e6	2.74e6	6.566e2	5.939e2	1.45	
2,3,4,7,8-PeCDF-13C		31:13	1.40e7	9.61e6	4.37e6	3.01e6	1.532e3	1.117e3	1.45	
1,2,3,7,8-PeCDF		30:12	(M)1.72e4	(M)1.33e4	6.08e3	3.41e3	6.070e2	8.376e2	1.29	I
2,3,4,7,8-PeCDF		31:13	(M)2.90e4	(M)1.53e4	1.02e4	5.77e3	4.200e2	8.376e2	1.90	I
Other PeCDF	1	28:51	1.36e4	9.02e3					1.51	
	2	29:02	3.61e4	2.53e4					1.43	
	3	26:54	3.09e5	1.78e5					1.74	
Ethers	1	32:01	2.04e4	1.28e4					1.59	P
	2	32:09	4.72e4	3.34e4					1.41	P

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-2	Injected By	CVS
Lab ID	10654728002	Instrument ID	10MSHR15 (L)
Filename	L230610A_19	GC Column ID	US3225411H
Analyzed	06/11/2023 00:38	ICAL ID	L230610

	3	30:44	2.45e4	1.67e4	1.47	P
	4	29:26	9.31e4	6.99e4	1.33	P
	5	30:28	1.61e5	1.06e5	1.53	P

Penta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C		31:30	1.81e7	1.20e7	5.76e6	3.83e6	8.567e3	1.310e3	1.51	
1,2,3,7,8-PeCDD		31:30	(M)2.96e3	(M)7.58e3	4.49e3	4.95e3	6.400e2	1.302e3	0.39	I
Other PeCDD	1	31:56	1.20e4	2.00e4					0.60	
	2	29:04	2.72e4	4.62e4					0.59	
	3	30:29	7.65e3	1.41e4					0.54	
	4	31:33	4.51e3	8.53e3					0.53	

Hexa-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C		33:54	4.63e6	9.67e6	1.82e6	3.64e6	8.593e2	1.476e3	0.48	
1,2,3,6,7,8-HxCDF-13C		33:59	4.76e6	1.01e7	1.90e6	4.00e6	3.886e2	6.007e3	0.47	
2,3,4,6,7,8-HxCDF-13C		34:28	4.63e6	9.58e6	1.98e6	4.08e6	5.253e2	6.839e2	0.48	
1,2,3,7,8,9-HxCDF-13C		35:09	3.75e6	7.77e6	1.49e6	3.18e6	4.085e2	2.481e3	0.48	
1,2,3,4,7,8-HxCDF		33:55	(M)3.20e4	(M)2.97e4	1.10e4	9.97e3	3.814e2	4.067e2	1.08	
1,2,3,6,7,8-HxCDF		34:00	(M)2.66e4	(M)1.96e4	1.39e4	1.01e4	3.814e2	1.893e2	1.36	P
2,3,4,6,7,8-HxCDF		34:28	(M)9.92e3	(M)1.48e4	3.67e3	6.32e3	9.278e2	2.027e2	0.67	I
1,2,3,7,8,9-HxCDF		35:10	(M)1.53e4	(M)1.16e4	4.93e3	2.51e3	4.474e2	3.935e2	1.32	
Other HxCDF	1	32:49	2.79e4	2.56e4					1.09	
	2	32:59	8.18e4	5.88e4					1.39	
	3	33:30	1.09e5	9.29e4					1.17	
Ethers	1	35:43	1.38e4	1.18e4					1.16	P
	2	33:24	1.72e4	1.37e4					1.25	P
	3	34:21	3.53e4	3.07e4					1.15	P
	4	34:00	2.66e4	1.96e4					1.36	P
	5	33:39	1.08e5	8.70e4					1.24	P

Hexa-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C		34:35	1.17e7	9.47e6	5.19e6	4.14e6	3.667e3	1.740e3	1.23	
1,2,3,6,7,8-HxCDD-13C		34:40	1.24e7	1.03e7	5.27e6	4.29e6	3.894e3	1.740e3	1.21	
1,2,3,7,8,9-HxCDD-13C		34:52	1.57e7	1.32e7	6.31e6	5.47e6	1.714e3	1.191e3	1.18	
1,2,3,4,7,8-HxCDD		34:36	(M)3.39e4	(M)2.57e4	2.14e4	1.00e4	2.791e2	5.878e2	1.32	
1,2,3,6,7,8-HxCDD		34:41	(M)5.53e4	(M)4.72e4	2.12e4	1.79e4	7.789e2	7.697e2	1.17	
1,2,3,7,8,9-HxCDD		34:52	6.27e4	(M)4.66e4	3.00e4	2.50e4	7.789e2	5.459e2	1.34	
Other HxCDD	1	33:20	5.45e5	4.70e5					1.16	

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-2	Injected By	CVS
Lab ID	10654728002	Instrument ID	10MSHR15 (L)
Filename	L230610A_19	GC Column ID	US3225411H
Analyzed	06/11/2023 00:38	ICAL ID	L230610

	2	33:50	8.08e4	7.40e4	1.09	
	3	34:03	2.98e5	2.67e5	1.12	
	4	34:09	1.29e5	1.22e5	1.06	
	5	34:48	8.07e4	7.34e4	1.10	

Hepta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C		36:19	8.12e6	1.84e7	3.12e6	7.26e6	2.895e3	3.506e3	0.44	
1,2,3,4,7,8,9-HpCDF-13C		37:41	5.89e6	1.34e7	2.04e6	4.62e6	1.866e3	2.122e3	0.44	
1,2,3,4,6,7,8-HpCDF		36:19	(M)4.55e5	(M)4.61e5	1.70e5	1.79e5	1.430e3	1.045e3	0.99	
1,2,3,4,7,8,9-HpCDF		37:42	(M)2.51e4	(M)1.95e4	9.99e3	5.93e3	1.183e3	9.799e2	1.29	I
Other HpCDF	1	36:43	6.22e5	6.25e5					1.00	
Ethers	1	36:52	7.99e4	8.29e4					0.96	P

Hepta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C		37:13	1.38e7	1.32e7	5.18e6	4.89e6	1.401e4	1.644e4	1.05	
1,2,3,4,6,7,8-HpCDD		37:14	5.22e6	5.23e6	1.82e6	1.78e6	6.024e3	4.215e3	1.00	
Other HpCDD	1	36:34	1.14e7	1.09e7					1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:07	(M)3.16e5	3.59e5	9.67e4	1.14e5	7.739e1	2.853e2	0.88	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:55	(M)1.37e7	1.75e7	4.38e6	5.40e6	2.001e3	3.970e2	0.78	
OCDD	39:56	1.99e8	2.32e8	6.08e7	6.98e7	8.004e2	1.644e3	0.86	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-3	Injected By	CVS
Lab ID	10654728003	Instrument ID	10MSHR15 (L)
Filename	L230610A_20	GC Column ID	US3225411H
Analyzed	06/11/2023 01:24	ICAL ID	L230610

Tetra-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C		23:45	1.52e7	2.10e7	2.32e6	3.14e6	1.954e3	2.472e3	0.73	
2,3,7,8-TCDF		23:46	3.16e5	4.13e5	5.14e4	6.62e4	9.258e2	9.419e2	0.77	
Other TCDF	1	19:37	3.39e4	3.97e4					0.85	
	2	20:07	1.80e4	2.59e4					0.70	
	3	20:26	3.15e4	3.70e4					0.85	
	4	22:05	1.76e4	2.30e4					0.77	
	5	24:16	3.59e4	5.11e4					0.70	
	6	22:37	1.46e5	2.14e5					0.68	
Ethers	1	26:00	1.61e5	2.01e5					0.80	P

Tetra-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C		24:02	2.76e7	3.35e7	4.24e6	5.12e6	3.219e3	1.137e3	0.82	
2,3,7,8-TCDD-13C		25:02	1.91e7	2.35e7	2.83e6	3.46e6	2.225e3	4.106e3	0.81	
2,3,7,8-TCDD-37Cl4		25:05	3.13e6		4.69e5		2.063e3	-----		
2,3,7,8-TCDD		25:04	1.18e5	(M)1.58e5	2.09e4	2.28e4	6.470e2	7.832e2	0.75	
Other TCDD	1	22:10	2.39e4	3.15e4					0.76	
	2	24:07	7.55e4	1.02e5					0.74	

Penta-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C		30:10	1.43e7	1.00e7	3.95e6	2.75e6	5.625e3	6.416e2	1.42	
2,3,4,7,8-PeCDF-13C		31:12	1.36e7	9.51e6	4.62e6	3.08e6	1.725e3	2.276e3	1.43	
1,2,3,7,8-PeCDF		30:11	(M)1.36e4	(M)1.13e4	3.92e3	3.05e3	3.839e2	5.442e2	1.20	I
2,3,4,7,8-PeCDF		31:13	(M)2.25e4	(M)1.87e4	6.18e3	6.21e3	3.682e2	4.017e2	1.21	I
Other PeCDF	1	29:43	9.84e3	6.24e3					1.58	
	2	29:59	8.67e3	5.71e3					1.52	
	3	26:53	2.91e5	1.69e5					1.73	
Ethers	1	32:09	3.09e4	2.33e4					1.33	P
	2	30:27	1.05e5	7.37e4					1.43	P

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	1.77e7	1.18e7	5.55e6	3.70e6	8.661e3	5.086e3	1.51	

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Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-3	Injected By	CVS
Lab ID	10654728003	Instrument ID	10MSHR15 (L)
Filename	L230610A_20	GC Column ID	US3225411H
Analyzed	06/11/2023 01:24	ICAL ID	L230610

1,2,3,7,8-PeCDD		31:30	(M)6.42e3	(M)1.17e4	6.15e3	4.24e3	8.539e2	1.227e3	0.55	
Other PeCDD	1	29:02	2.55e4	4.37e4					0.58	
	2	29:39	2.36e4	3.54e4					0.67	
	3	31:06	7.65e4	1.32e5					0.58	

Hexa-Furans:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C		33:53	4.38e6	8.99e6	1.78e6	3.67e6	3.223e2	8.499e2	0.49	
1,2,3,6,7,8-HxCDF-13C		33:59	4.60e6	9.59e6	1.69e6	3.49e6	5.456e2	8.427e2	0.48	
2,3,4,6,7,8-HxCDF-13C		34:27	4.39e6	9.06e6	1.66e6	3.54e6	5.456e2	3.570e2	0.48	
1,2,3,7,8,9-HxCDF-13C		35:08	3.41e6	7.42e6	1.28e6	2.90e6	1.614e3	3.483e3	0.46	
1,2,3,4,7,8-HxCDF		33:54	(M)2.06e4	(M)2.19e4	1.03e4	7.98e3	4.547e2	4.281e2	0.94	I
1,2,3,6,7,8-HxCDF		33:59	(M)2.30e4	(M)1.63e4	8.83e3	5.86e3	3.906e2	4.043e2	1.41	P
2,3,4,6,7,8-HxCDF		34:29	(M)1.96e4	(M)1.07e4	1.07e4	4.87e3	4.133e2	9.316e1	1.82	I
1,2,3,7,8,9-HxCDF		35:10	(M)8.26e3	(M)1.03e4	4.04e3	3.82e3	4.547e2	4.748e2	0.80	I
Other HxCDF	1	33:29	8.12e4	7.34e4					1.11	
	2	32:58	6.35e4	5.84e4					1.09	
Ethers	1	33:23	1.15e4	8.88e3					1.29	P
	2	33:38	9.64e4	8.14e4					1.18	P
	3	33:59	2.30e4	1.63e4					1.41	P
	4	34:21	3.01e4	2.18e4					1.38	P

Hexa-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C		34:34	1.10e7	9.15e6	4.77e6	4.00e6	4.682e3	2.813e3	1.21	
1,2,3,6,7,8-HxCDD-13C		34:39	1.20e7	1.01e7	5.20e6	4.33e6	4.135e3	3.834e2	1.19	
1,2,3,7,8,9-HxCDD-13C		34:52	1.74e7	1.47e7	6.94e6	5.64e6	2.992e3	2.713e3	1.19	
1,2,3,4,7,8-HxCDD		34:35	(M)2.59e4	(M)2.26e4	1.93e4	2.18e4	1.065e3	3.074e2	1.15	
1,2,3,6,7,8-HxCDD		34:40	(M)4.57e4	(M)5.15e4	1.93e4	2.19e4	1.065e3	3.928e2	0.89	I
1,2,3,7,8,9-HxCDD		34:53	(M)4.49e4	(M)4.30e4	5.05e4	4.66e4	1.065e3	3.928e2	1.04	I
Other HxCDD	1	33:20	4.75e5	4.33e5					1.10	
	2	33:50	8.52e4	6.82e4					1.25	
	3	34:03	2.66e5	2.35e5					1.13	
	4	34:08	1.23e5	1.07e5					1.14	
	5	34:48	1.20e5	1.06e5					1.13	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:18	8.23e6	1.82e7	3.04e6	7.08e6	1.525e3	2.541e3	0.45	
1,2,3,4,7,8,9-HpCDF-13C	37:41	6.08e6	1.38e7	2.09e6	4.67e6	1.525e3	2.541e3	0.44	
1,2,3,4,6,7,8-HpCDF	36:18	(M)4.66e5	(M)4.22e5	1.77e5	1.59e5	8.387e2	1.164e3	1.10	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID	12599404-042423-S-NE-RELEASE-3	Injected By	CVS
Lab ID	10654728003	Instrument ID	10MSHR15 (L)
Filename	L230610A_20	GC Column ID	US3225411H
Analyzed	06/11/2023 01:24	ICAL ID	L230610

1,2,3,4,7,8,9-HpCDF		37:42	(M)2.61e4	(M)2.63e4	8.08e3	6.86e3	8.387e2	1.337e3	0.99	
Other HpCDF	1	36:43	5.95e5	5.66e5					1.05	
Ethers	1	36:52	6.32e4	7.09e4					0.89	P

Hepta-Dioxins:		RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C		37:12	1.40e7	1.34e7	5.12e6	4.83e6	2.046e4	1.587e4	1.04	
1,2,3,4,6,7,8-HpCDD		37:13	4.33e6	4.36e6	1.65e6	1.59e6	6.704e2	2.569e3	0.99	
Other HpCDD	1	36:33	1.28e7	1.26e7					1.01	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:06	3.20e5	(M)3.59e5	9.37e4	1.05e5	2.461e2	4.016e2	0.89	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:54	1.39e7	1.67e7	4.32e6	5.34e6	4.974e2	9.937e2	0.83	
OCDD	39:55	1.45e8	1.73e8	4.52e7	5.28e7	6.246e2	8.601e2	0.84	

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
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Appendix E

Calibration Raw Data

REPORT OF LABORATORY ANALYSIS

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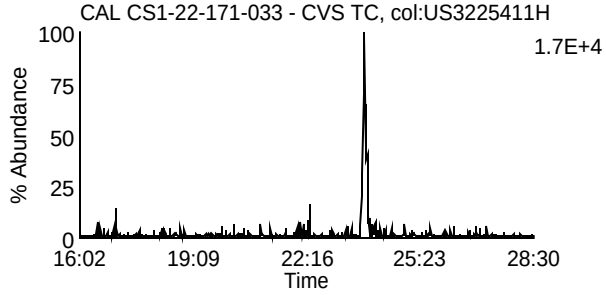
Homologue Group: Tetras

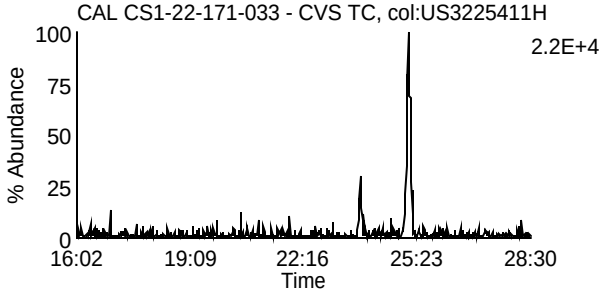
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

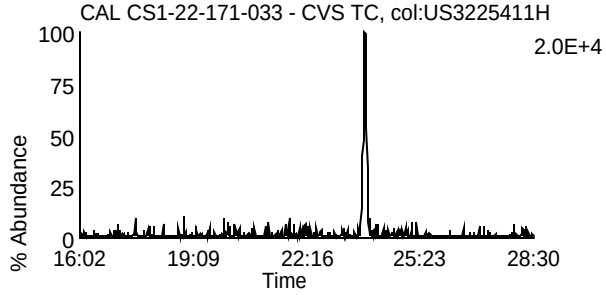
Data File: L230610A_02 G1 C1 - 303.9016
CAL CS1-22-171-033 - CVS TC, col:US3225411H



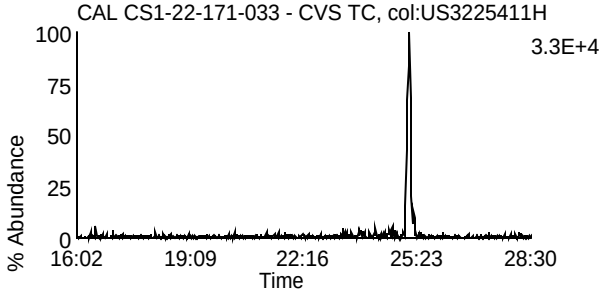
Data File: L230610A_02 G1 C7 - 319.8965
CAL CS1-22-171-033 - CVS TC, col:US3225411H



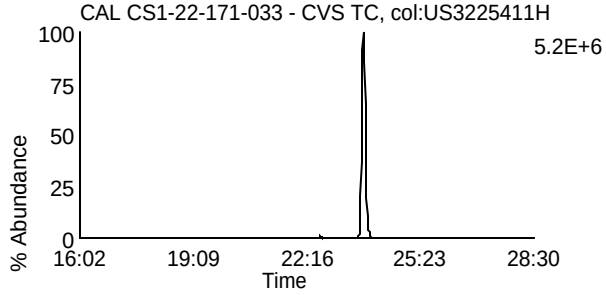
Data File: L230610A_02 G1 C2 - 305.8987
CAL CS1-22-171-033 - CVS TC, col:US3225411H



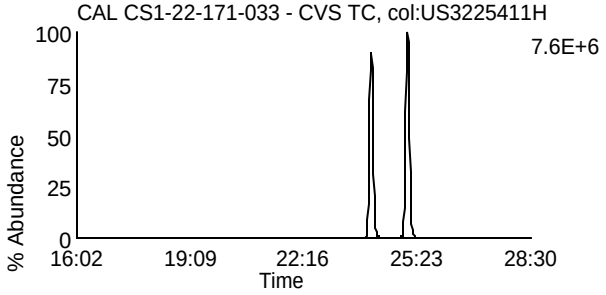
Data File: L230610A_02 G1 C8 - 321.8936
CAL CS1-22-171-033 - CVS TC, col:US3225411H



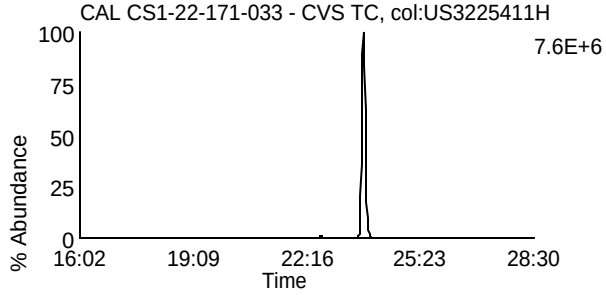
Data File: L230610A_02 G1 C3 - 315.9418
CAL CS1-22-171-033 - CVS TC, col:US3225411H



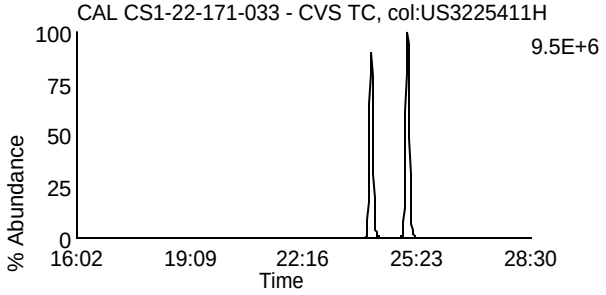
Data File: L230610A_02 G1 C10 - 331.9367
CAL CS1-22-171-033 - CVS TC, col:US3225411H



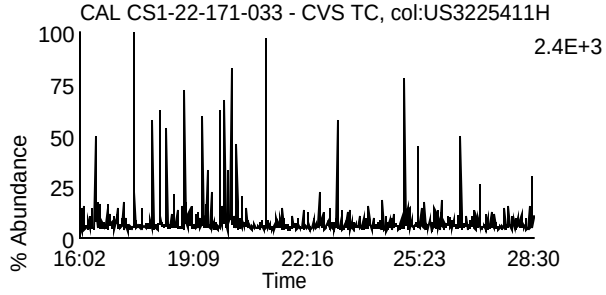
Data File: L230610A_02 G1 C4 - 317.9389
CAL CS1-22-171-033 - CVS TC, col:US3225411H



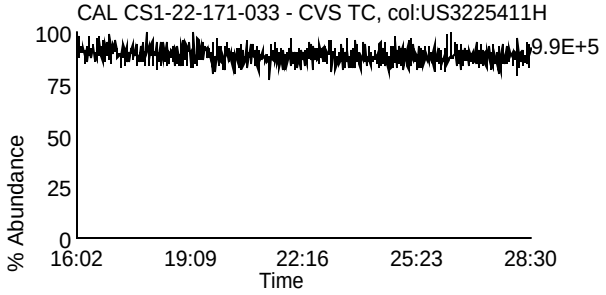
Data File: L230610A_02 G1 C11 - 333.9338
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G1 C14 - 375.8364
CAL CS1-22-171-033 - CVS TC, col:US3225411H



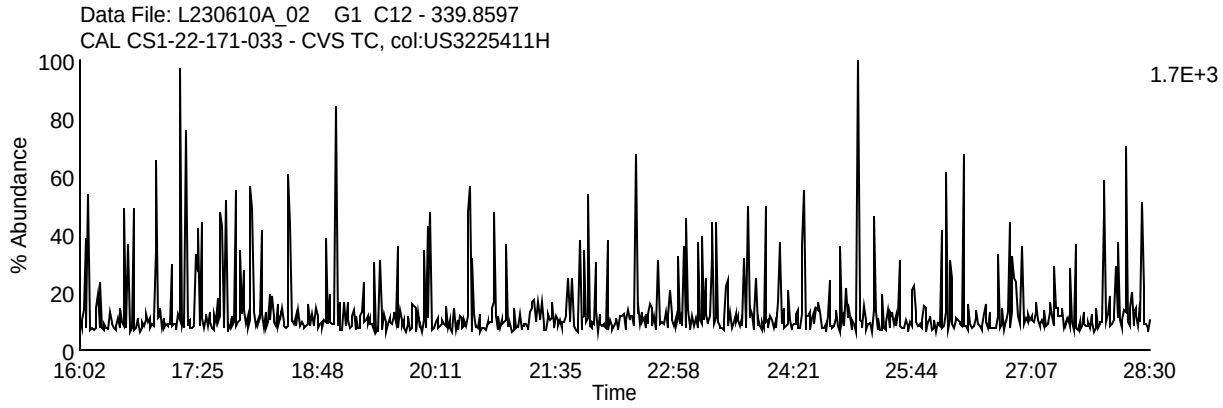
Data File: L230610A_02 G1 C5 - 318.9792
CAL CS1-22-171-033 - CVS TC, col:US3225411H

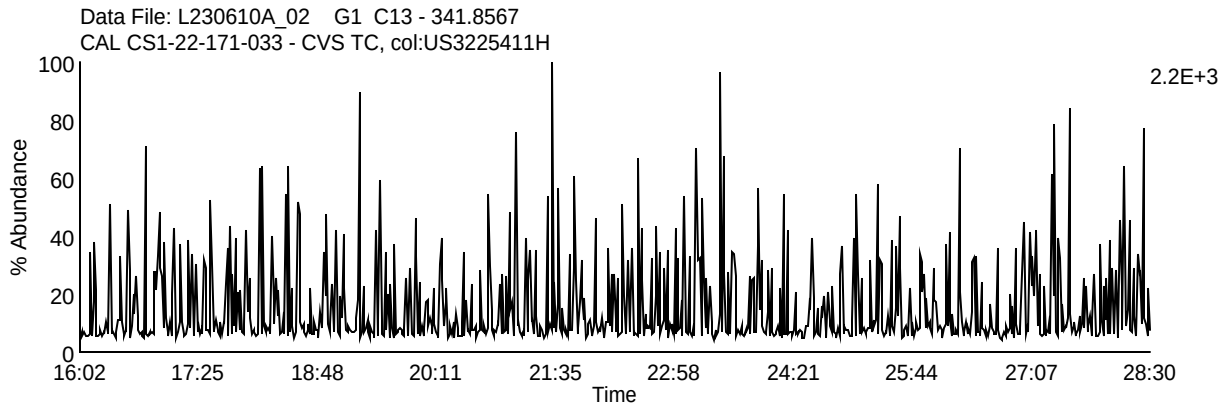


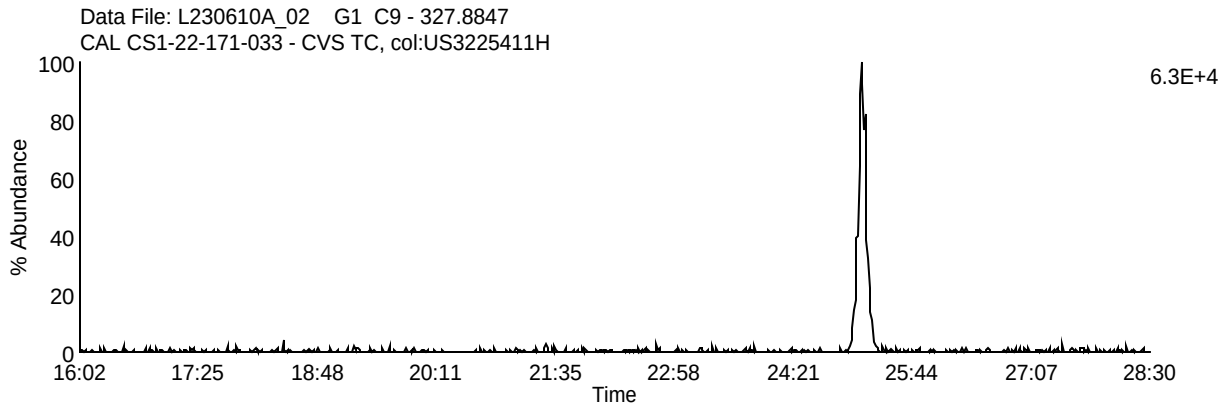
Homologue Group: Penta & Cleanup

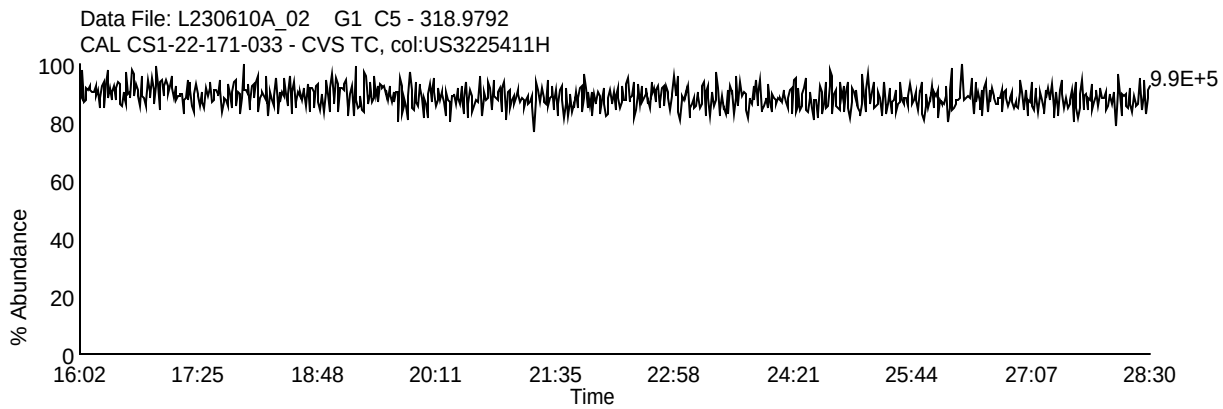
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)







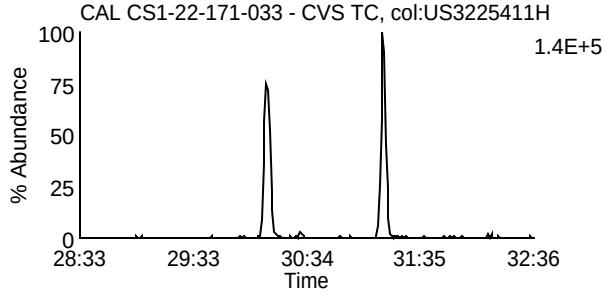


Homologue Group: Pentas

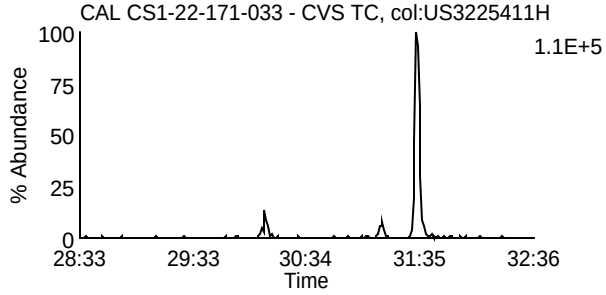
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

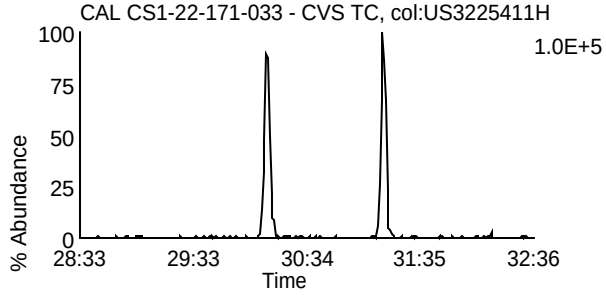
Data File: L230610A_02 G2 C1 - 339.8597
CAL CS1-22-171-033 - CVS TC, col:US3225411H



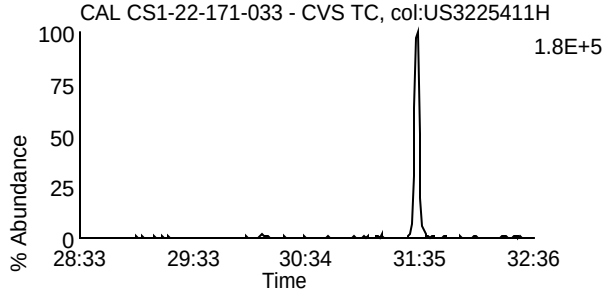
Data File: L230610A_02 G2 C4 - 353.8576
CAL CS1-22-171-033 - CVS TC, col:US3225411H



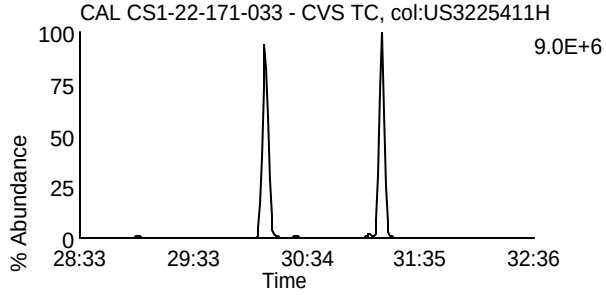
Data File: L230610A_02 G2 C2 - 341.8567
CAL CS1-22-171-033 - CVS TC, col:US3225411H



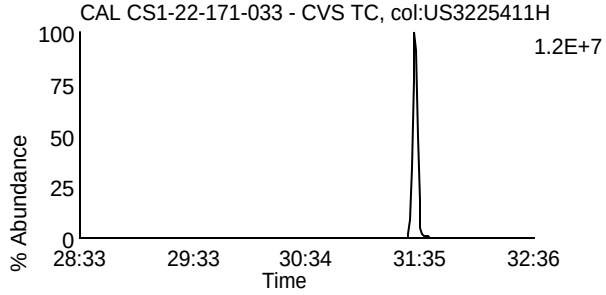
Data File: L230610A_02 G2 C8 - 355.8546
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G2 C3 - 351.8999
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G2 C10 - 367.8948
CAL CS1-22-171-033 - CVS TC, col:US3225411H



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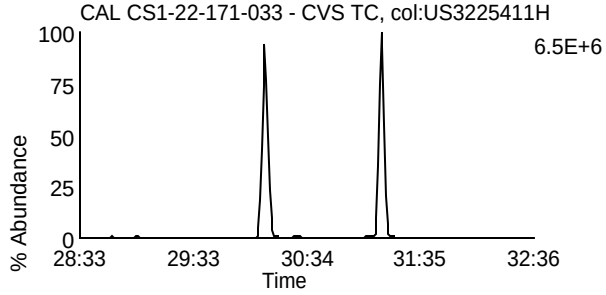
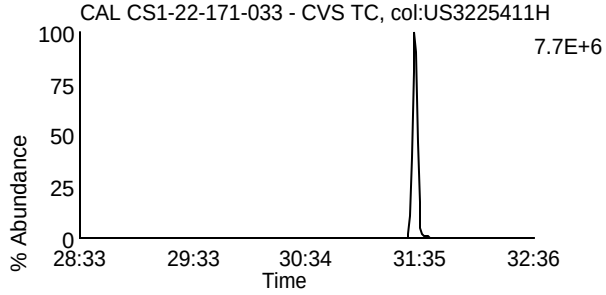
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G2 C11 - 369.8918
CAL CS1-22-171-033 - CVS TC, col:US3225411H



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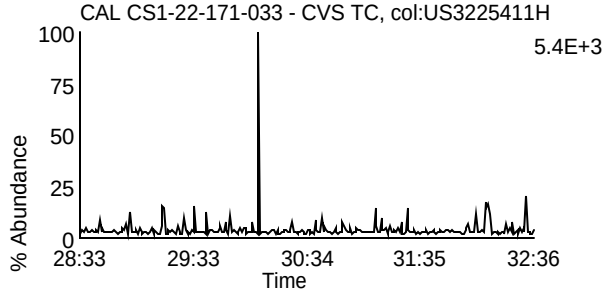
CAL CS1-22-171-033 - CVS TC, col:US3225411H



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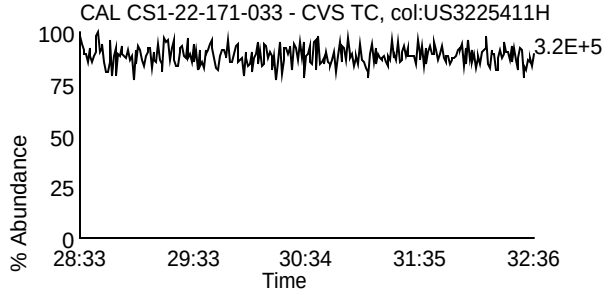
CAL CS1-22-171-033 - CVS TC, col:US3225411H

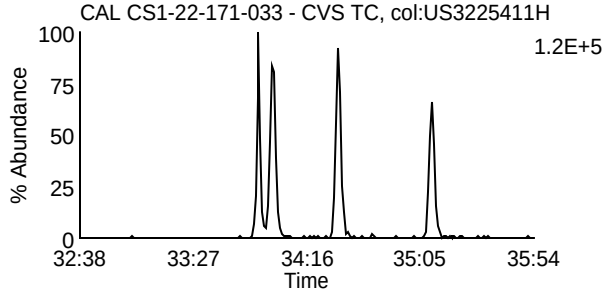


Homologue Group: Hexas

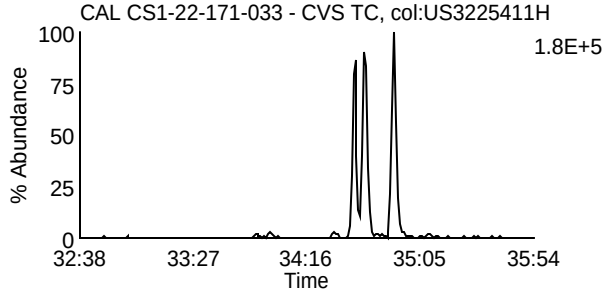
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

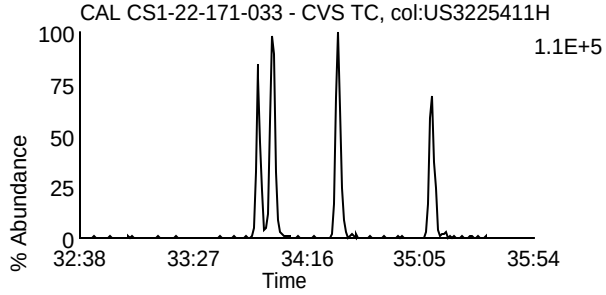
Data File: L230610A_02 G3 C1 - 373.8207
CAL CS1-22-171-033 - CVS TC, col:US3225411H



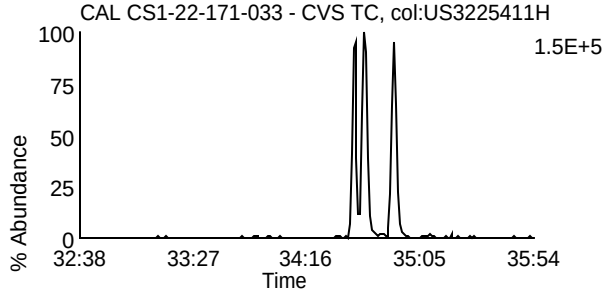
Data File: L230610A_02 G3 C7 - 389.8156
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G3 C2 - 375.8178
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G3 C8 - 391.8127
CAL CS1-22-171-033 - CVS TC, col:US3225411H



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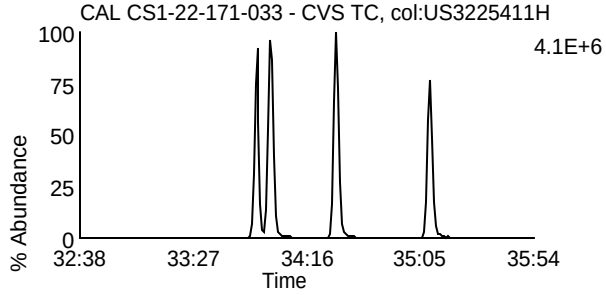
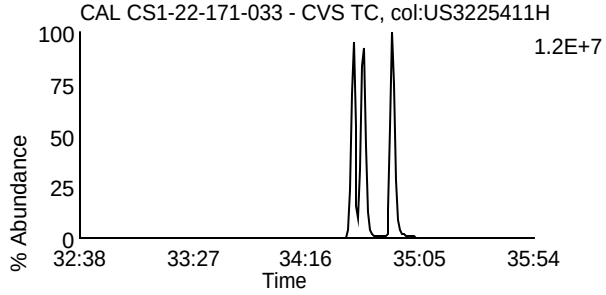
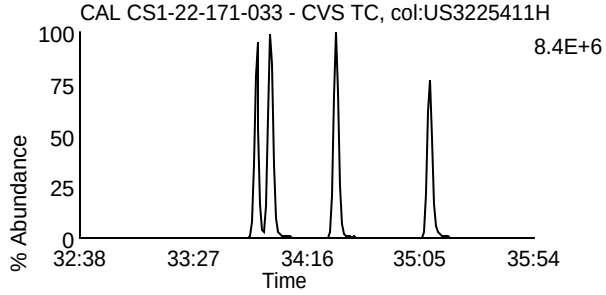
CAL CS1-22-171-033 - CVS TC, col:US3225411H



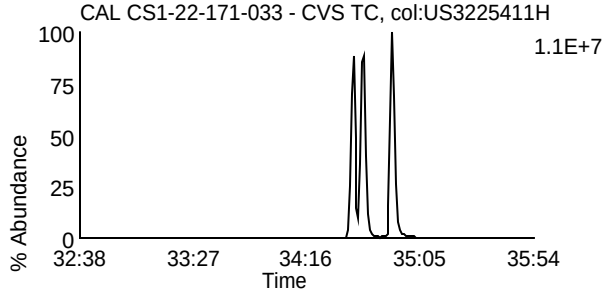
Data File: L230610A_02 G3 C9 - 401.8559
CAL CS1-22-171-033 - CVS TC, col:US3225411H



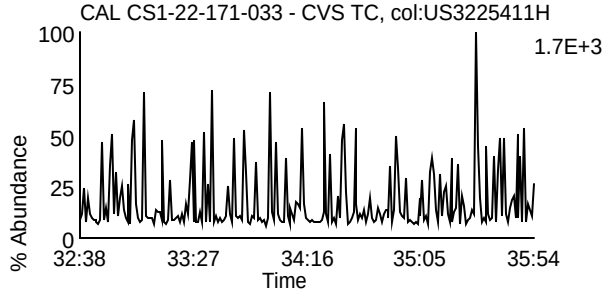
Data File: L230610A_02 G3 C6 - 385.861
CAL CS1-22-171-033 - CVS TC, col:US3225411H



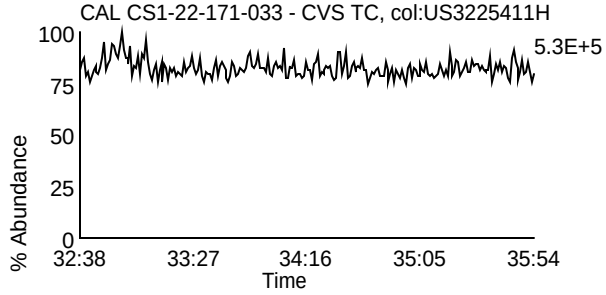
Data File: L230610A_02 G3 C10 - 403.8529
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G3 C11 - 445.7555
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G3 C3 - 380.976
CAL CS1-22-171-033 - CVS TC, col:US3225411H

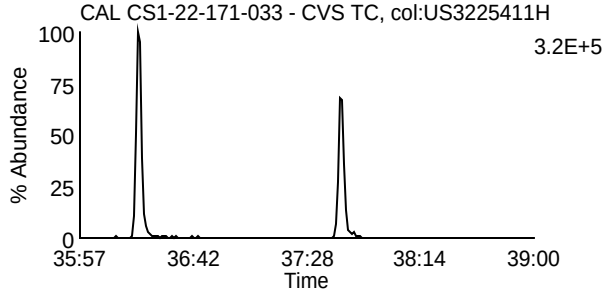


Homologue Group: Heptas

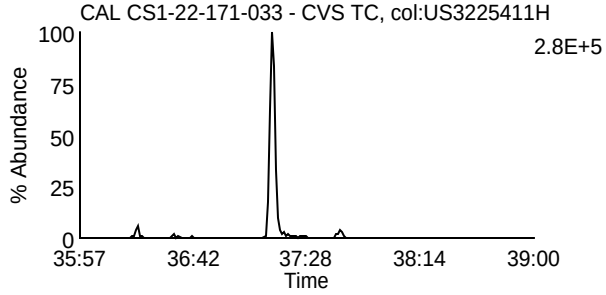
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

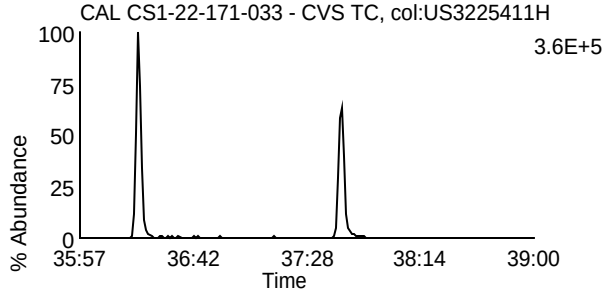
Data File: L230610A_02 G4 C3 - 407.7818
CAL CS1-22-171-033 - CVS TC, col:US3225411H



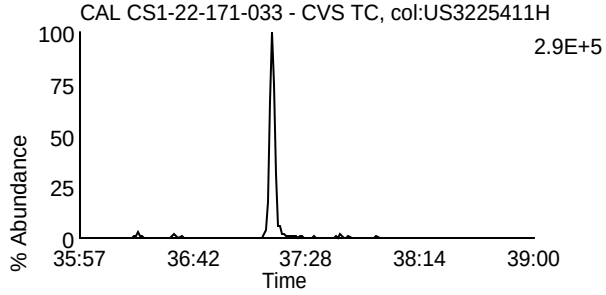
Data File: L230610A_02 G4 C8 - 423.7767
CAL CS1-22-171-033 - CVS TC, col:US3225411H



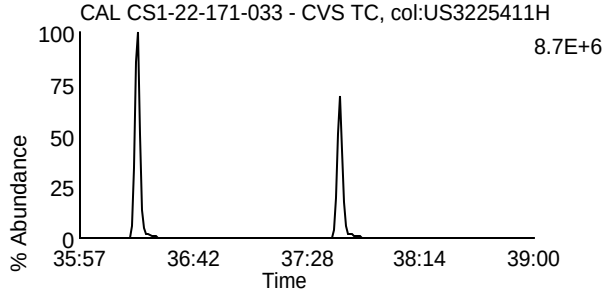
Data File: L230610A_02 G4 C4 - 409.7788
CAL CS1-22-171-033 - CVS TC, col:US3225411H



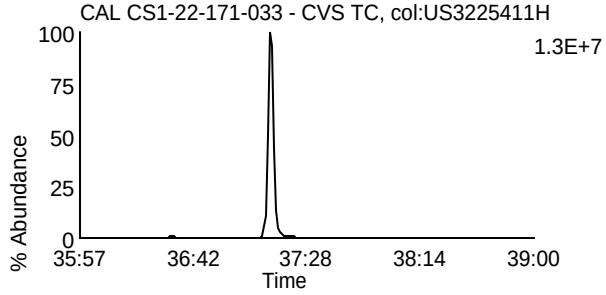
Data File: L230610A_02 G4 C9 - 425.7737
CAL CS1-22-171-033 - CVS TC, col:US3225411H



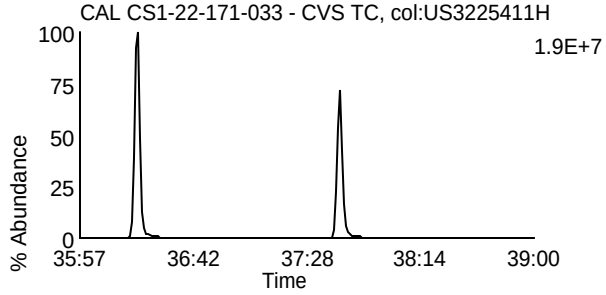
Data File: L230610A_02 G4 C6 - 417.825
CAL CS1-22-171-033 - CVS TC, col:US3225411H



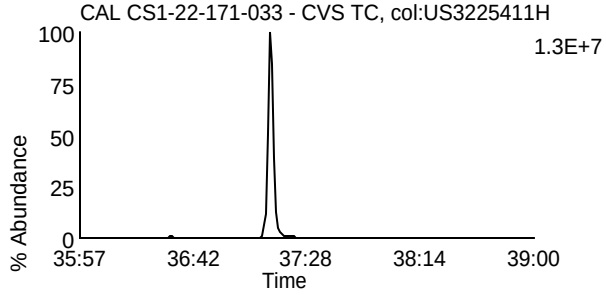
Data File: L230610A_02 G4 C11 - 435.8169
CAL CS1-22-171-033 - CVS TC, col:US3225411H



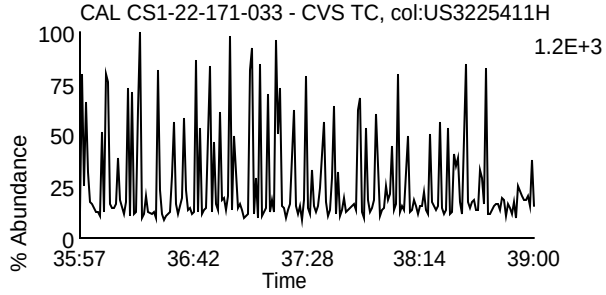
Data File: L230610A_02 G4 C7 - 419.822
CAL CS1-22-171-033 - CVS TC, col:US3225411H



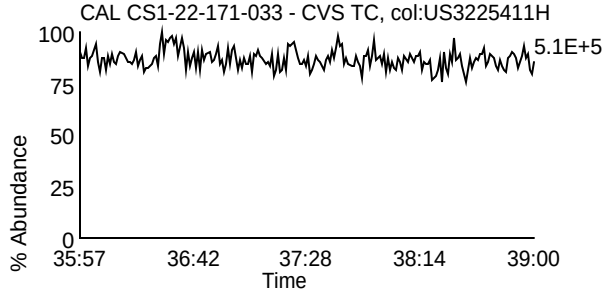
Data File: L230610A_02 G4 C12 - 437.814
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G4 C13 - 479.7165
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G4 C1 - 380.976
CAL CS1-22-171-033 - CVS TC, col:US3225411H

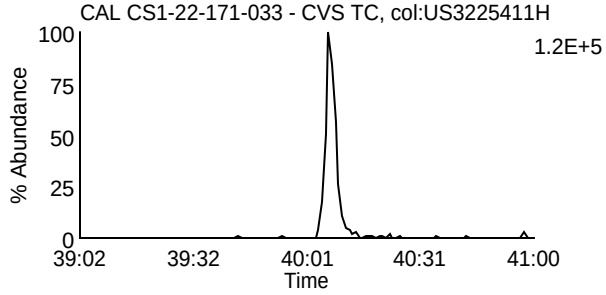


Homologue Group: Octas

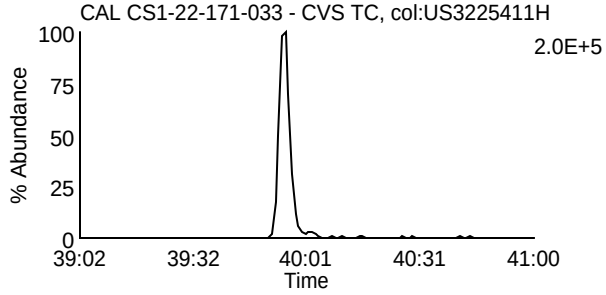
Data File Name: L230610A_02
Date Acquired: 6/10/2023
Sample Description: CAL CS1-22-171-033 - CVS TC, col:US3225411H

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR15 (L)

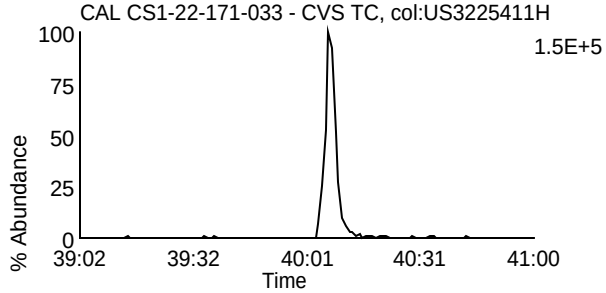
Data File: L230610A_02 G5 C4 - 441.7428
CAL CS1-22-171-033 - CVS TC, col:US3225411H



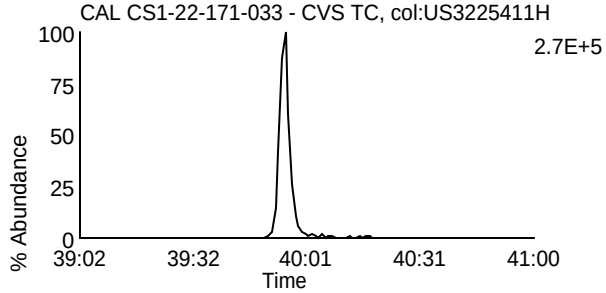
Data File: L230610A_02 G5 C8 - 457.7377
CAL CS1-22-171-033 - CVS TC, col:US3225411H



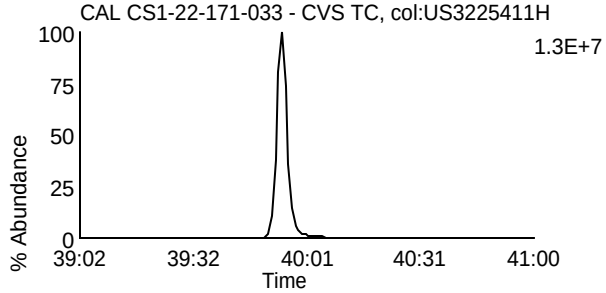
Data File: L230610A_02 G5 C5 - 443.7398
CAL CS1-22-171-033 - CVS TC, col:US3225411H



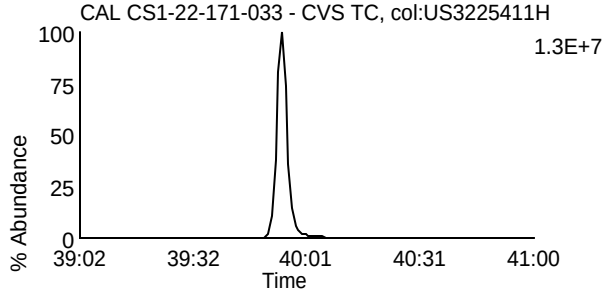
Data File: L230610A_02 G5 C9 - 459.7347
CAL CS1-22-171-033 - CVS TC, col:US3225411H



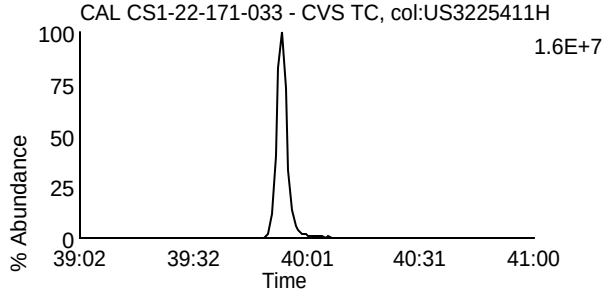
Data File: L230610A_02 G5 C11 - 469.7779
CAL CS1-22-171-033 - CVS TC, col:US3225411H



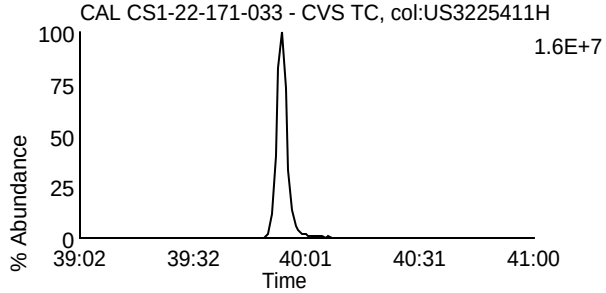
Data File: L230610A_02 G5 C11 - 469.7779
CAL CS1-22-171-033 - CVS TC, col:US3225411H



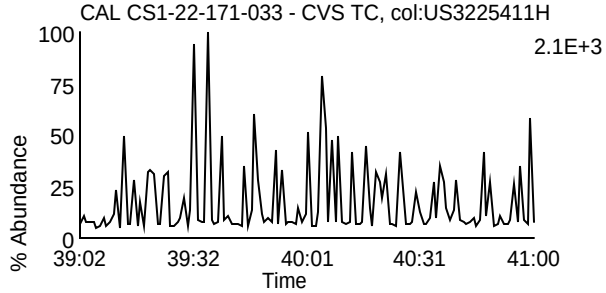
Data File: L230610A_02 G5 C12 - 471.7749
CAL CS1-22-171-033 - CVS TC, col:US3225411H



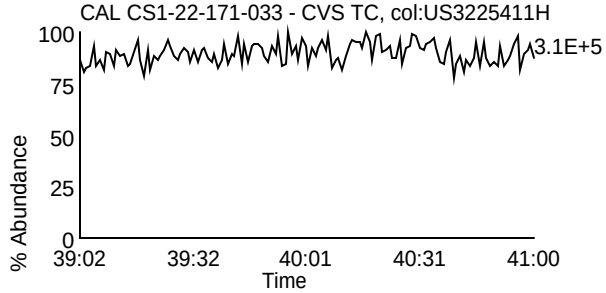
Data File: L230610A_02 G5 C12 - 471.7749
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G5 C13 - 513.6775
CAL CS1-22-171-033 - CVS TC, col:US3225411H



Data File: L230610A_02 G5 C2 - 430.9728
CAL CS1-22-171-033 - CVS TC, col:US3225411H

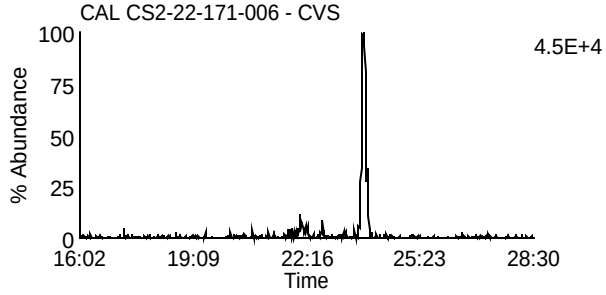


Homologue Group: Tetras

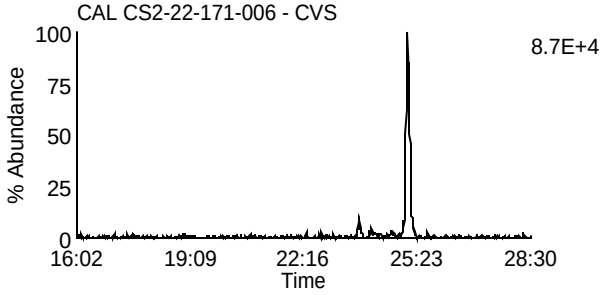
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

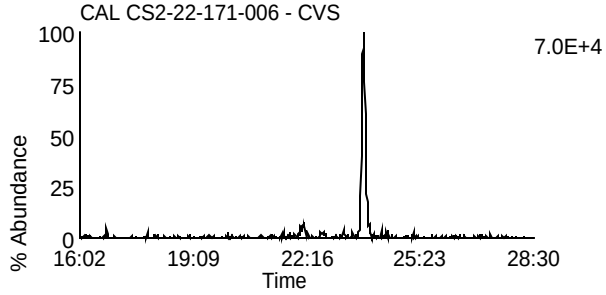
Data File: L230610A_03 G1 C1 - 303.9016
CAL CS2-22-171-006 - CVS



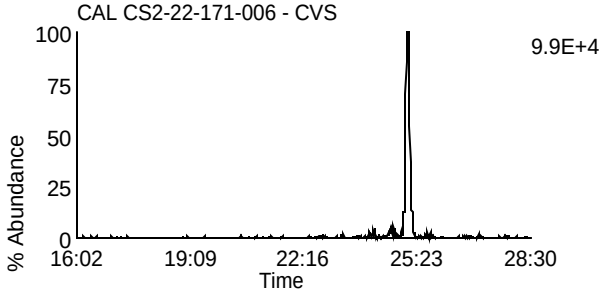
Data File: L230610A_03 G1 C7 - 319.8965
CAL CS2-22-171-006 - CVS



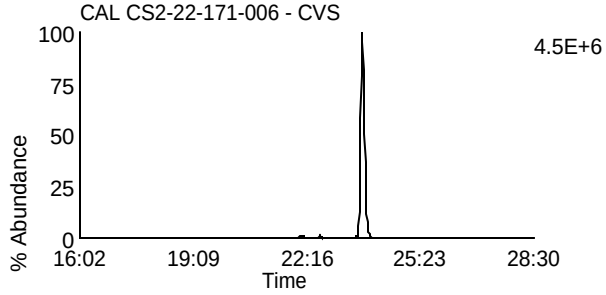
Data File: L230610A_03 G1 C2 - 305.8987
CAL CS2-22-171-006 - CVS



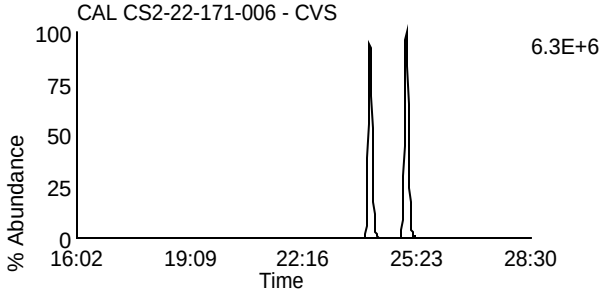
Data File: L230610A_03 G1 C8 - 321.8936
CAL CS2-22-171-006 - CVS



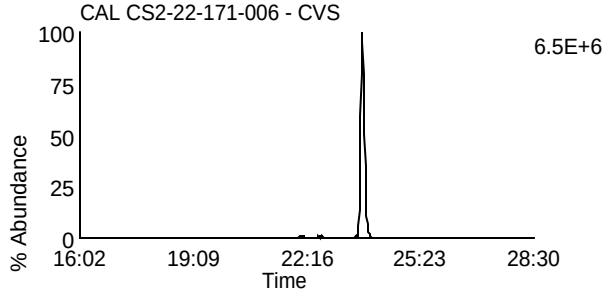
Data File: L230610A_03 G1 C3 - 315.9418
CAL CS2-22-171-006 - CVS



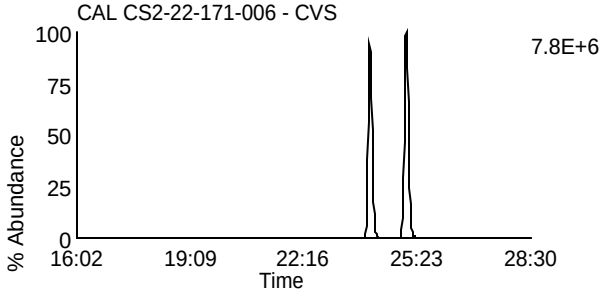
Data File: L230610A_03 G1 C10 - 331.9367
CAL CS2-22-171-006 - CVS



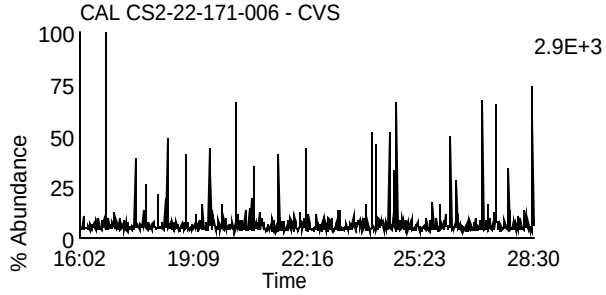
Data File: L230610A_03 G1 C4 - 317.9389
CAL CS2-22-171-006 - CVS



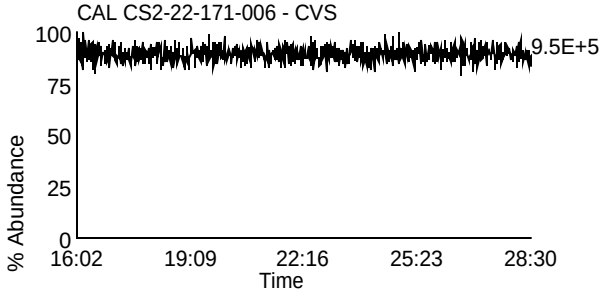
Data File: L230610A_03 G1 C11 - 333.9338
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C14 - 375.8364
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - CVS

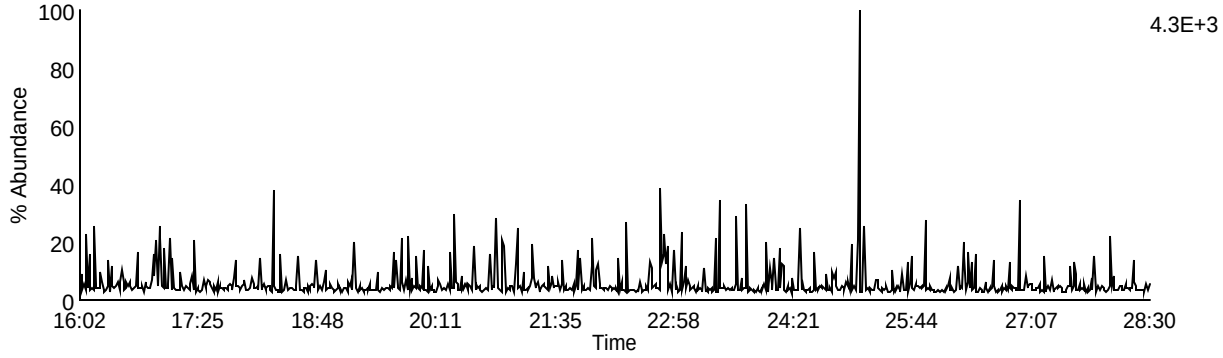


Homologue Group: Penta & Cleanup

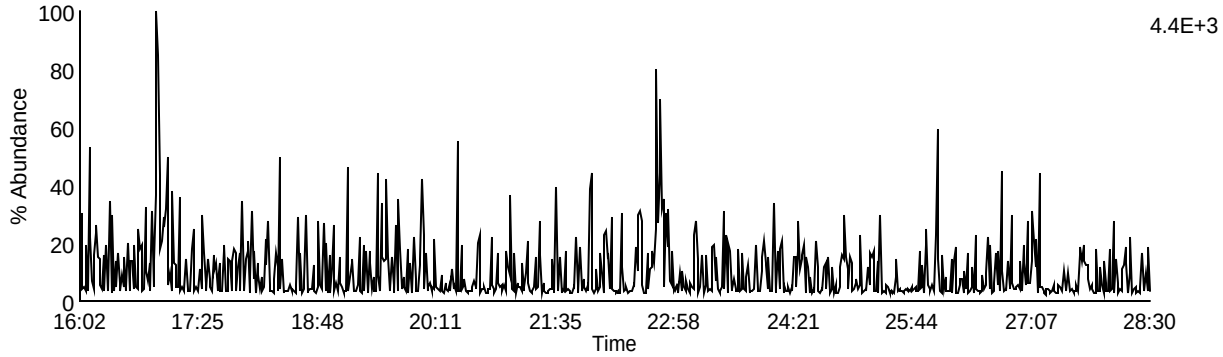
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

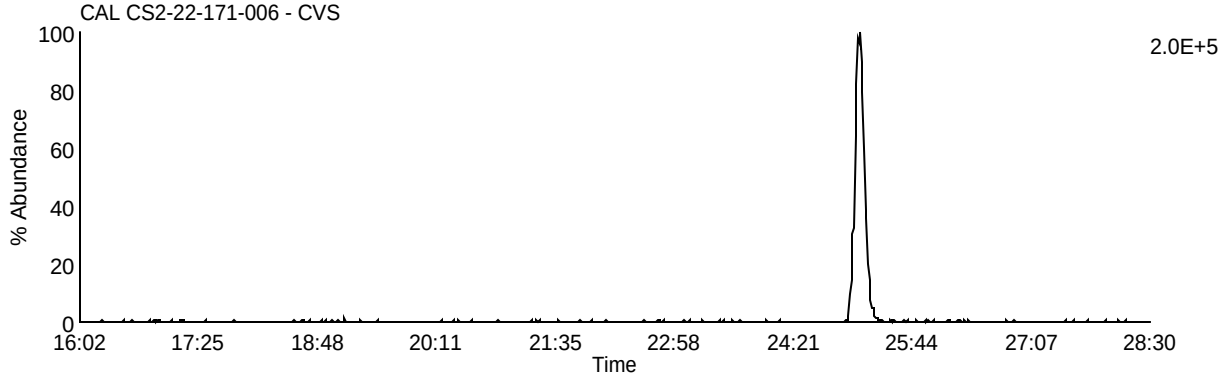
Data File: L230610A_03 G1 C12 - 339.8597
CAL CS2-22-171-006 - CVS



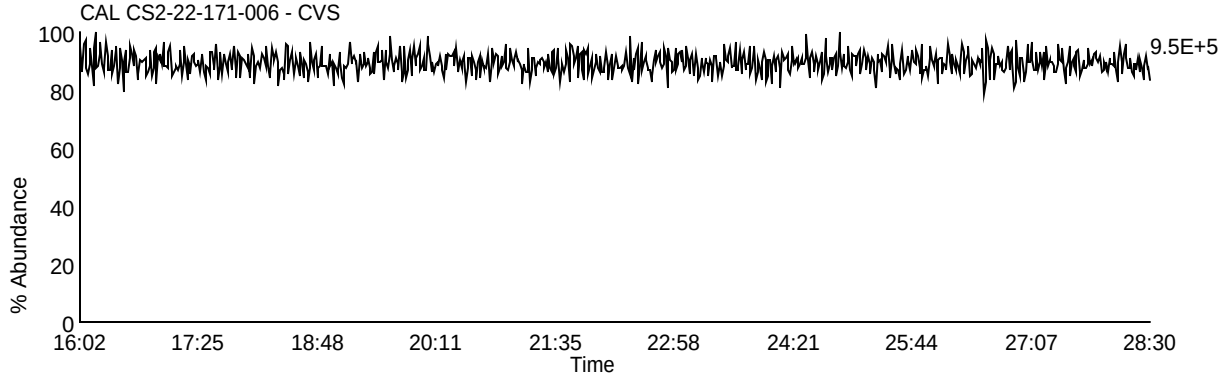
Data File: L230610A_03 G1 C13 - 341.8567
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C9 - 327.8847
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - CVS

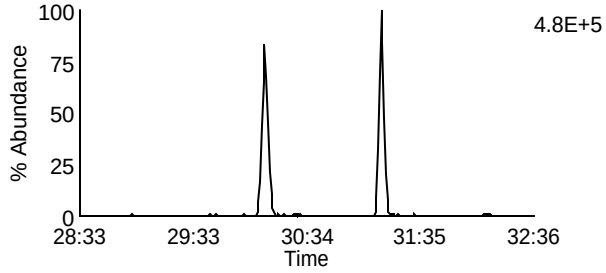


Homologue Group: Pentas

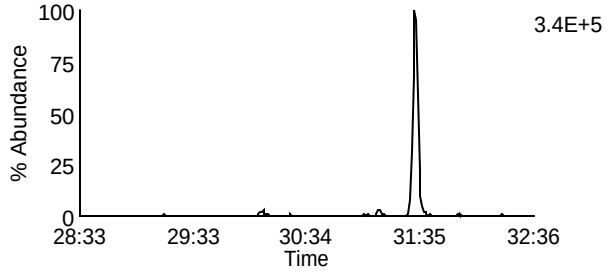
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

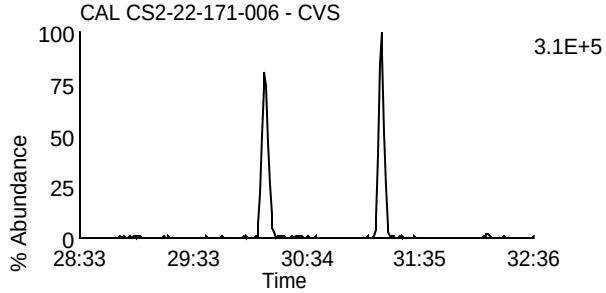
Data File: L230610A_03 G2 C1 - 339.8597
CAL CS2-22-171-006 - CVS



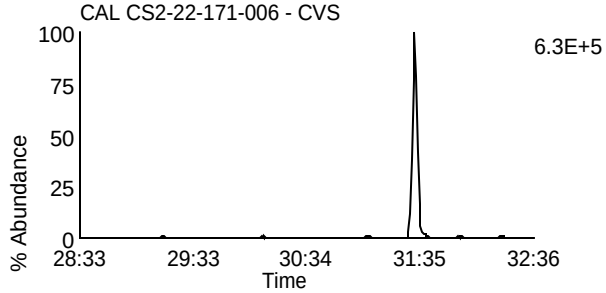
Data File: L230610A_03 G2 C4 - 353.8576
CAL CS2-22-171-006 - CVS



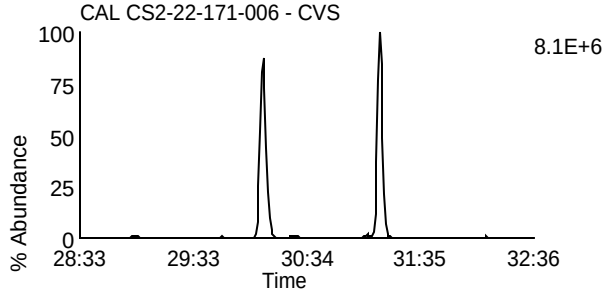
Data File: L230610A_03 G2 C2 - 341.8567
CAL CS2-22-171-006 - CVS



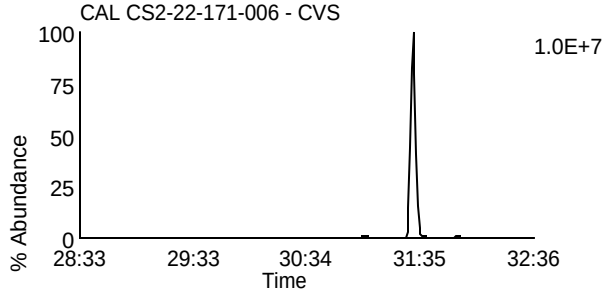
Data File: L230610A_03 G2 C8 - 355.8546
CAL CS2-22-171-006 - CVS



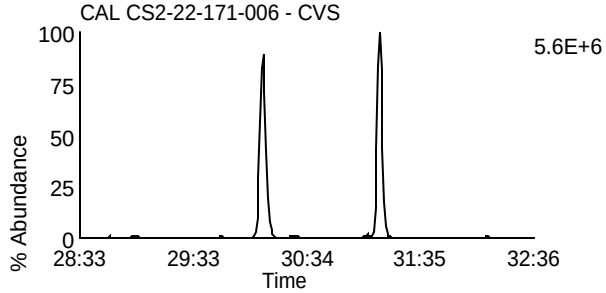
Data File: L230610A_03 G2 C3 - 351.8999
CAL CS2-22-171-006 - CVS



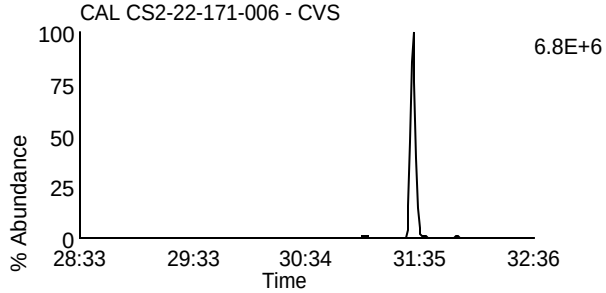
Data File: L230610A_03 G2 C10 - 367.8948
CAL CS2-22-171-006 - CVS



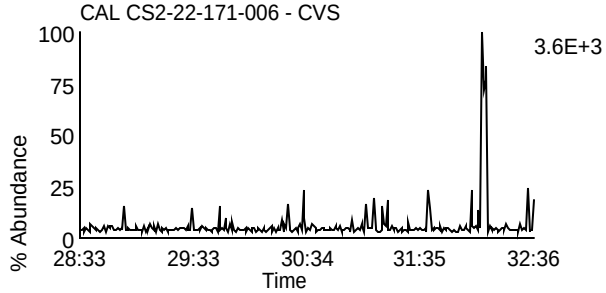
Data File: L230610A_03 G2 C5 - 353.8969
CAL CS2-22-171-006 - CVS



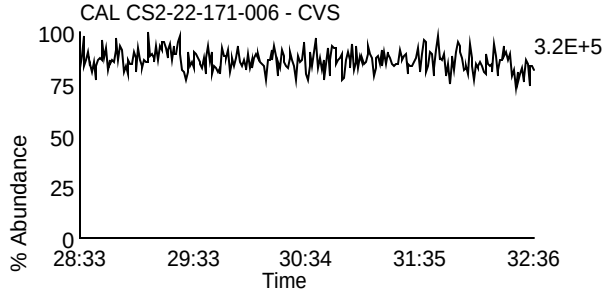
Data File: L230610A_03 G2 C11 - 369.8918
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G2 C12 - 409.7974
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G2 C6 - 354.9792
CAL CS2-22-171-006 - CVS

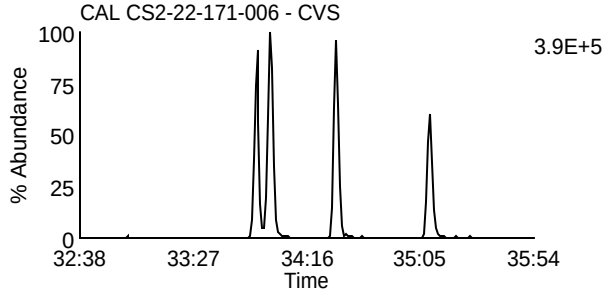


Homologue Group: Hexas

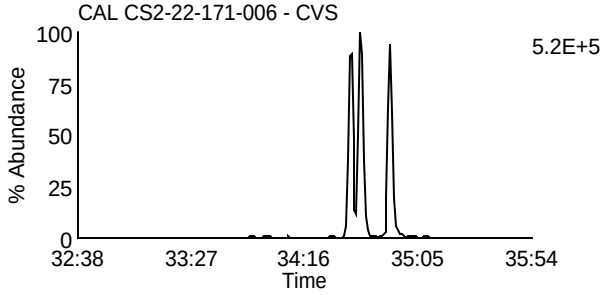
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

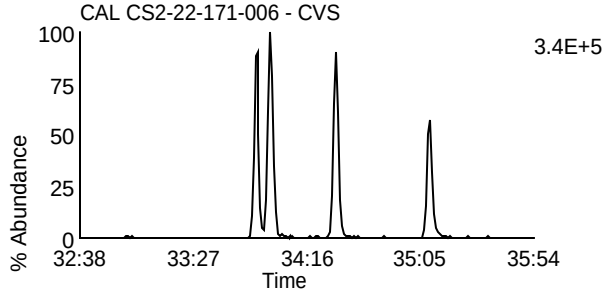
Data File: L230610A_03 G3 C1 - 373.8207
CAL CS2-22-171-006 - CVS



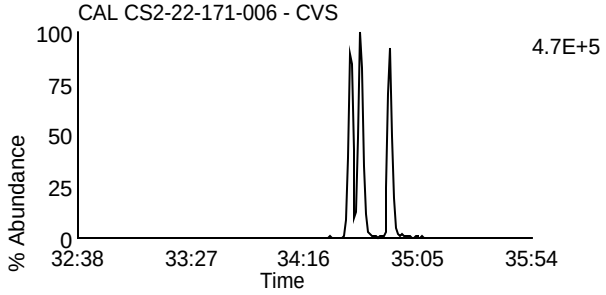
Data File: L230610A_03 G3 C7 - 389.8156
CAL CS2-22-171-006 - CVS



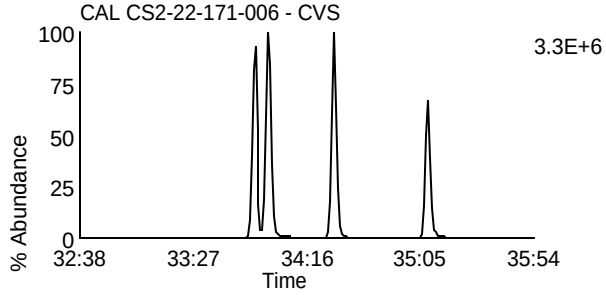
Data File: L230610A_03 G3 C2 - 375.8178
CAL CS2-22-171-006 - CVS



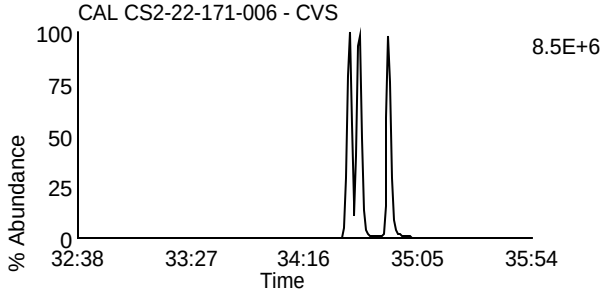
Data File: L230610A_03 G3 C8 - 391.8127
CAL CS2-22-171-006 - CVS



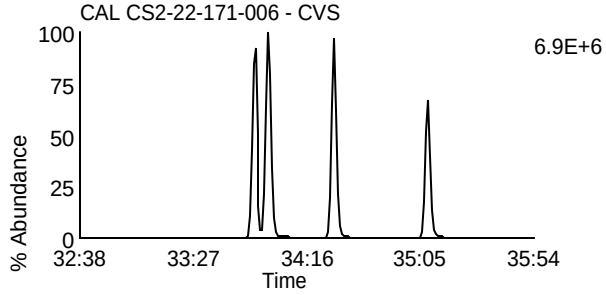
Data File: L230610A_03 G3 C5 - 383.8639
CAL CS2-22-171-006 - CVS



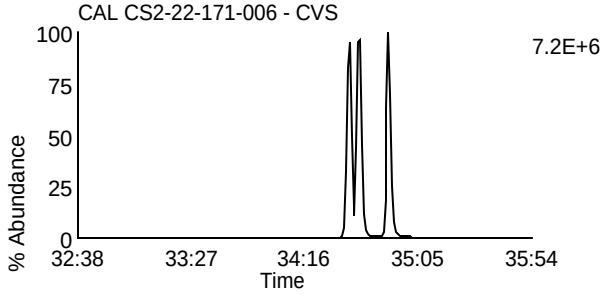
Data File: L230610A_03 G3 C9 - 401.8559
CAL CS2-22-171-006 - CVS



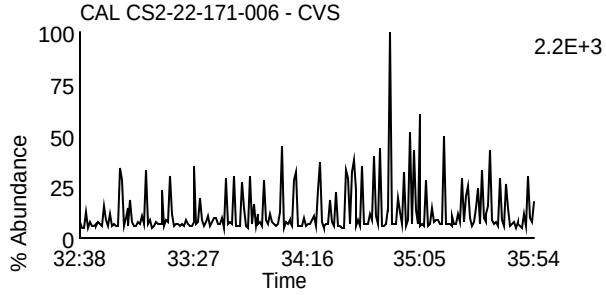
Data File: L230610A_03 G3 C6 - 385.861
CAL CS2-22-171-006 - CVS



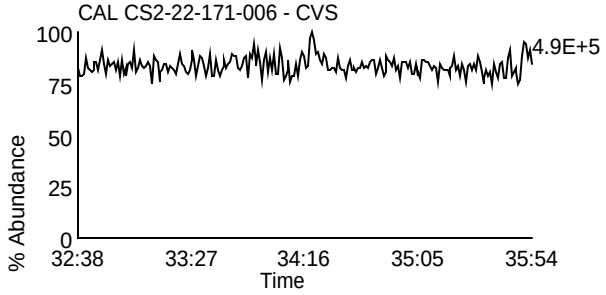
Data File: L230610A_03 G3 C10 - 403.8529
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G3 C11 - 445.7555
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G3 C3 - 380.976
CAL CS2-22-171-006 - CVS

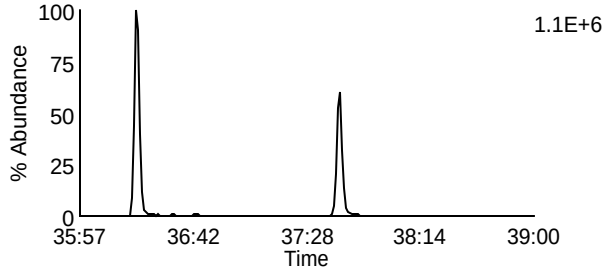


Homologue Group: Heptas

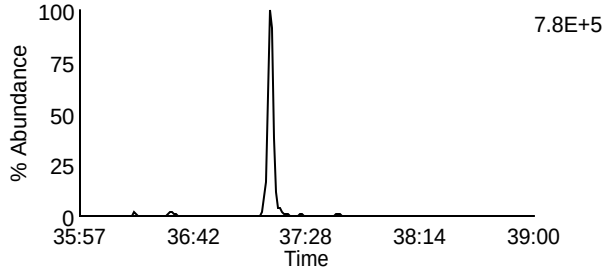
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

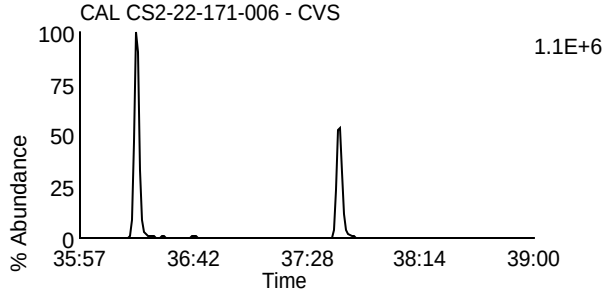
Data File: L230610A_03 G4 C3 - 407.7818
CAL CS2-22-171-006 - CVS



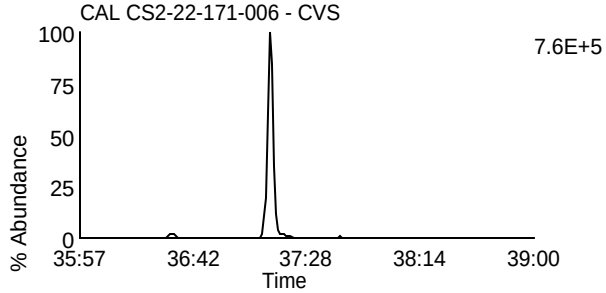
Data File: L230610A_03 G4 C8 - 423.7767
CAL CS2-22-171-006 - CVS



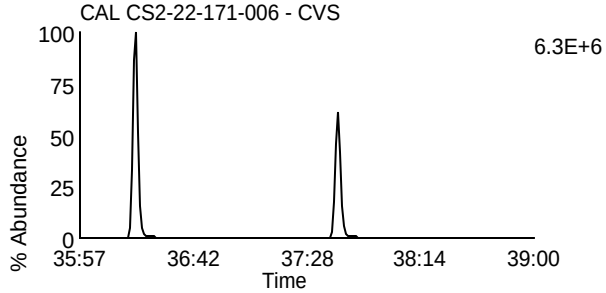
Data File: L230610A_03 G4 C4 - 409.7788
CAL CS2-22-171-006 - CVS



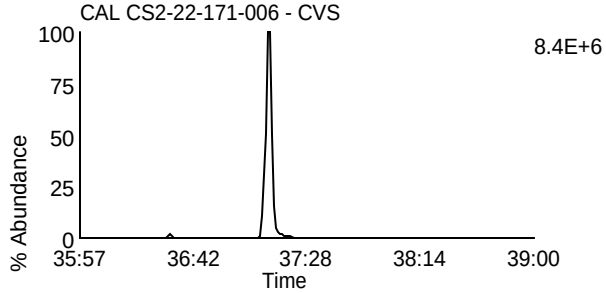
Data File: L230610A_03 G4 C9 - 425.7737
CAL CS2-22-171-006 - CVS



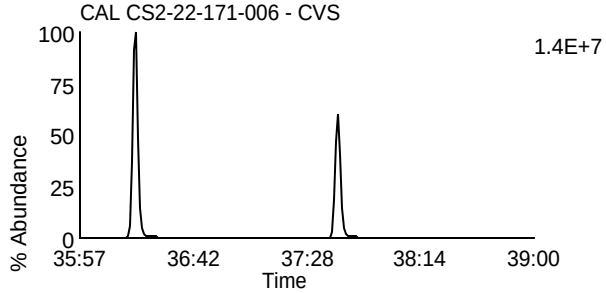
Data File: L230610A_03 G4 C6 - 417.825
CAL CS2-22-171-006 - CVS



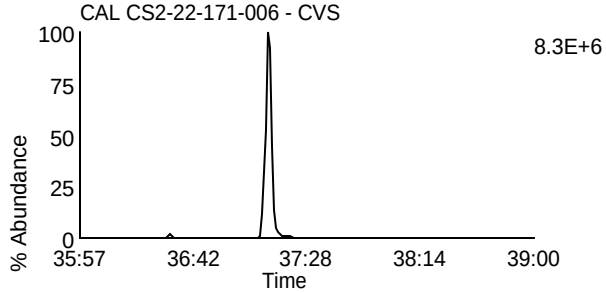
Data File: L230610A_03 G4 C11 - 435.8169
CAL CS2-22-171-006 - CVS



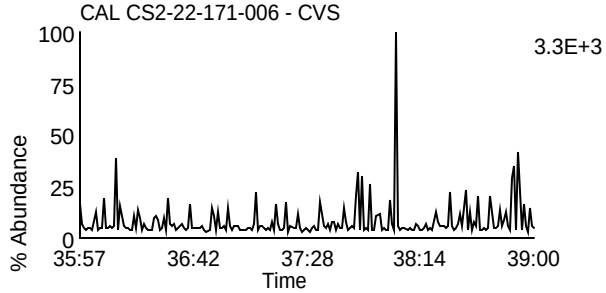
Data File: L230610A_03 G4 C7 - 419.822
CAL CS2-22-171-006 - CVS



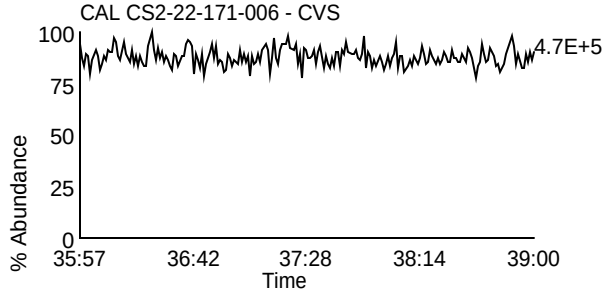
Data File: L230610A_03 G4 C12 - 437.814
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G4 C13 - 479.7165
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G4 C1 - 380.976
CAL CS2-22-171-006 - CVS

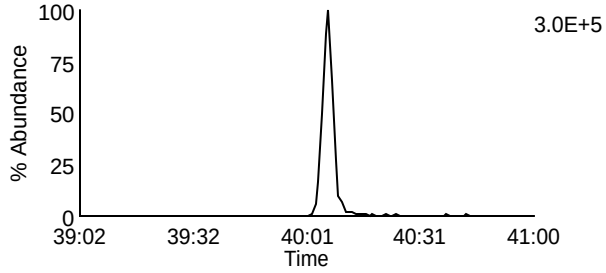


Homologue Group: Octas

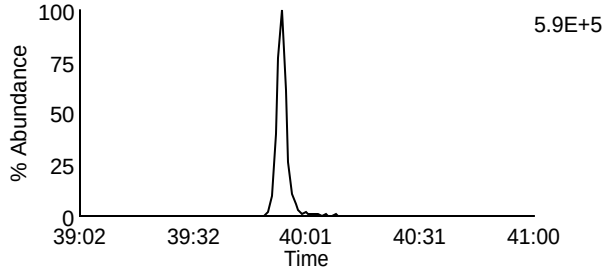
Data File Name: L230610A_03
Date Acquired: 6/10/2023
Sample Description: CAL CS2-22-171-006 - CVS

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR15 (L)

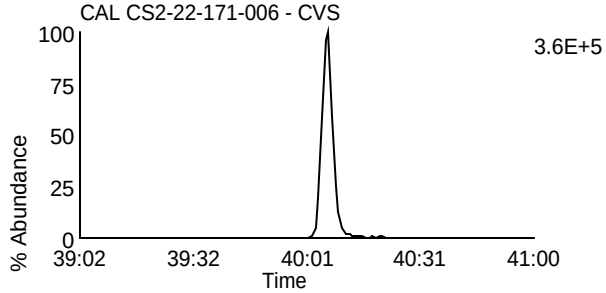
Data File: L230610A_03 G5 C4 - 441.7428
CAL CS2-22-171-006 - CVS



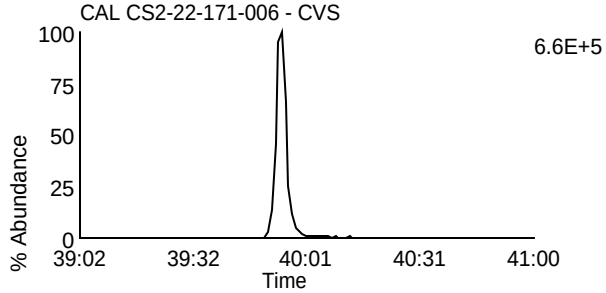
Data File: L230610A_03 G5 C8 - 457.7377
CAL CS2-22-171-006 - CVS



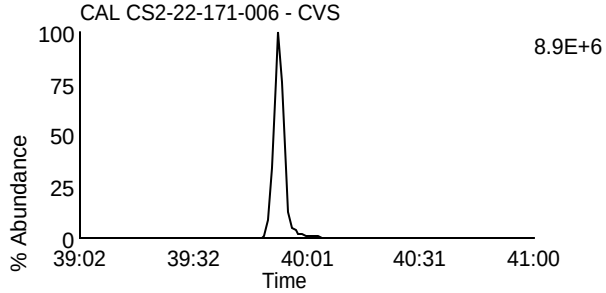
Data File: L230610A_03 G5 C5 - 443.7398
CAL CS2-22-171-006 - CVS



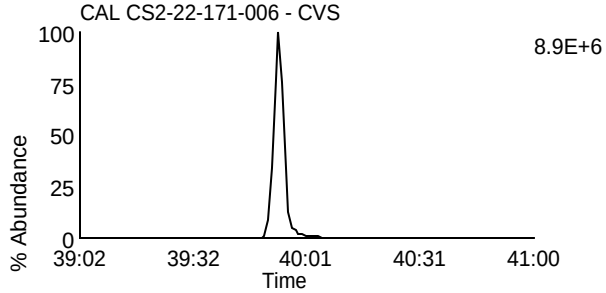
Data File: L230610A_03 G5 C9 - 459.7347
CAL CS2-22-171-006 - CVS



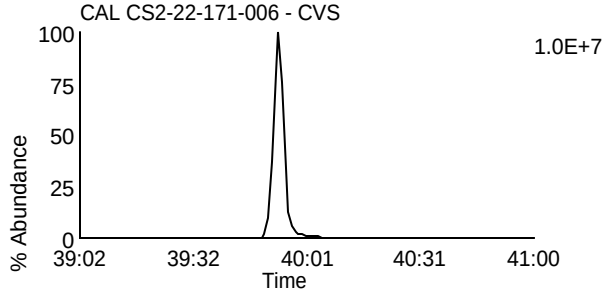
Data File: L230610A_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - CVS



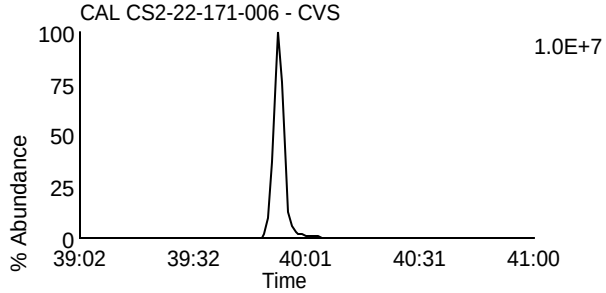
Data File: L230610A_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - CVS



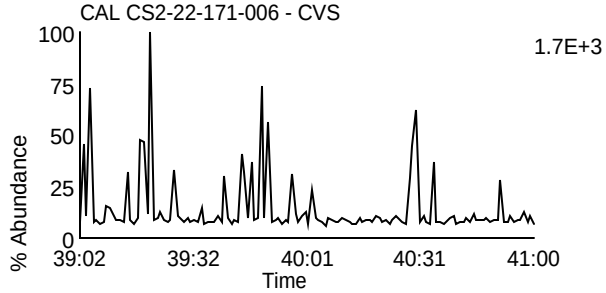
Data File: L230610A_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - CVS



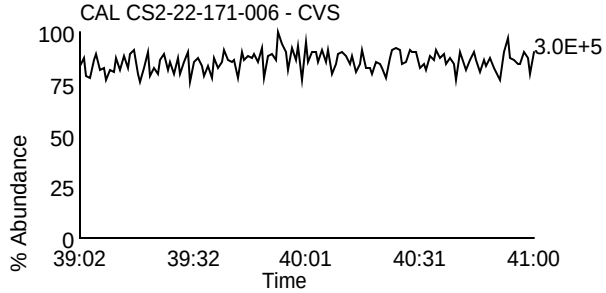
Data File: L230610A_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G5 C13 - 513.6775
CAL CS2-22-171-006 - CVS



Data File: L230610A_03 G5 C2 - 430.9728
CAL CS2-22-171-006 - CVS

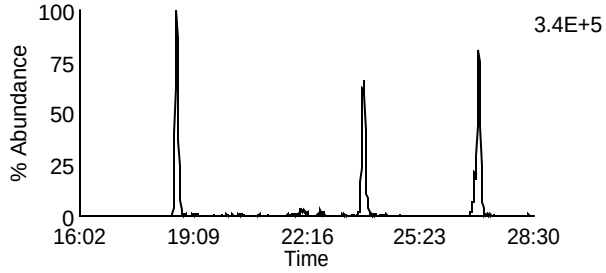


Homologue Group: Tetras

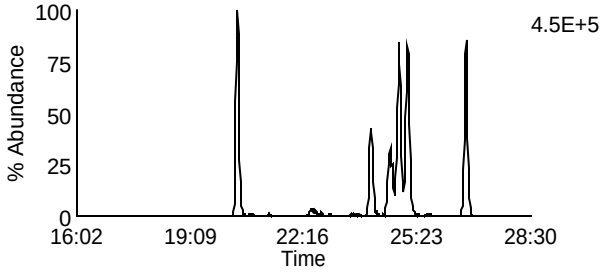
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

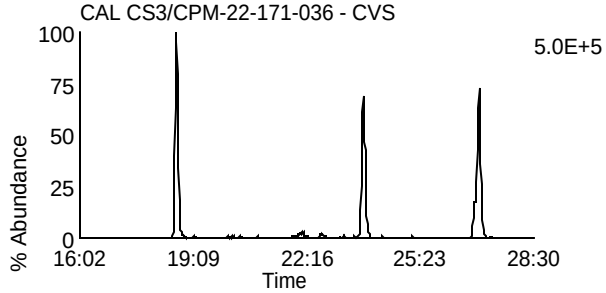
Data File: L230610A_06 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - CVS



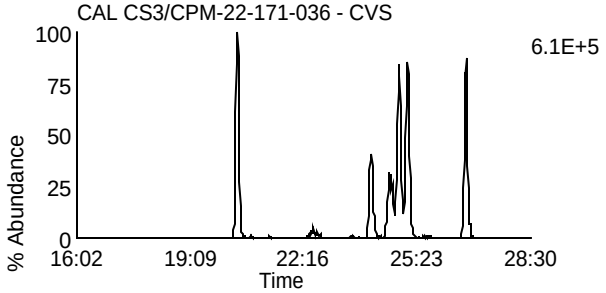
Data File: L230610A_06 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - CVS



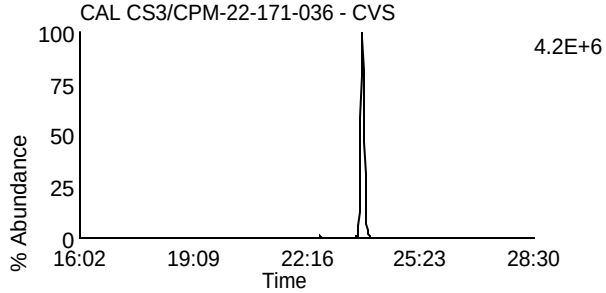
Data File: L230610A_06 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - CVS



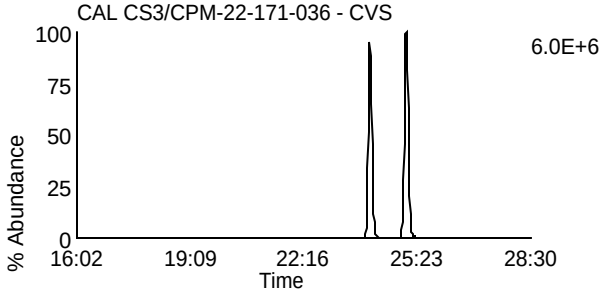
Data File: L230610A_06 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - CVS



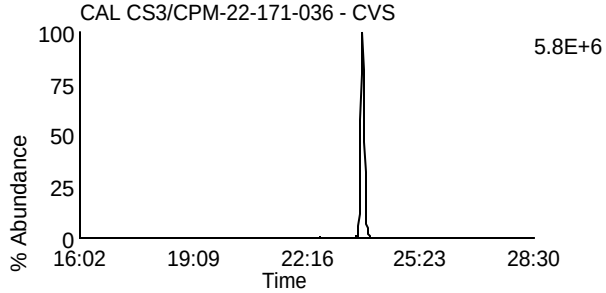
Data File: L230610A_06 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - CVS



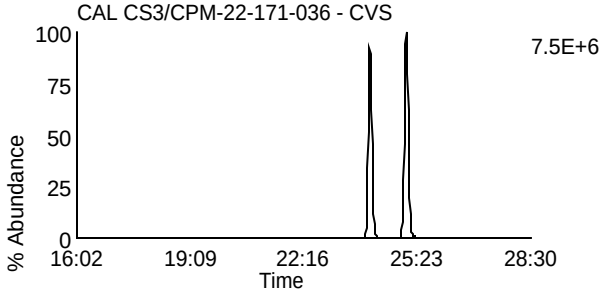
Data File: L230610A_06 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - CVS



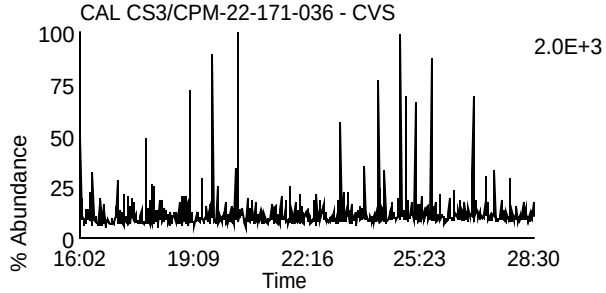
Data File: L230610A_06 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - CVS



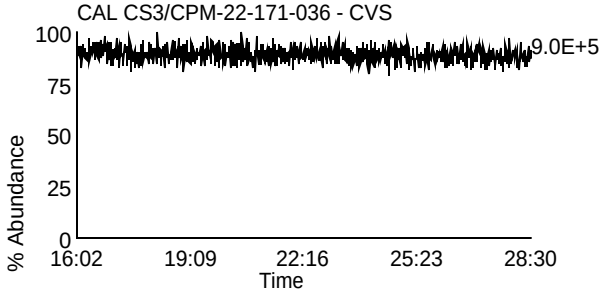
Data File: L230610A_06 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - CVS



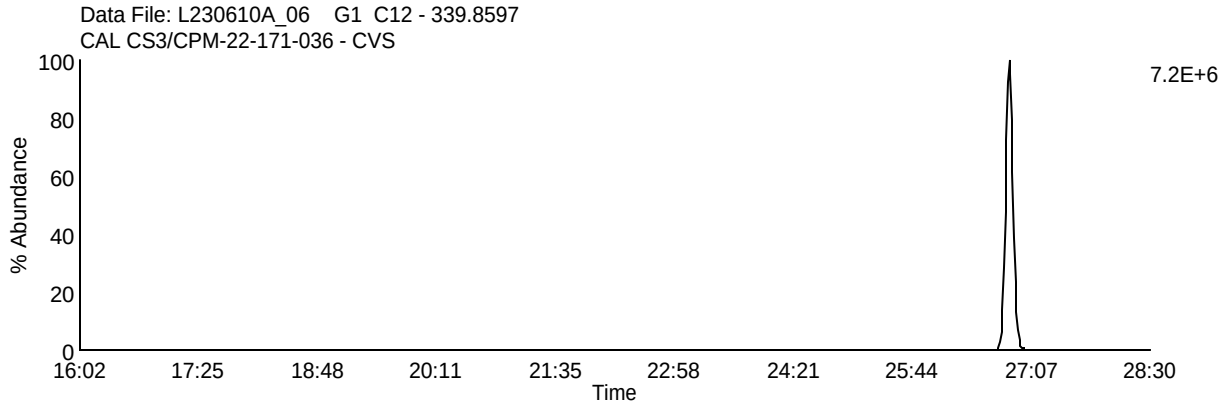
Data File: L230610A_06 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - CVS

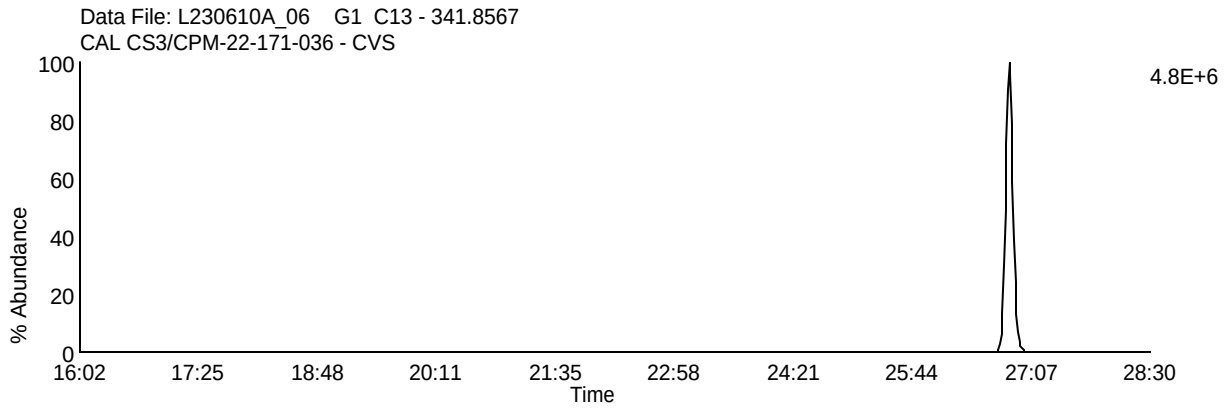


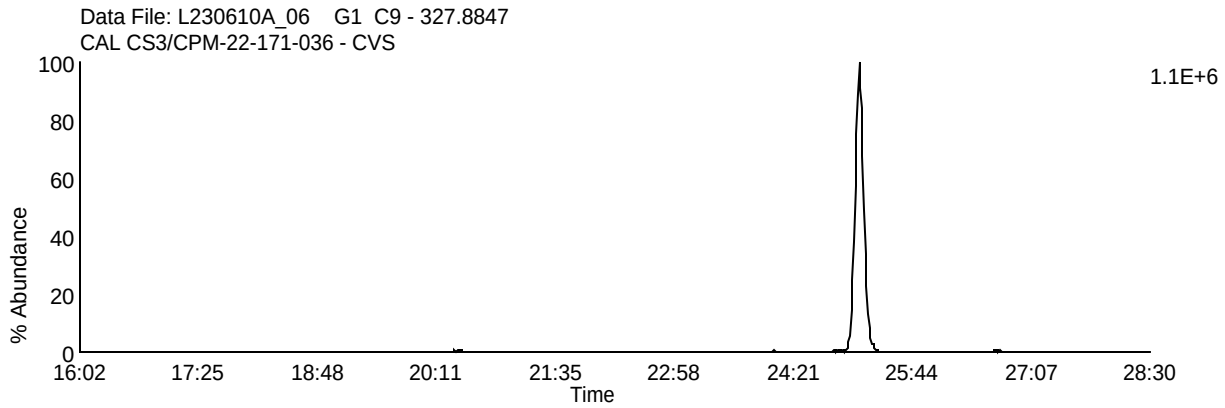
Homologue Group: Penta & Cleanup

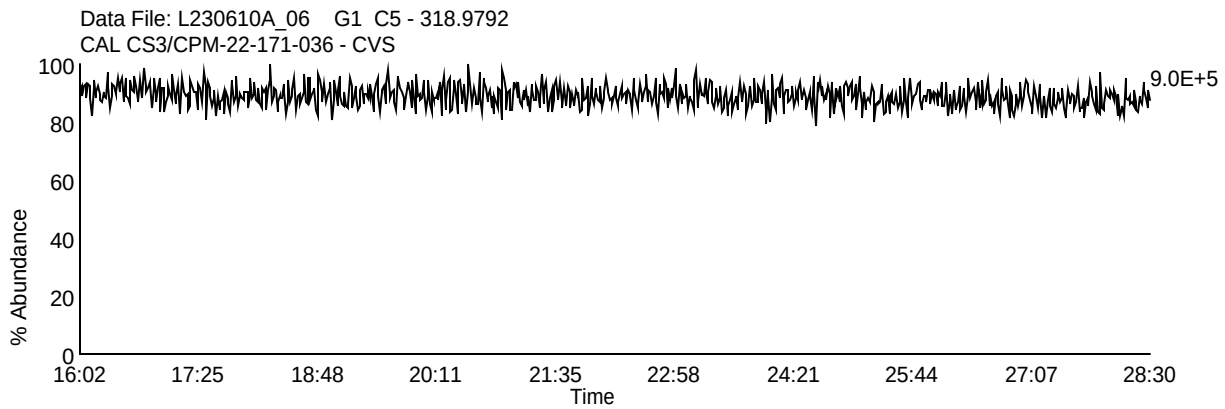
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)







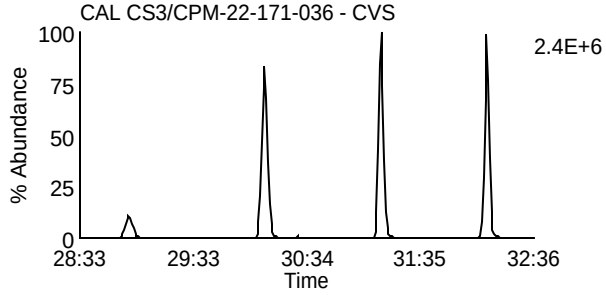


Homologue Group: Pentas

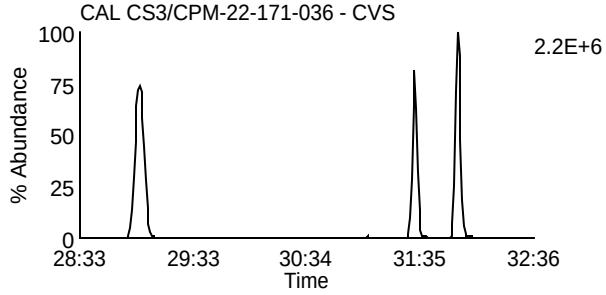
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

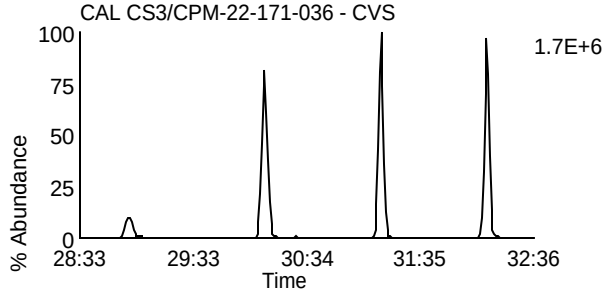
Data File: L230610A_06 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - CVS



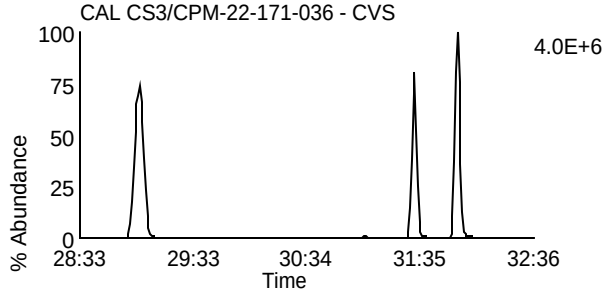
Data File: L230610A_06 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - CVS



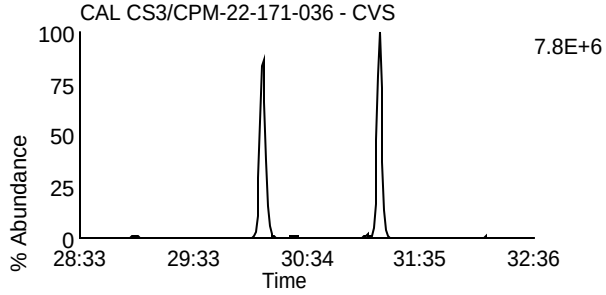
Data File: L230610A_06 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - CVS



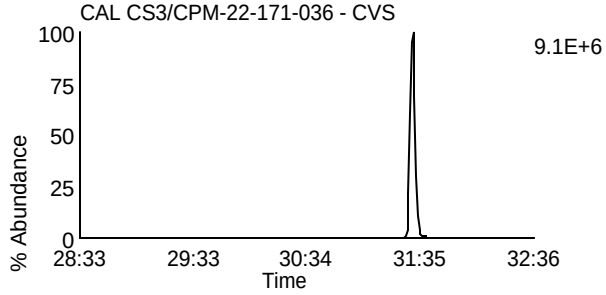
Data File: L230610A_06 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - CVS



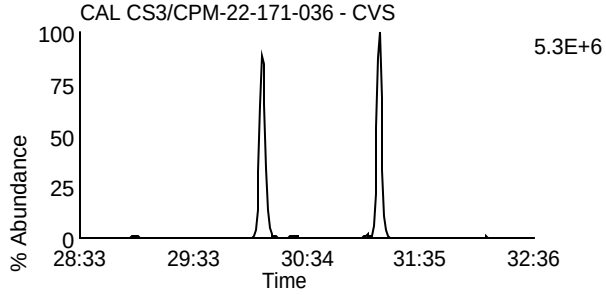
Data File: L230610A_06 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - CVS



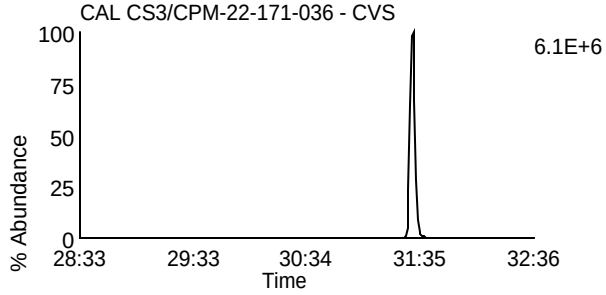
Data File: L230610A_06 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - CVS



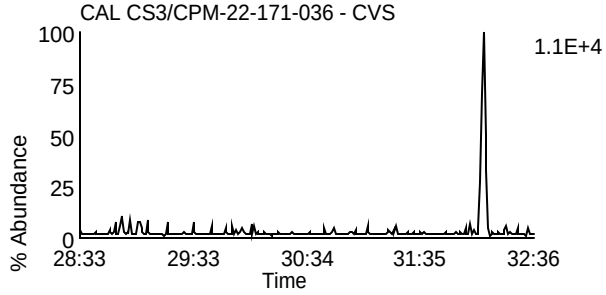
Data File: L230610A_06 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - CVS



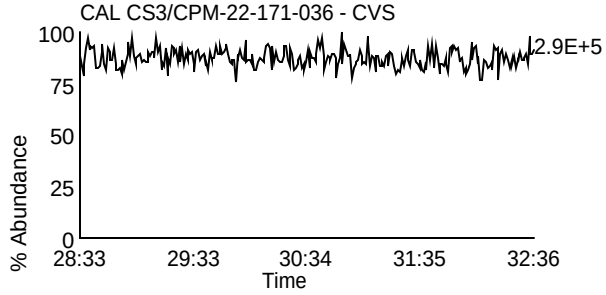
Data File: L230610A_06 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - CVS

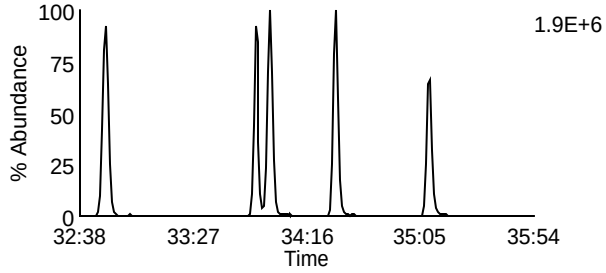


Homologue Group: Hexas

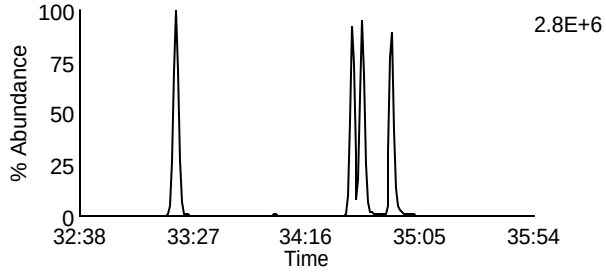
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

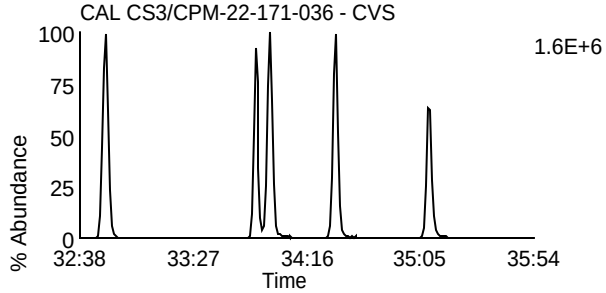
Data File: L230610A_06 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - CVS



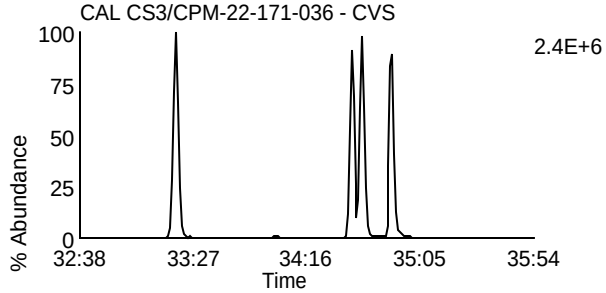
Data File: L230610A_06 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - CVS



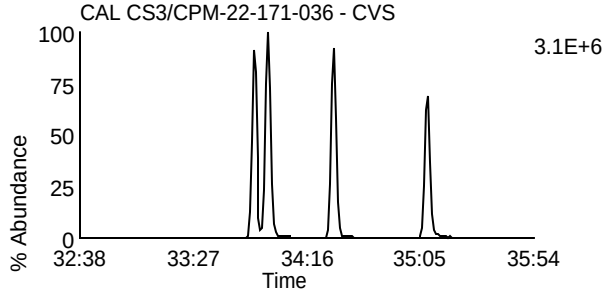
Data File: L230610A_06 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - CVS



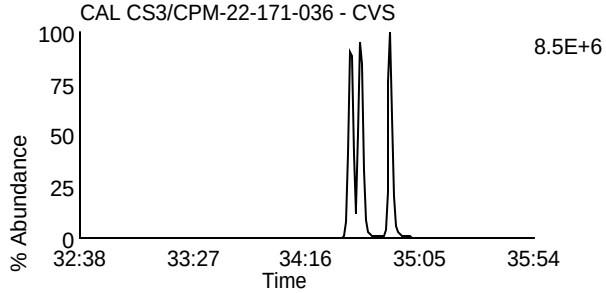
Data File: L230610A_06 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - CVS



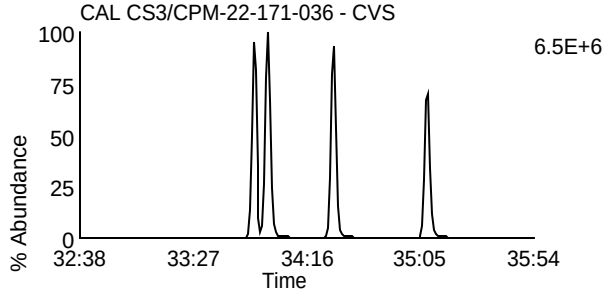
Data File: L230610A_06 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - CVS



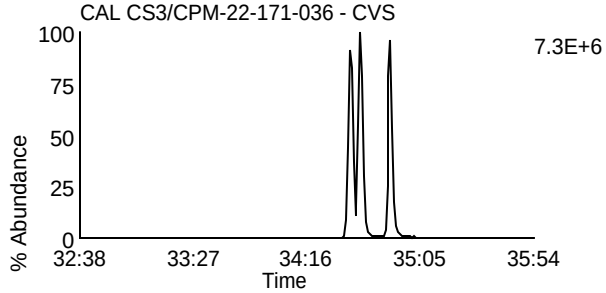
Data File: L230610A_06 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - CVS



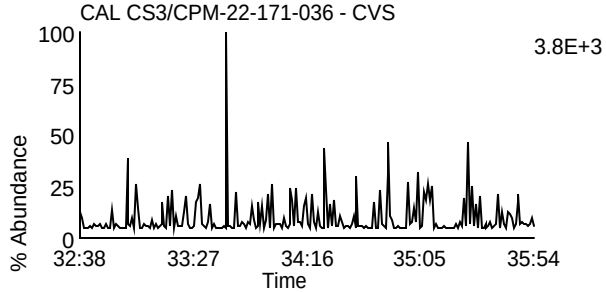
Data File: L230610A_06 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - CVS



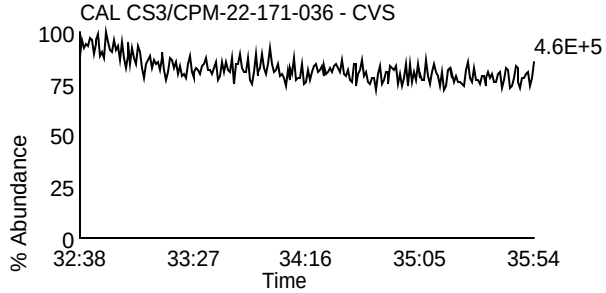
Data File: L230610A_06 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - CVS

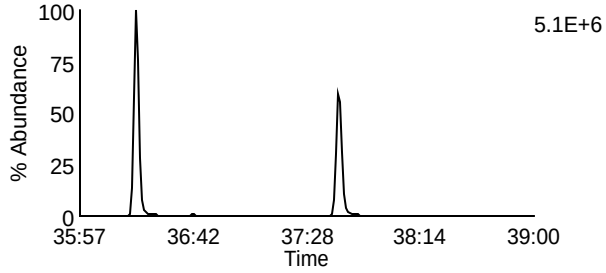


Homologue Group: Heptas

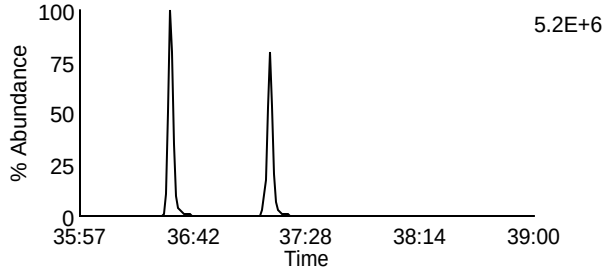
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

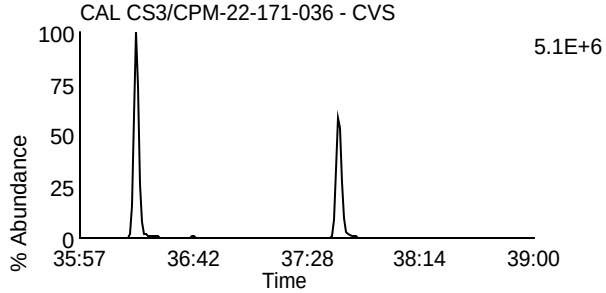
Data File: L230610A_06 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - CVS



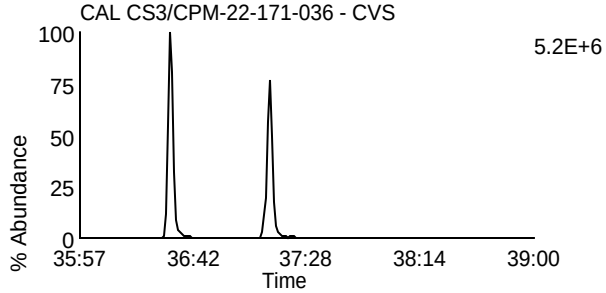
Data File: L230610A_06 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - CVS



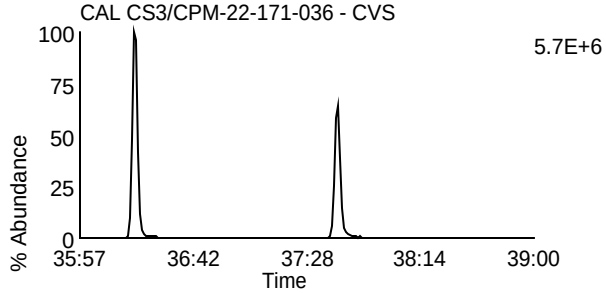
Data File: L230610A_06 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - CVS



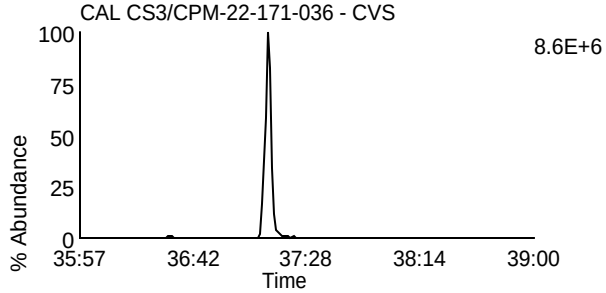
Data File: L230610A_06 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - CVS



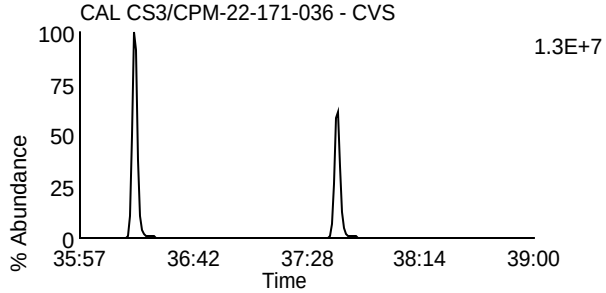
Data File: L230610A_06 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - CVS



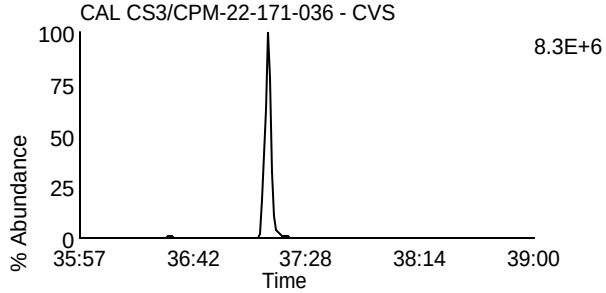
Data File: L230610A_06 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - CVS



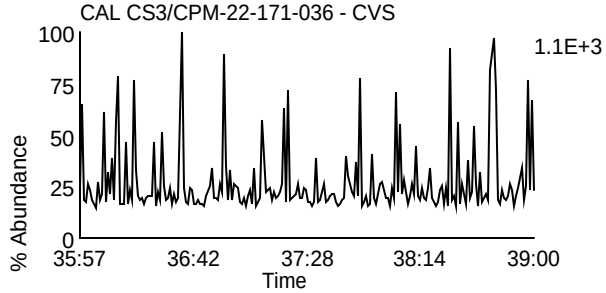
Data File: L230610A_06 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - CVS



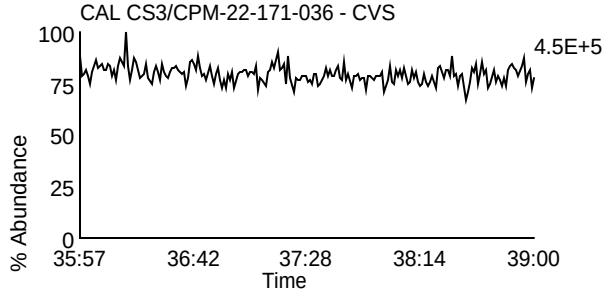
Data File: L230610A_06 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - CVS

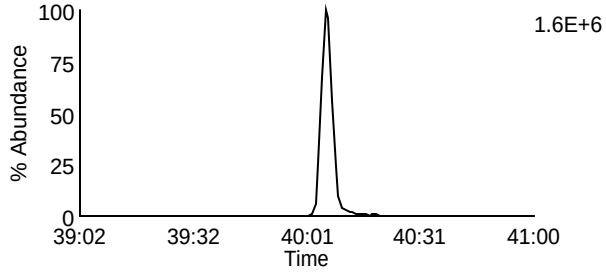


Homologue Group: Octas

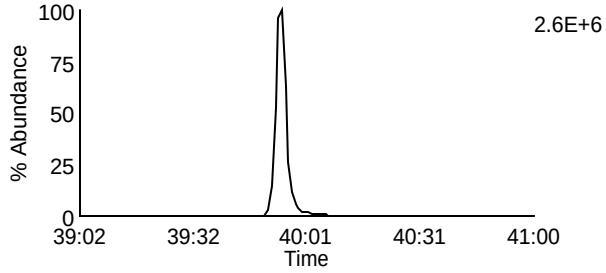
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR15 (L)

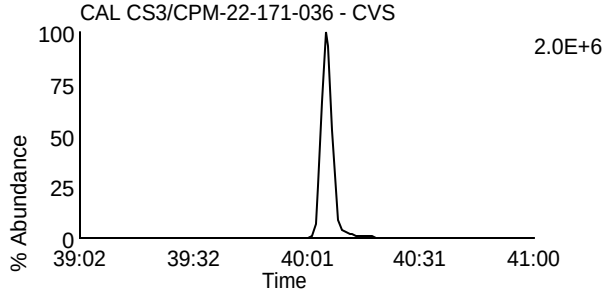
Data File: L230610A_06 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - CVS



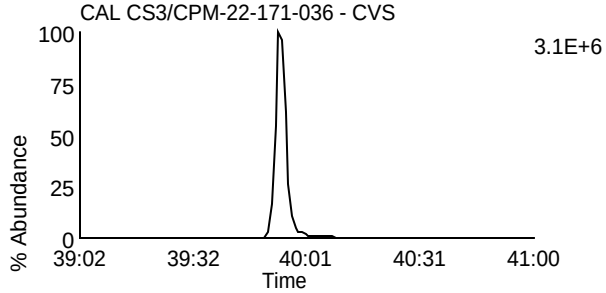
Data File: L230610A_06 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - CVS



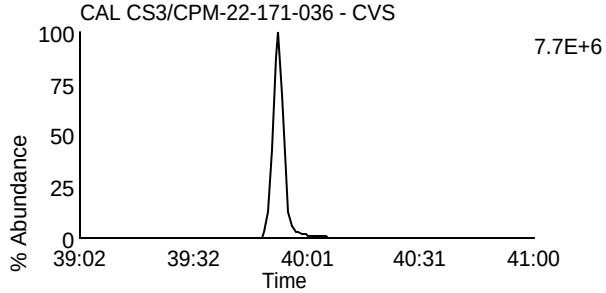
Data File: L230610A_06 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - CVS



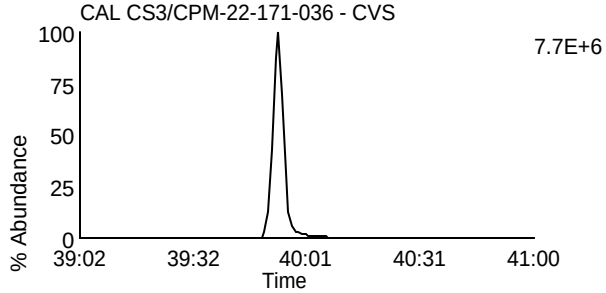
Data File: L230610A_06 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - CVS



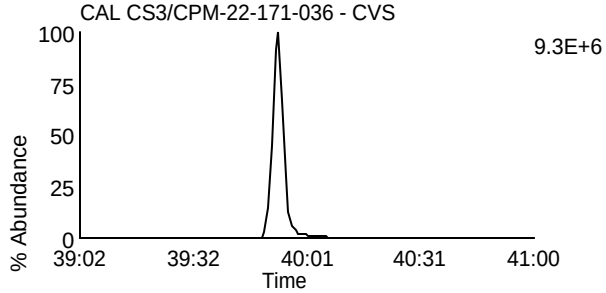
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



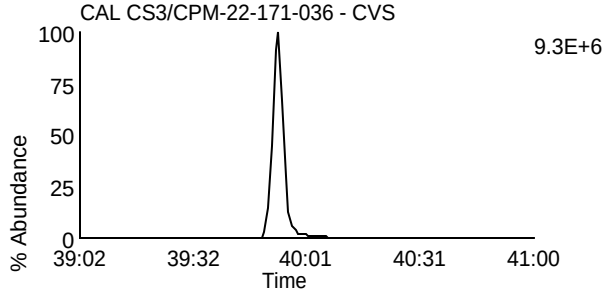
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



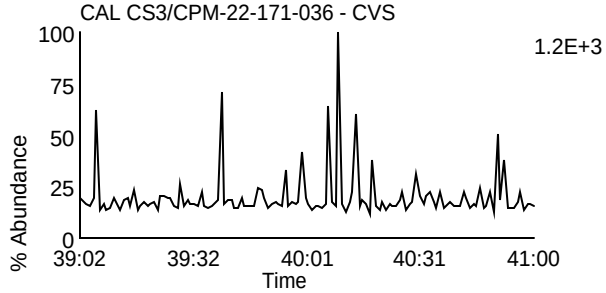
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



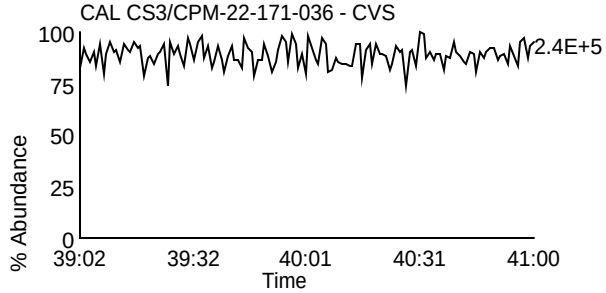
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - CVS

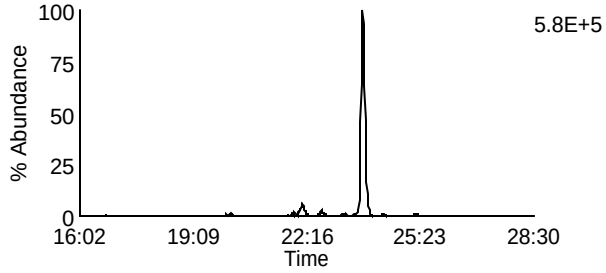


Homologue Group: Tetras

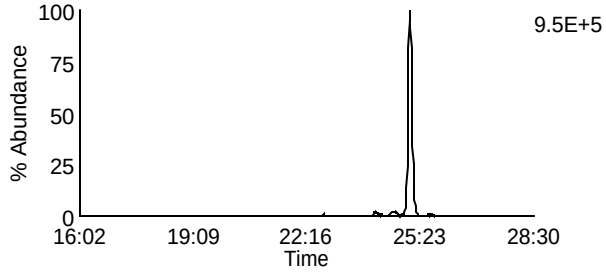
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

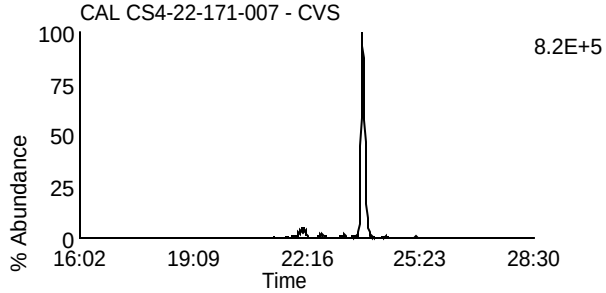
Data File: L230610A_05 G1 C1 - 303.9016
CAL CS4-22-171-007 - CVS



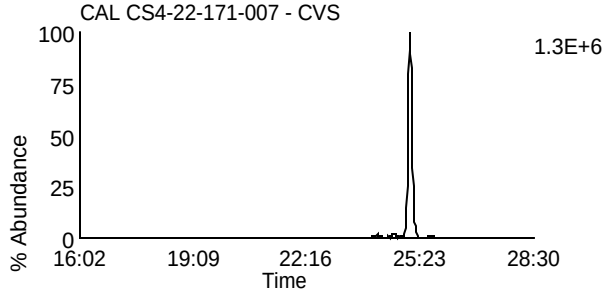
Data File: L230610A_05 G1 C7 - 319.8965
CAL CS4-22-171-007 - CVS



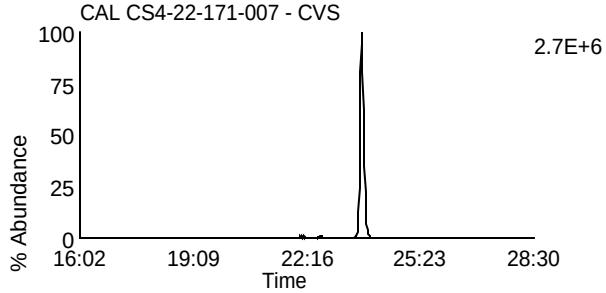
Data File: L230610A_05 G1 C2 - 305.8987
CAL CS4-22-171-007 - CVS



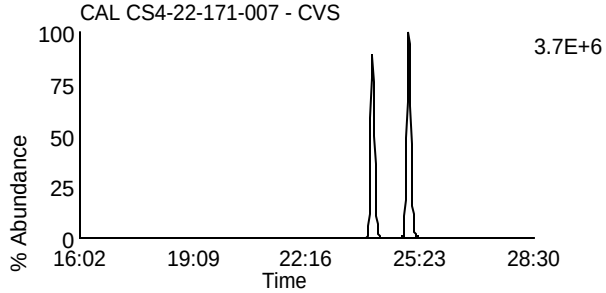
Data File: L230610A_05 G1 C8 - 321.8936
CAL CS4-22-171-007 - CVS



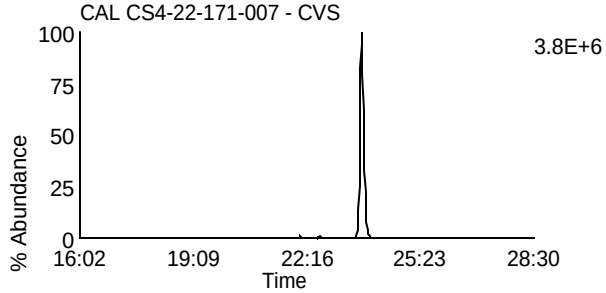
Data File: L230610A_05 G1 C3 - 315.9418
CAL CS4-22-171-007 - CVS



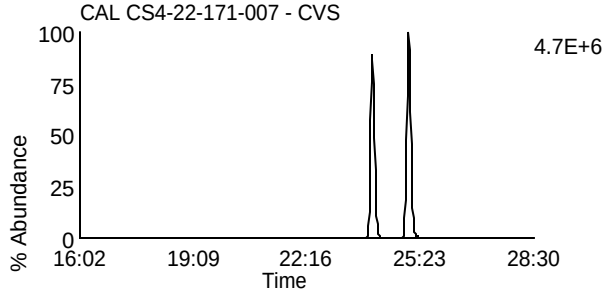
Data File: L230610A_05 G1 C10 - 331.9367
CAL CS4-22-171-007 - CVS



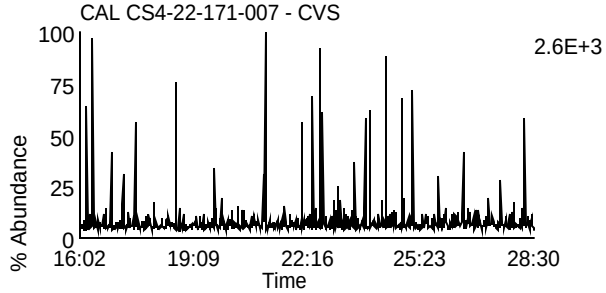
Data File: L230610A_05 G1 C4 - 317.9389
CAL CS4-22-171-007 - CVS



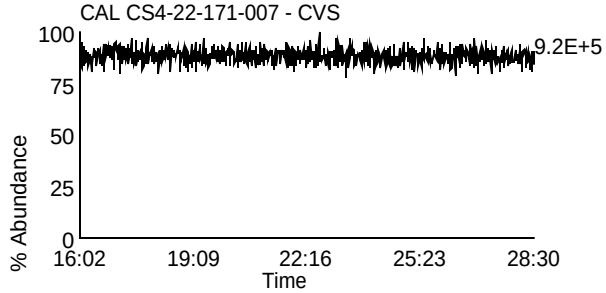
Data File: L230610A_05 G1 C11 - 333.9338
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C14 - 375.8364
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C5 - 318.9792
CAL CS4-22-171-007 - CVS

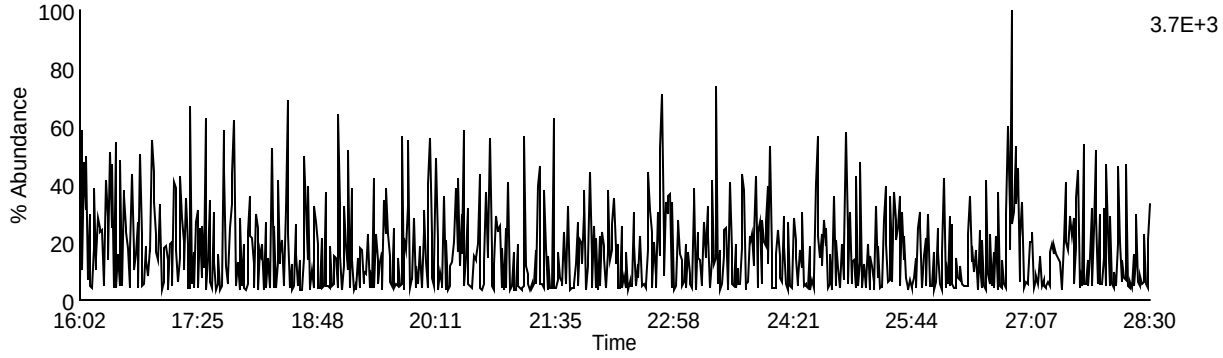


Homologue Group: Penta & Cleanup

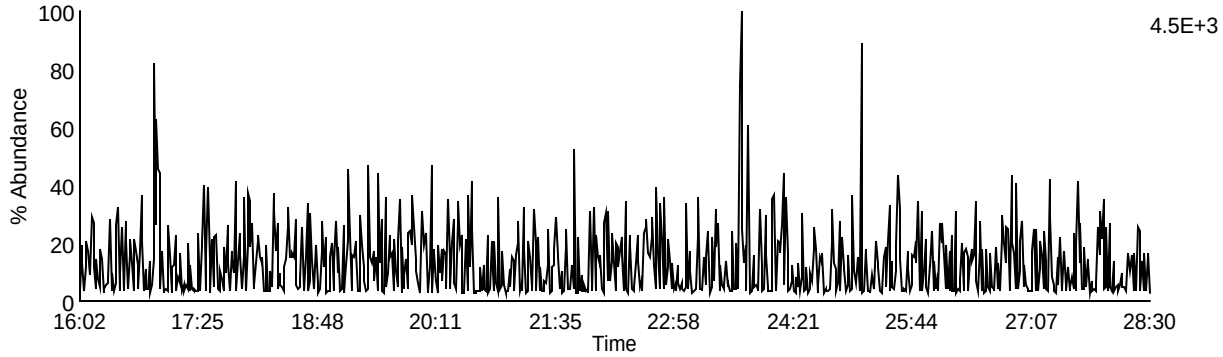
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

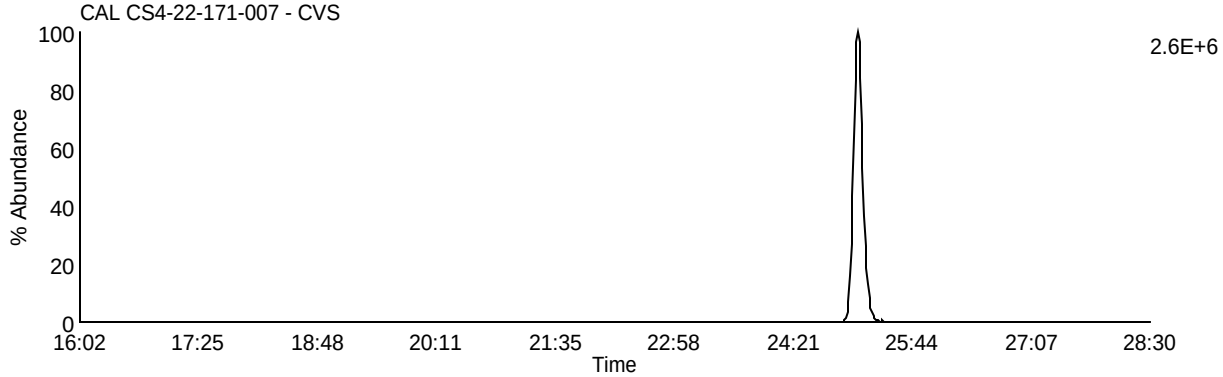
Data File: L230610A_05 G1 C12 - 339.8597
CAL CS4-22-171-007 - CVS



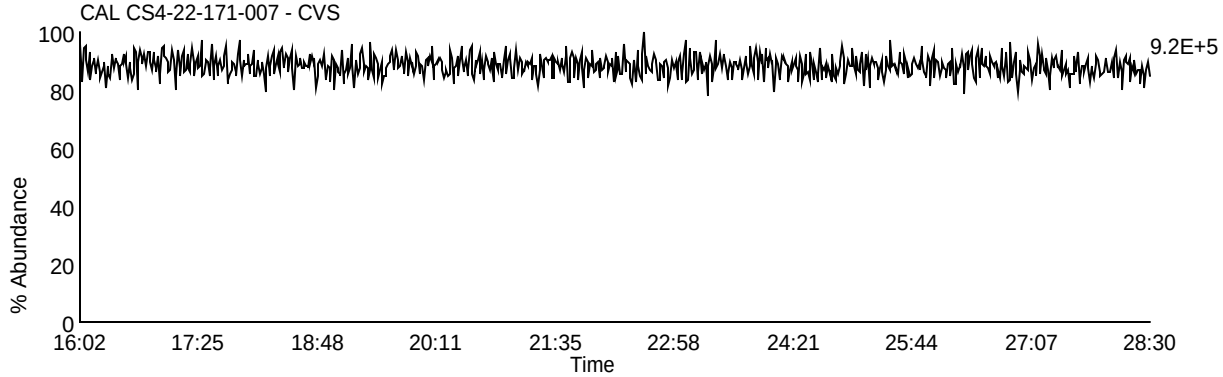
Data File: L230610A_05 G1 C13 - 341.8567
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C9 - 327.8847
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G1 C5 - 318.9792
CAL CS4-22-171-007 - CVS

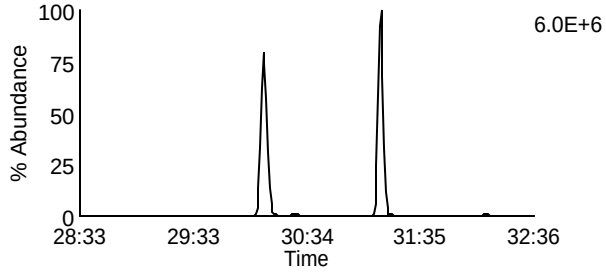


Homologue Group: Pentas

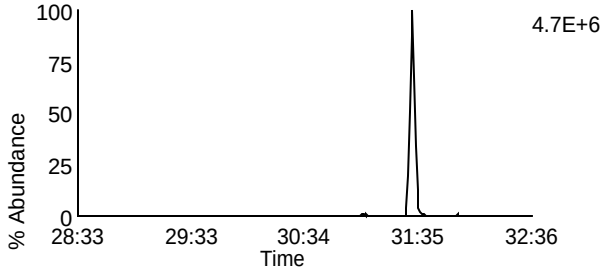
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

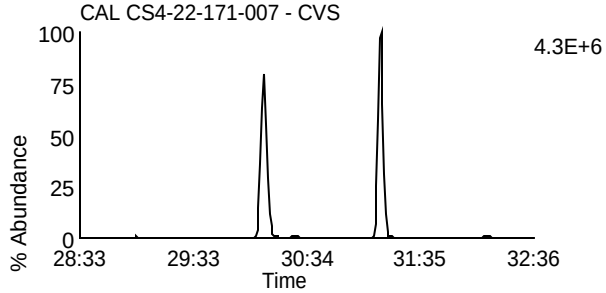
Data File: L230610A_05 G2 C1 - 339.8597
CAL CS4-22-171-007 - CVS



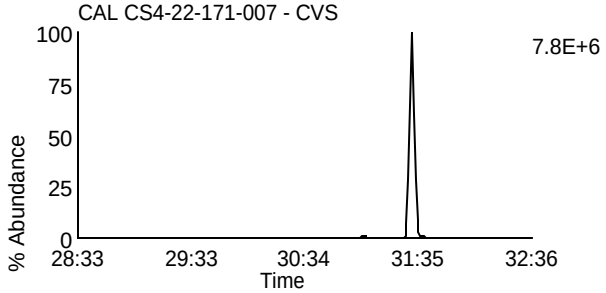
Data File: L230610A_05 G2 C4 - 353.8576
CAL CS4-22-171-007 - CVS



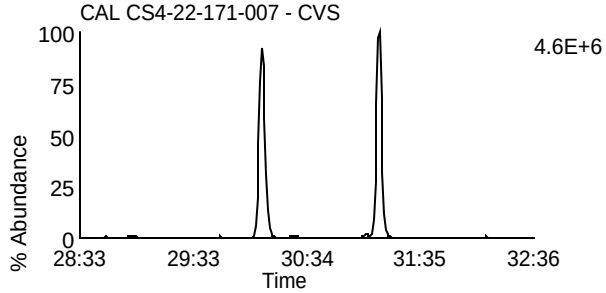
Data File: L230610A_05 G2 C2 - 341.8567
CAL CS4-22-171-007 - CVS



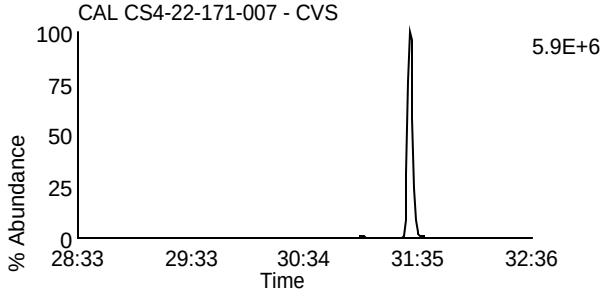
Data File: L230610A_05 G2 C8 - 355.8546
CAL CS4-22-171-007 - CVS



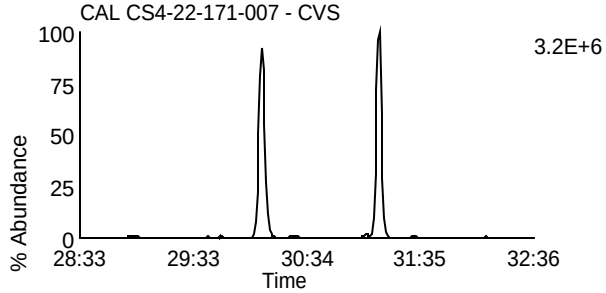
Data File: L230610A_05 G2 C3 - 351.8999
CAL CS4-22-171-007 - CVS



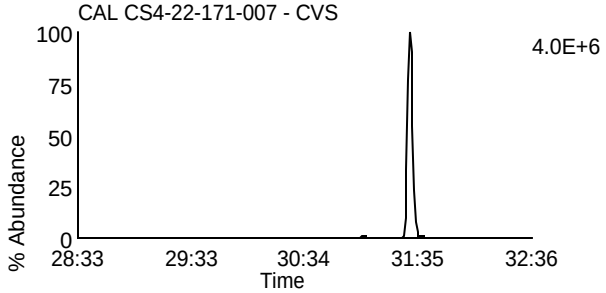
Data File: L230610A_05 G2 C10 - 367.8948
CAL CS4-22-171-007 - CVS



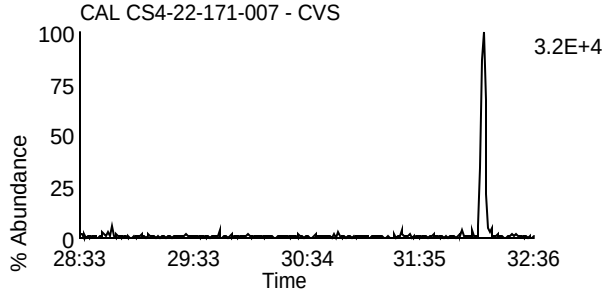
Data File: L230610A_05 G2 C5 - 353.8969
CAL CS4-22-171-007 - CVS



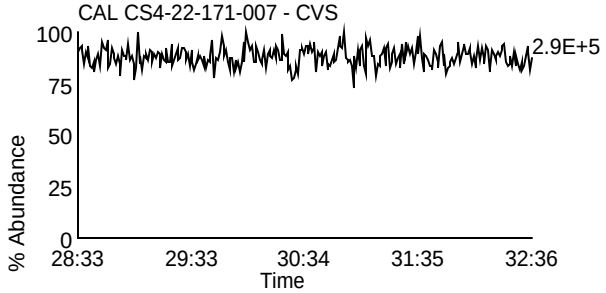
Data File: L230610A_05 G2 C11 - 369.8918
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G2 C12 - 409.7974
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G2 C6 - 354.9792
CAL CS4-22-171-007 - CVS

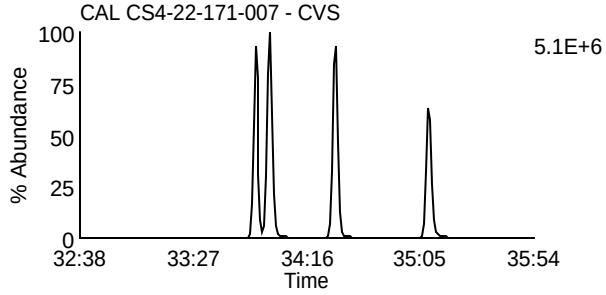


Homologue Group: Hexas

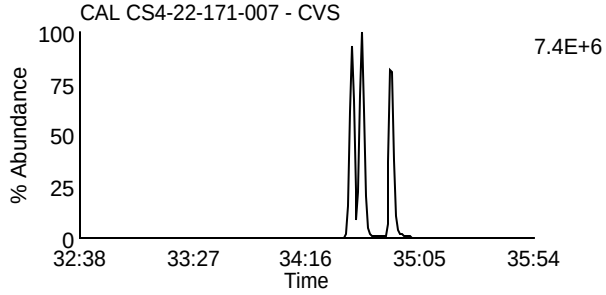
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

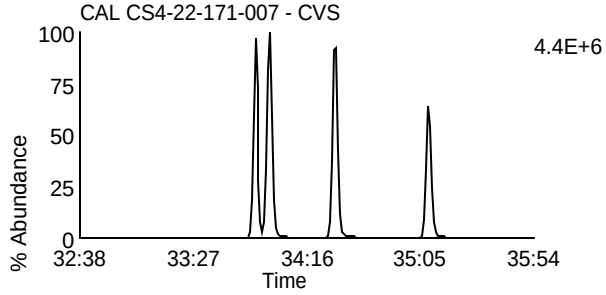
Data File: L230610A_05 G3 C1 - 373.8207
CAL CS4-22-171-007 - CVS



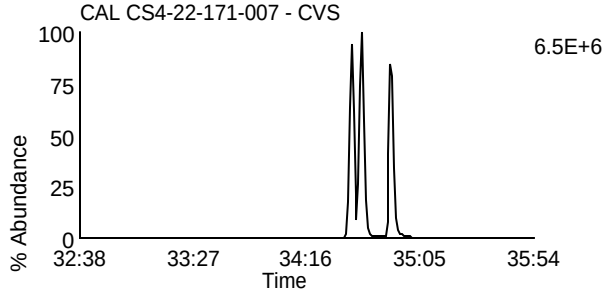
Data File: L230610A_05 G3 C7 - 389.8156
CAL CS4-22-171-007 - CVS



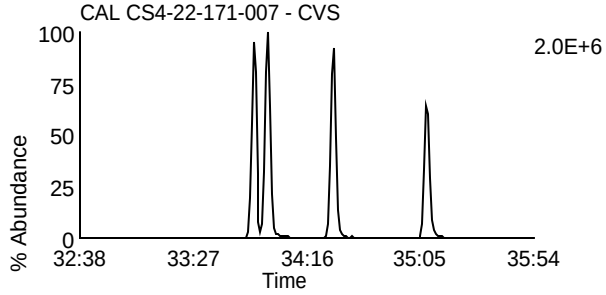
Data File: L230610A_05 G3 C2 - 375.8178
CAL CS4-22-171-007 - CVS



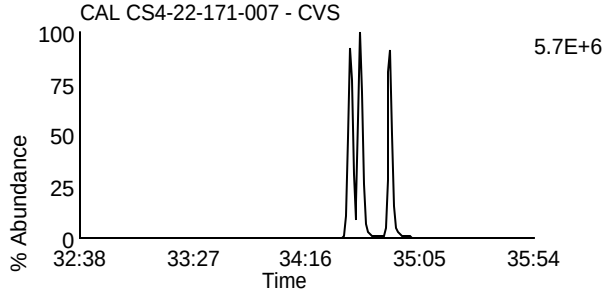
Data File: L230610A_05 G3 C8 - 391.8127
CAL CS4-22-171-007 - CVS



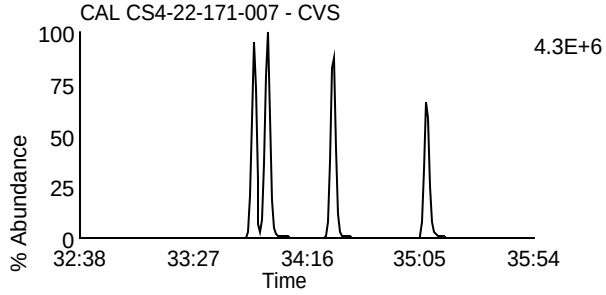
Data File: L230610A_05 G3 C5 - 383.8639
CAL CS4-22-171-007 - CVS



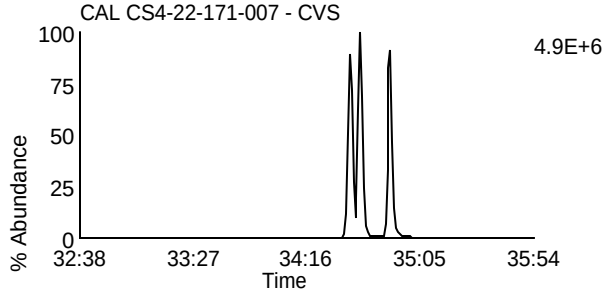
Data File: L230610A_05 G3 C9 - 401.8559
CAL CS4-22-171-007 - CVS



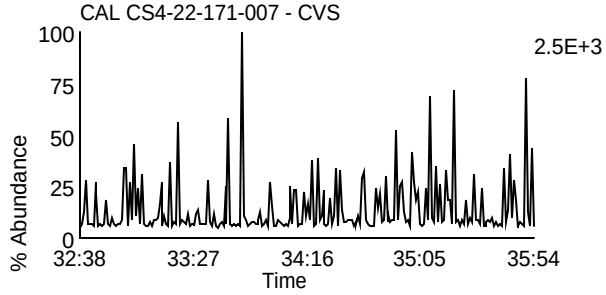
Data File: L230610A_05 G3 C6 - 385.861
CAL CS4-22-171-007 - CVS



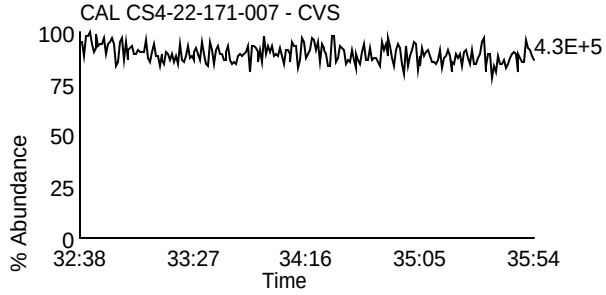
Data File: L230610A_05 G3 C10 - 403.8529
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G3 C11 - 445.7555
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G3 C3 - 380.976
CAL CS4-22-171-007 - CVS

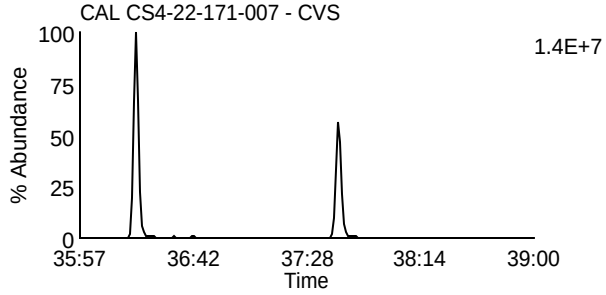


Homologue Group: Heptas

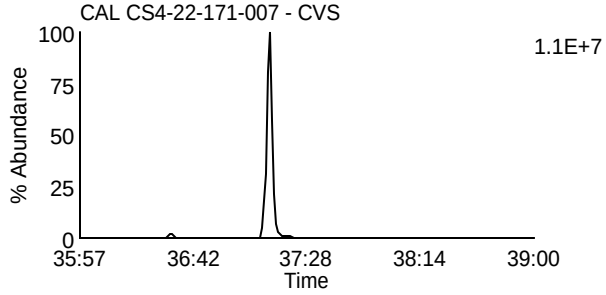
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

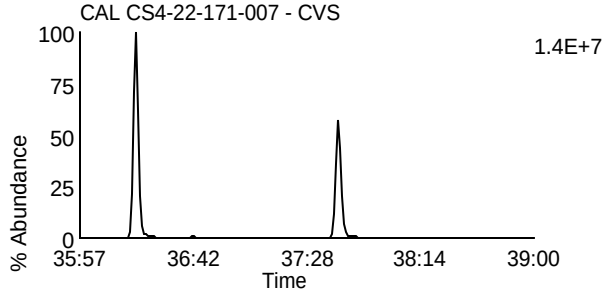
Data File: L230610A_05 G4 C3 - 407.7818
CAL CS4-22-171-007 - CVS



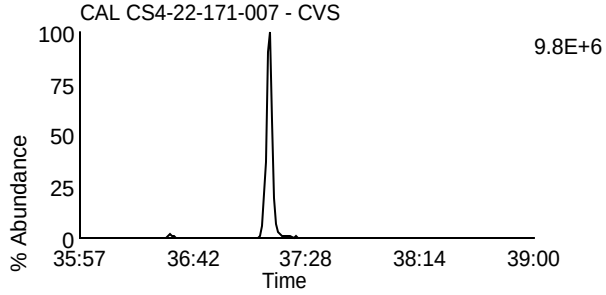
Data File: L230610A_05 G4 C8 - 423.7767
CAL CS4-22-171-007 - CVS



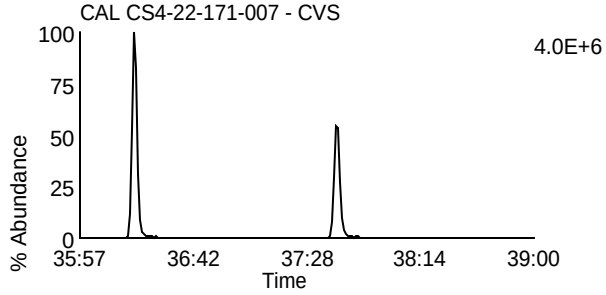
Data File: L230610A_05 G4 C4 - 409.7788
CAL CS4-22-171-007 - CVS



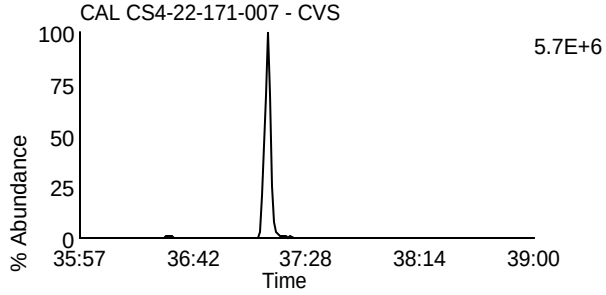
Data File: L230610A_05 G4 C9 - 425.7737
CAL CS4-22-171-007 - CVS



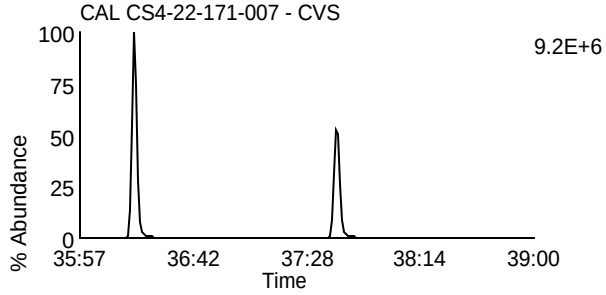
Data File: L230610A_05 G4 C6 - 417.825
CAL CS4-22-171-007 - CVS



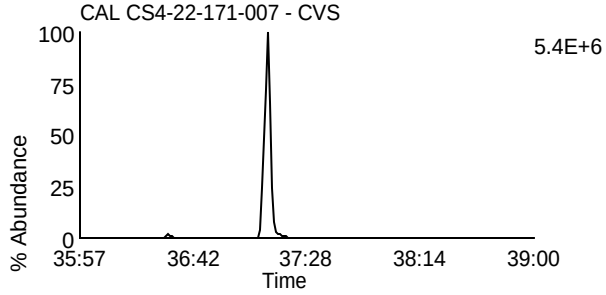
Data File: L230610A_05 G4 C11 - 435.8169
CAL CS4-22-171-007 - CVS



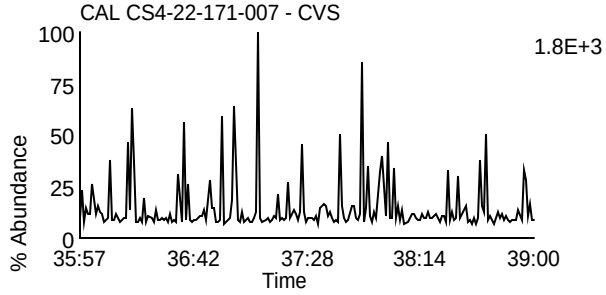
Data File: L230610A_05 G4 C7 - 419.822
CAL CS4-22-171-007 - CVS



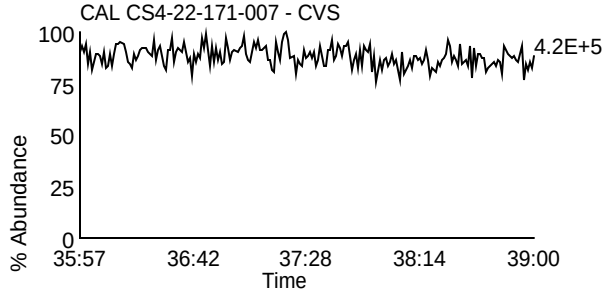
Data File: L230610A_05 G4 C12 - 437.814
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G4 C13 - 479.7165
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G4 C1 - 380.976
CAL CS4-22-171-007 - CVS

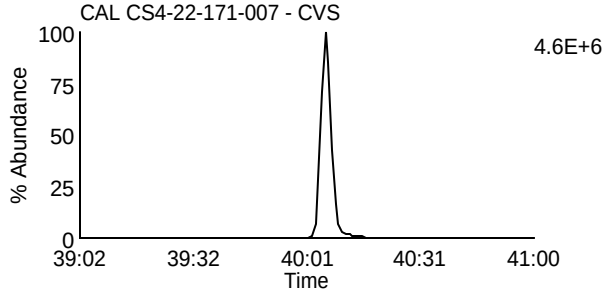


Homologue Group: Octas

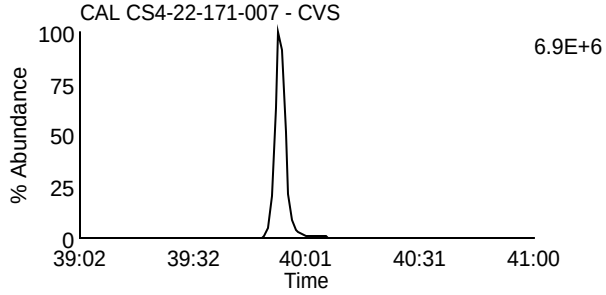
Data File Name: L230610A_05
Date Acquired: 6/10/2023
Sample Description: CAL CS4-22-171-007 - CVS

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR15 (L)

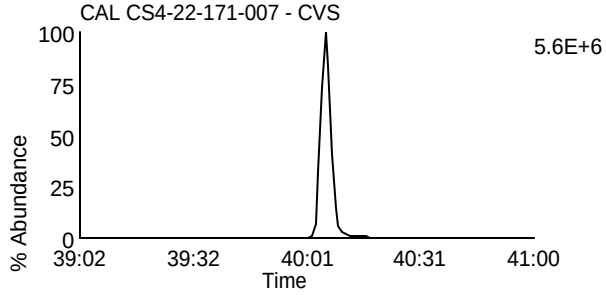
Data File: L230610A_05 G5 C4 - 441.7428
CAL CS4-22-171-007 - CVS



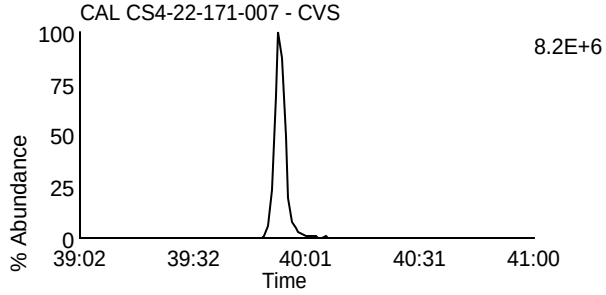
Data File: L230610A_05 G5 C8 - 457.7377
CAL CS4-22-171-007 - CVS



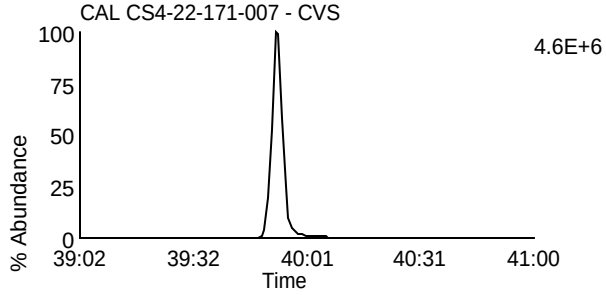
Data File: L230610A_05 G5 C5 - 443.7398
CAL CS4-22-171-007 - CVS



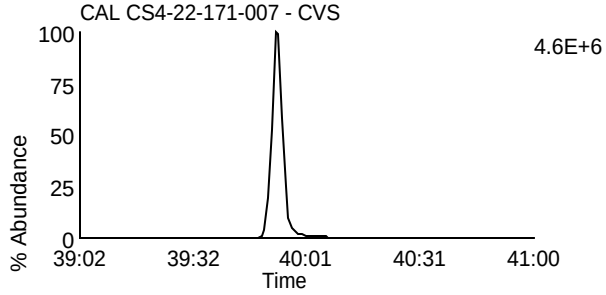
Data File: L230610A_05 G5 C9 - 459.7347
CAL CS4-22-171-007 - CVS



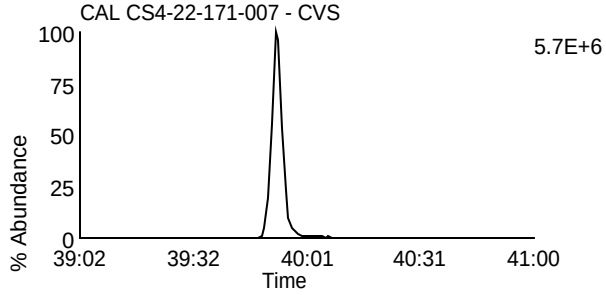
Data File: L230610A_05 G5 C11 - 469.7779
CAL CS4-22-171-007 - CVS



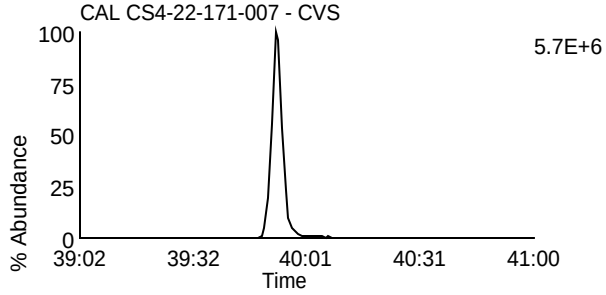
Data File: L230610A_05 G5 C11 - 469.7779
CAL CS4-22-171-007 - CVS



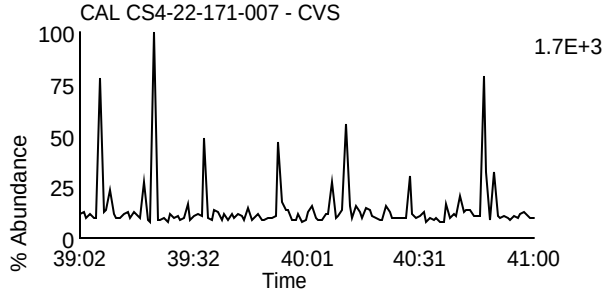
Data File: L230610A_05 G5 C12 - 471.7749
CAL CS4-22-171-007 - CVS



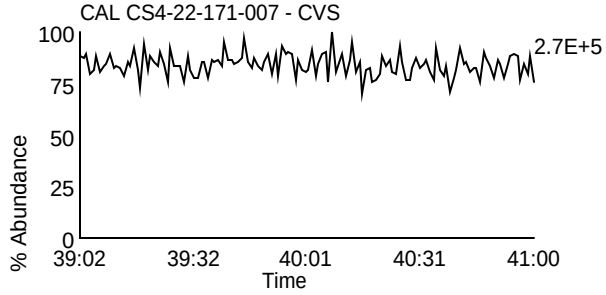
Data File: L230610A_05 G5 C12 - 471.7749
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G5 C13 - 513.6775
CAL CS4-22-171-007 - CVS



Data File: L230610A_05 G5 C2 - 430.9728
CAL CS4-22-171-007 - CVS

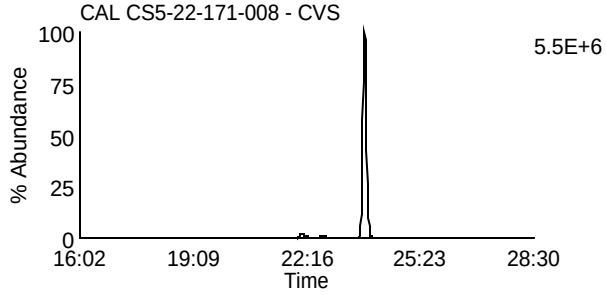


Homologue Group: Tetras

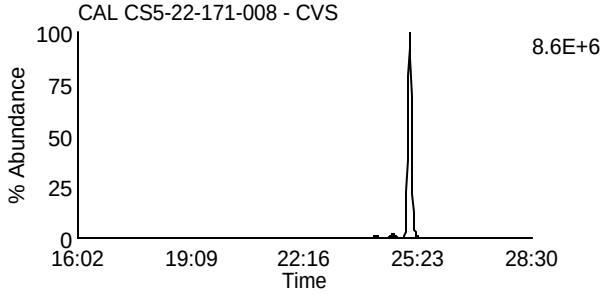
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

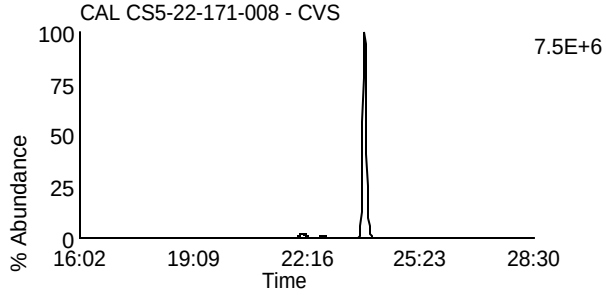
Data File: L230610A_04 G1 C1 - 303.9016
CAL CS5-22-171-008 - CVS



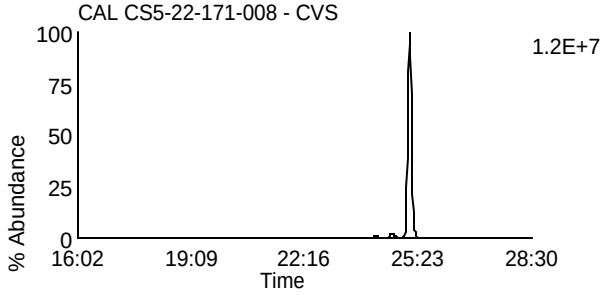
Data File: L230610A_04 G1 C7 - 319.8965
CAL CS5-22-171-008 - CVS



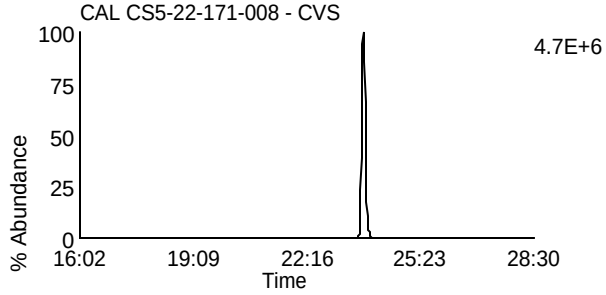
Data File: L230610A_04 G1 C2 - 305.8987
CAL CS5-22-171-008 - CVS



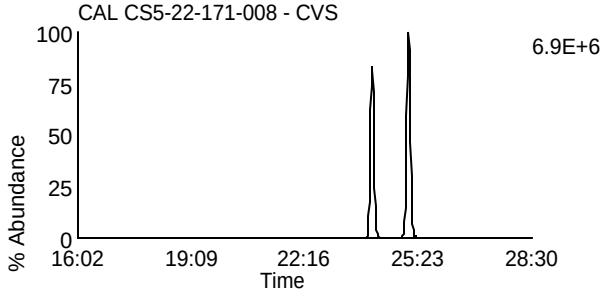
Data File: L230610A_04 G1 C8 - 321.8936
CAL CS5-22-171-008 - CVS



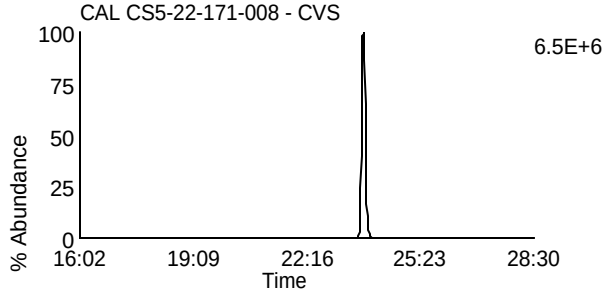
Data File: L230610A_04 G1 C3 - 315.9418
CAL CS5-22-171-008 - CVS



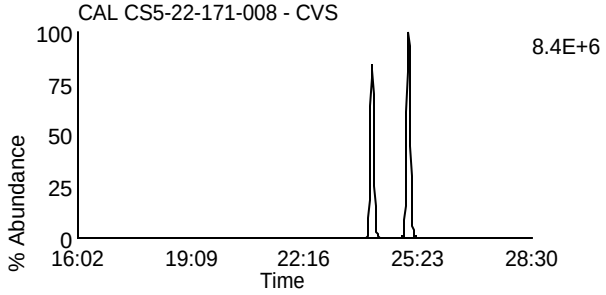
Data File: L230610A_04 G1 C10 - 331.9367
CAL CS5-22-171-008 - CVS



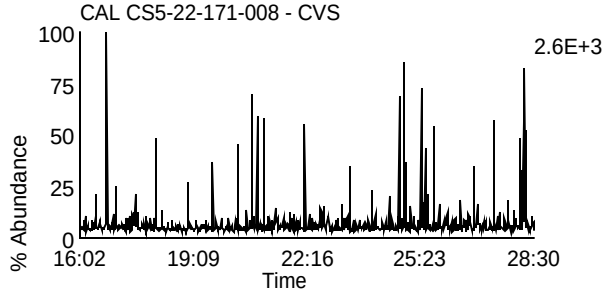
Data File: L230610A_04 G1 C4 - 317.9389
CAL CS5-22-171-008 - CVS



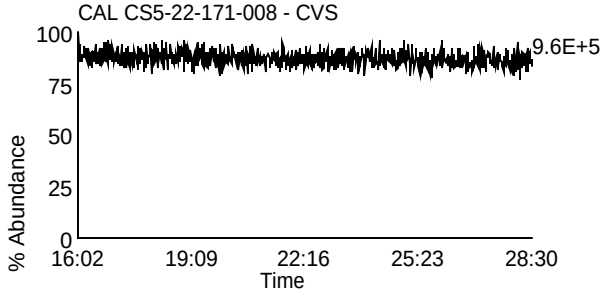
Data File: L230610A_04 G1 C11 - 333.9338
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C14 - 375.8364
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C5 - 318.9792
CAL CS5-22-171-008 - CVS

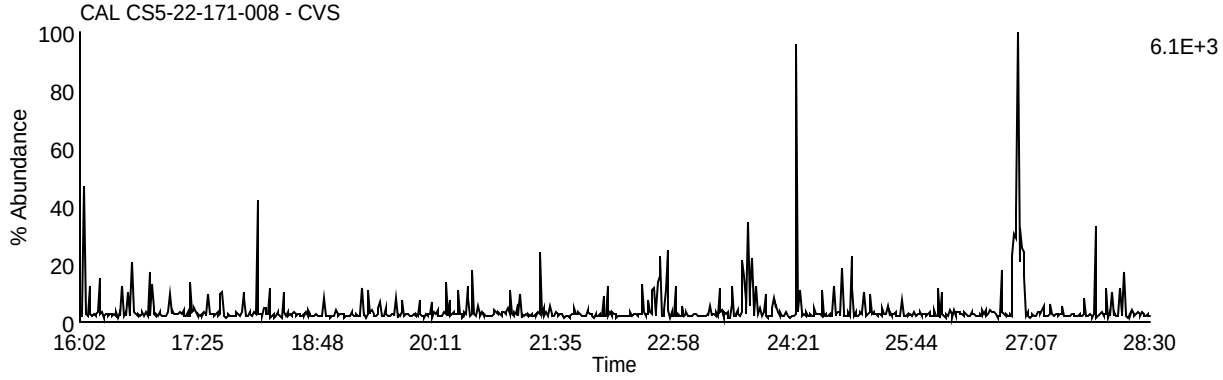


Homologue Group: Penta & Cleanup

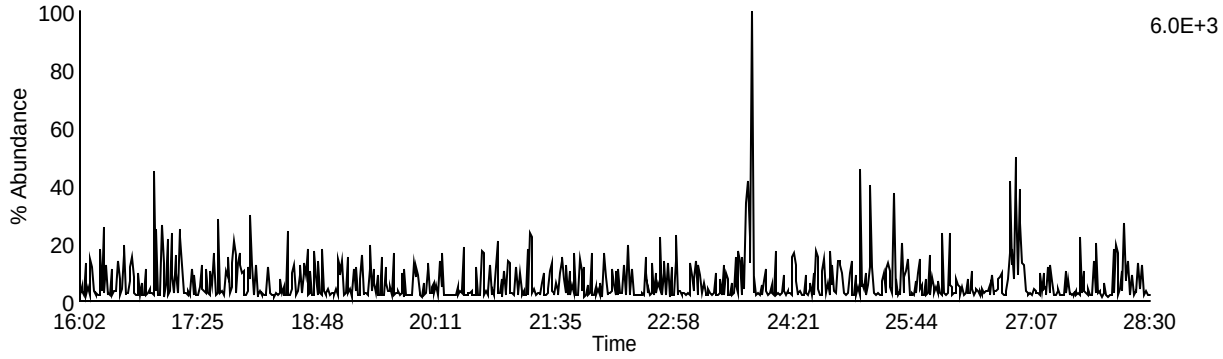
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

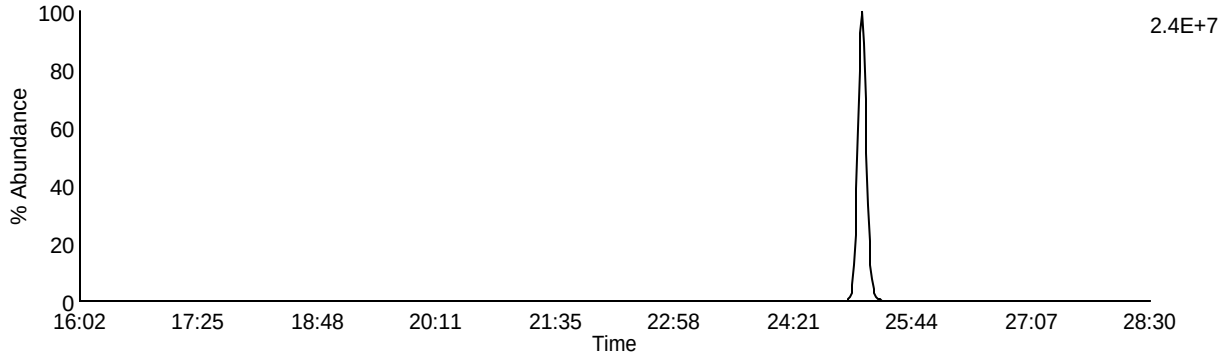
Data File: L230610A_04 G1 C12 - 339.8597
CAL CS5-22-171-008 - CVS



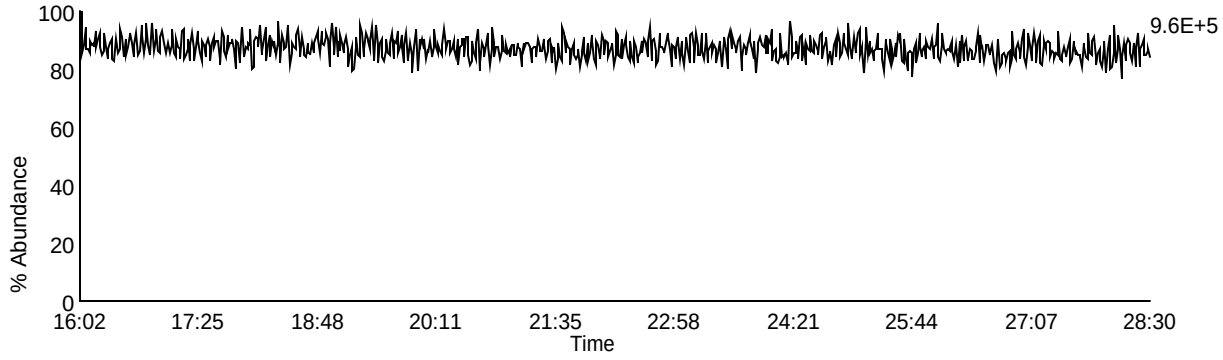
Data File: L230610A_04 G1 C13 - 341.8567
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C9 - 327.8847
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G1 C5 - 318.9792
CAL CS5-22-171-008 - CVS

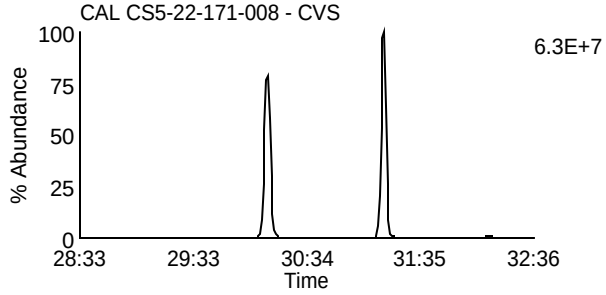


Homologue Group: Pentas

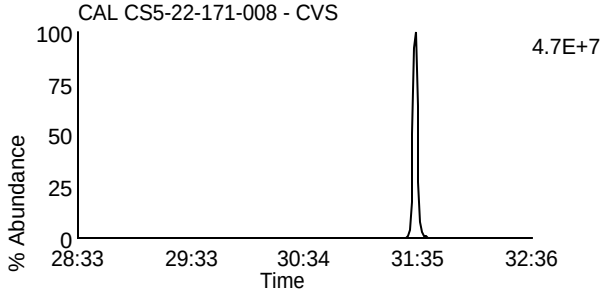
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

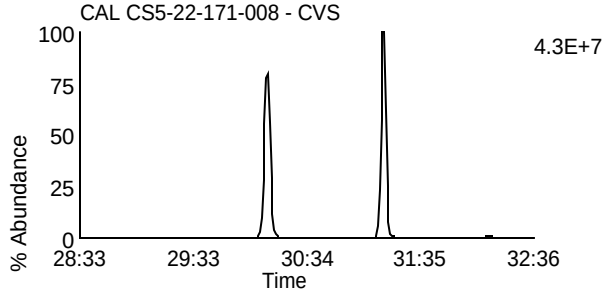
Data File: L230610A_04 G2 C1 - 339.8597
CAL CS5-22-171-008 - CVS



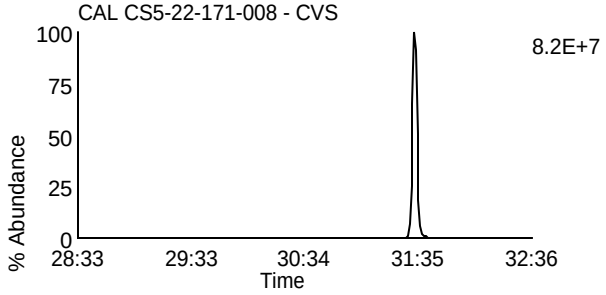
Data File: L230610A_04 G2 C4 - 353.8576
CAL CS5-22-171-008 - CVS



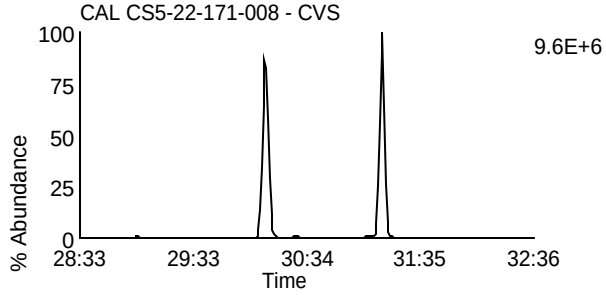
Data File: L230610A_04 G2 C2 - 341.8567
CAL CS5-22-171-008 - CVS



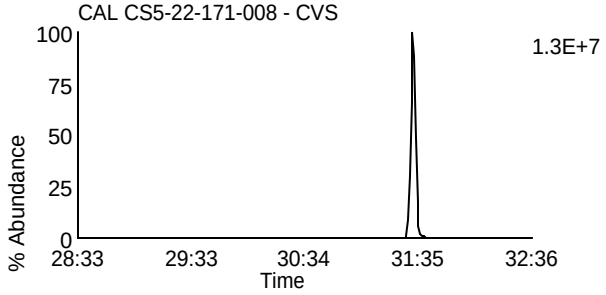
Data File: L230610A_04 G2 C8 - 355.8546
CAL CS5-22-171-008 - CVS



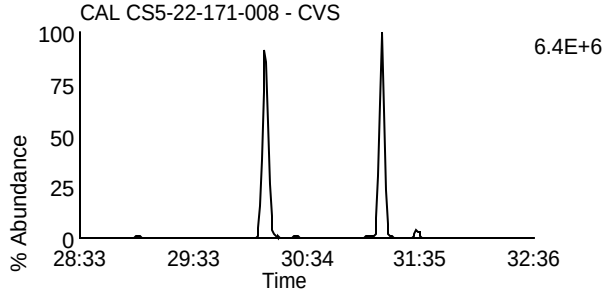
Data File: L230610A_04 G2 C3 - 351.8999
CAL CS5-22-171-008 - CVS



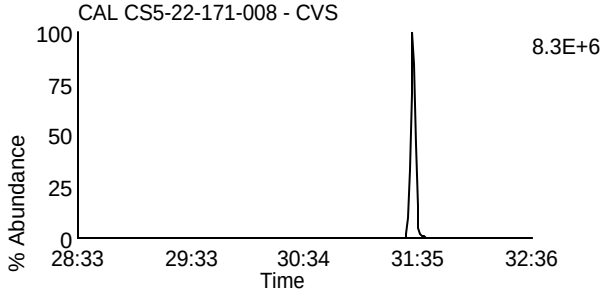
Data File: L230610A_04 G2 C10 - 367.8948
CAL CS5-22-171-008 - CVS



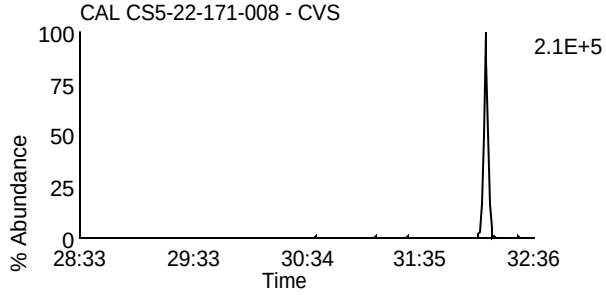
Data File: L230610A_04 G2 C5 - 353.8969
CAL CS5-22-171-008 - CVS



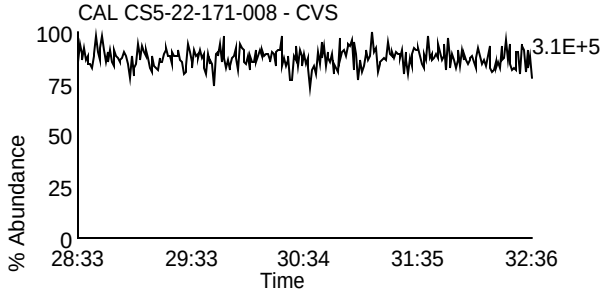
Data File: L230610A_04 G2 C11 - 369.8918
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G2 C12 - 409.7974
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G2 C6 - 354.9792
CAL CS5-22-171-008 - CVS

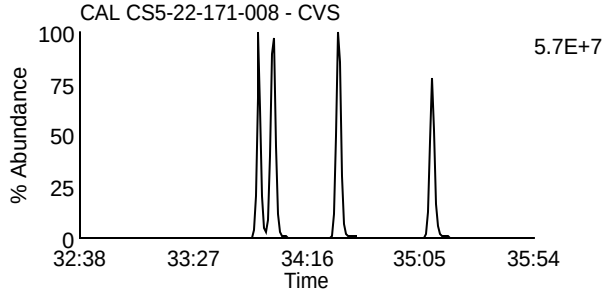


Homologue Group: Hexas

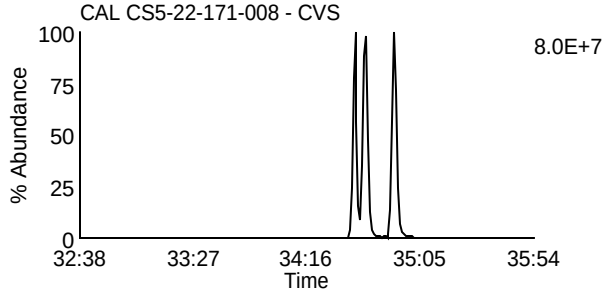
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

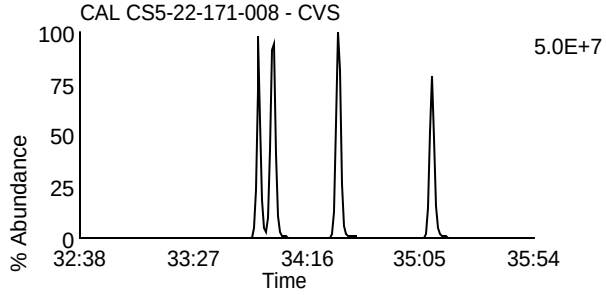
Data File: L230610A_04 G3 C1 - 373.8207
CAL CS5-22-171-008 - CVS



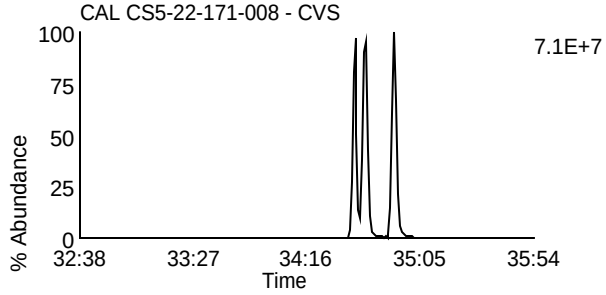
Data File: L230610A_04 G3 C7 - 389.8156
CAL CS5-22-171-008 - CVS



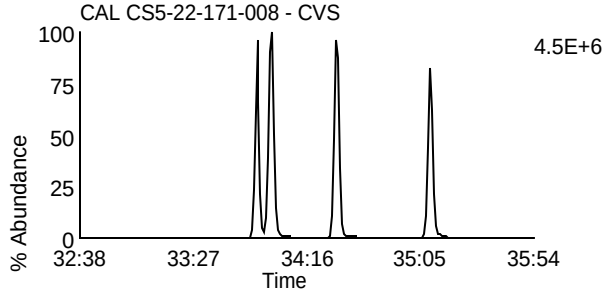
Data File: L230610A_04 G3 C2 - 375.8178
CAL CS5-22-171-008 - CVS



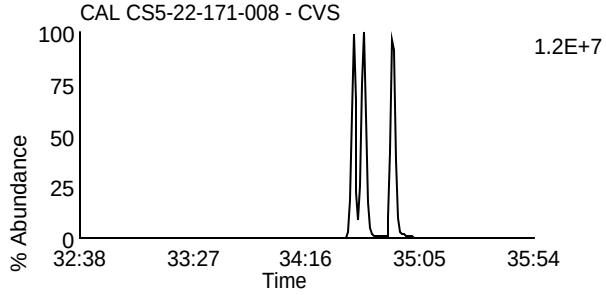
Data File: L230610A_04 G3 C8 - 391.8127
CAL CS5-22-171-008 - CVS



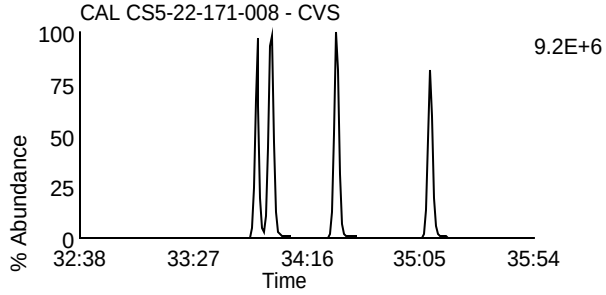
Data File: L230610A_04 G3 C5 - 383.8639
CAL CS5-22-171-008 - CVS



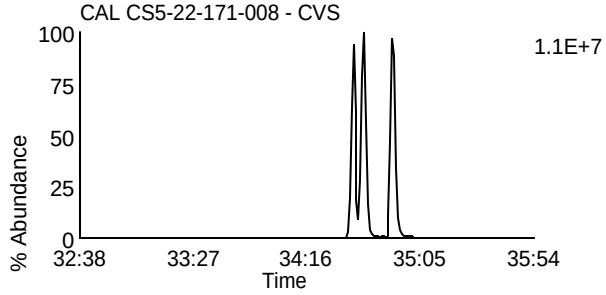
Data File: L230610A_04 G3 C9 - 401.8559
CAL CS5-22-171-008 - CVS



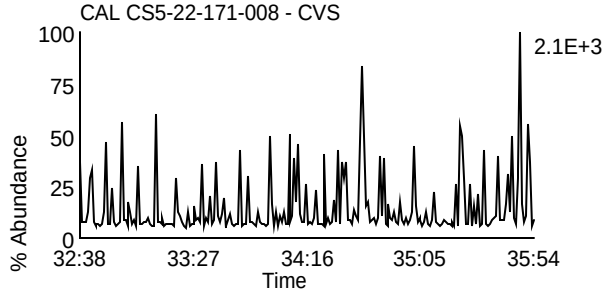
Data File: L230610A_04 G3 C6 - 385.861
CAL CS5-22-171-008 - CVS



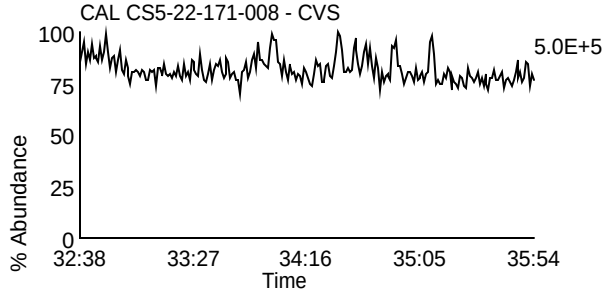
Data File: L230610A_04 G3 C10 - 403.8529
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G3 C11 - 445.7555
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G3 C3 - 380.976
CAL CS5-22-171-008 - CVS

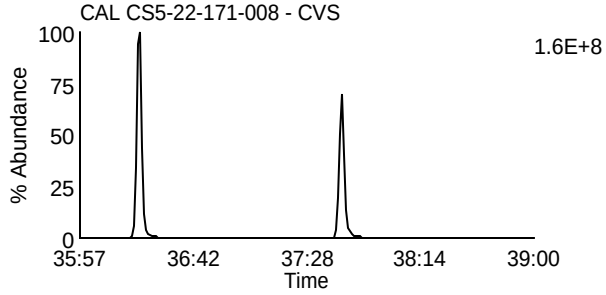


Homologue Group: Heptas

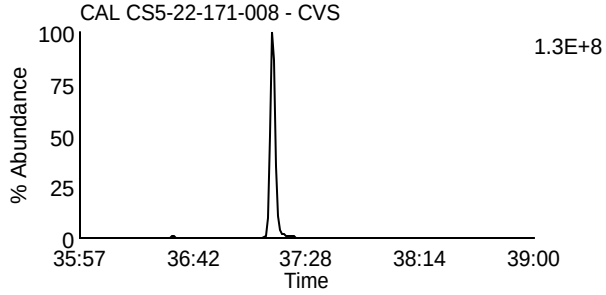
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

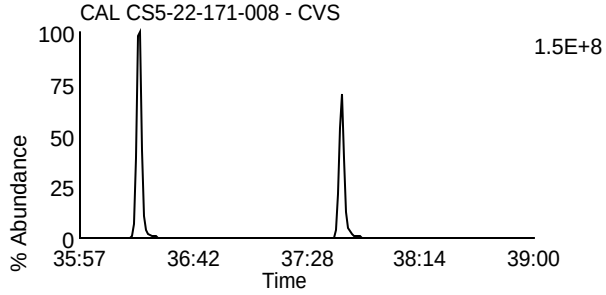
Data File: L230610A_04 G4 C3 - 407.7818
CAL CS5-22-171-008 - CVS



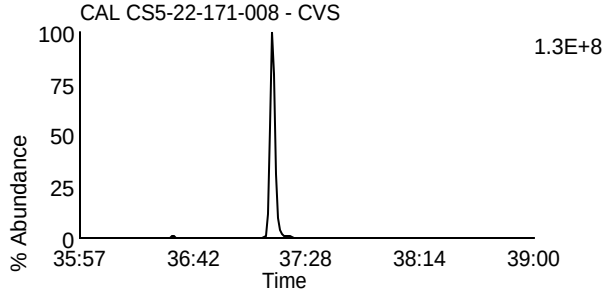
Data File: L230610A_04 G4 C8 - 423.7767
CAL CS5-22-171-008 - CVS



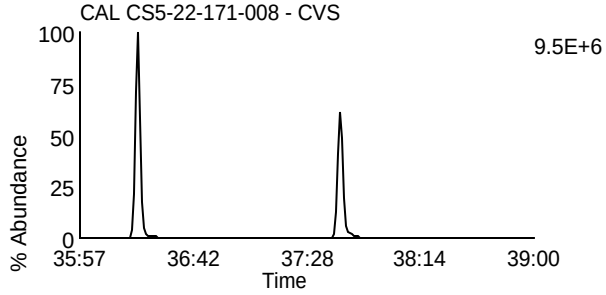
Data File: L230610A_04 G4 C4 - 409.7788
CAL CS5-22-171-008 - CVS



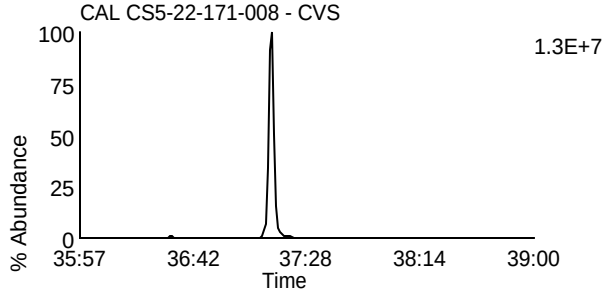
Data File: L230610A_04 G4 C9 - 425.7737
CAL CS5-22-171-008 - CVS



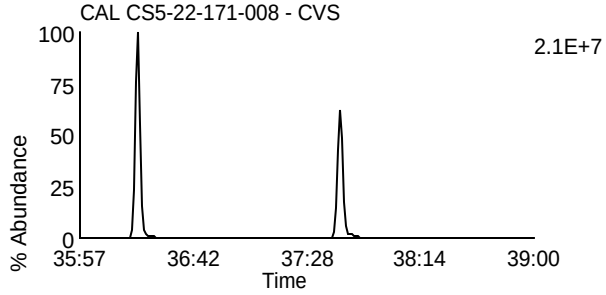
Data File: L230610A_04 G4 C6 - 417.825
CAL CS5-22-171-008 - CVS



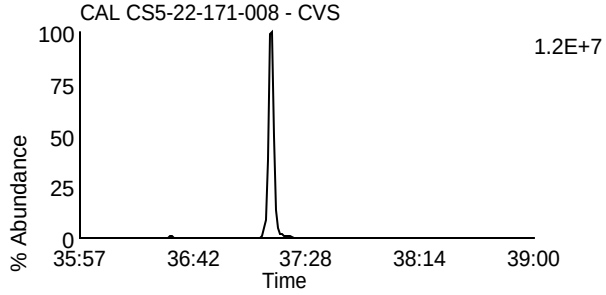
Data File: L230610A_04 G4 C11 - 435.8169
CAL CS5-22-171-008 - CVS



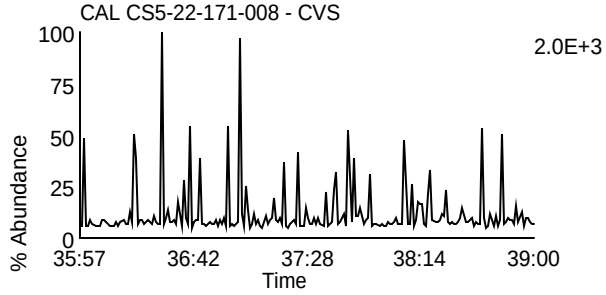
Data File: L230610A_04 G4 C7 - 419.822
CAL CS5-22-171-008 - CVS



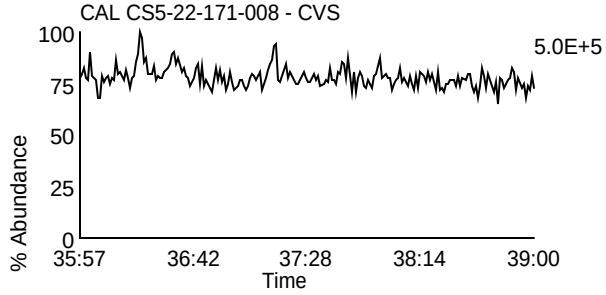
Data File: L230610A_04 G4 C12 - 437.814
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G4 C13 - 479.7165
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G4 C1 - 380.976
CAL CS5-22-171-008 - CVS

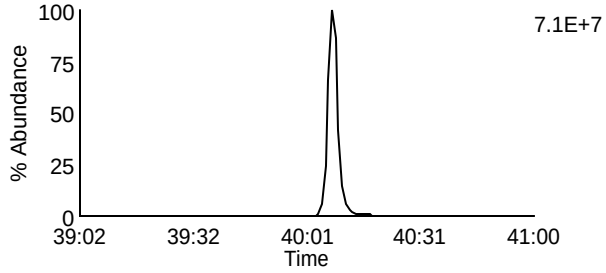


Homologue Group: Octas

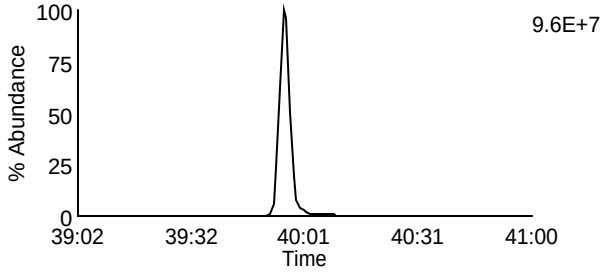
Data File Name: L230610A_04
Date Acquired: 6/10/2023
Sample Description: CAL CS5-22-171-008 - CVS

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR15 (L)

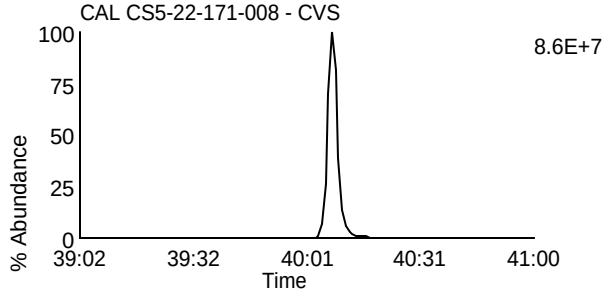
Data File: L230610A_04 G5 C4 - 441.7428
CAL CS5-22-171-008 - CVS



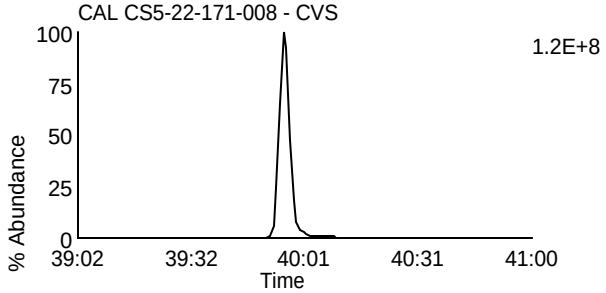
Data File: L230610A_04 G5 C8 - 457.7377
CAL CS5-22-171-008 - CVS



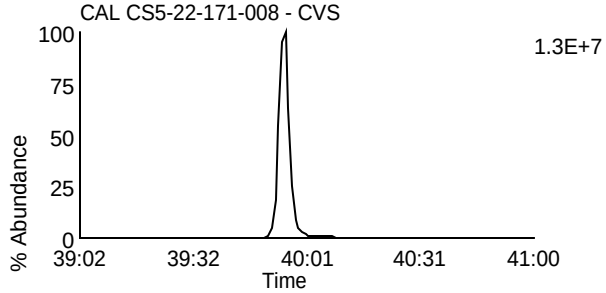
Data File: L230610A_04 G5 C5 - 443.7398
CAL CS5-22-171-008 - CVS



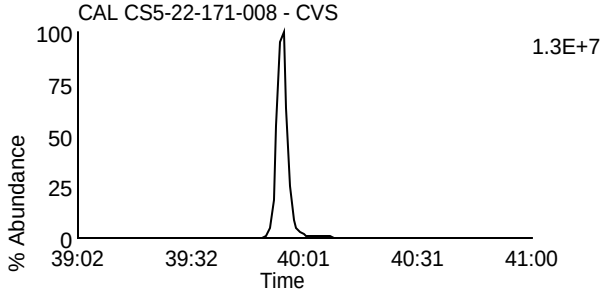
Data File: L230610A_04 G5 C9 - 459.7347
CAL CS5-22-171-008 - CVS



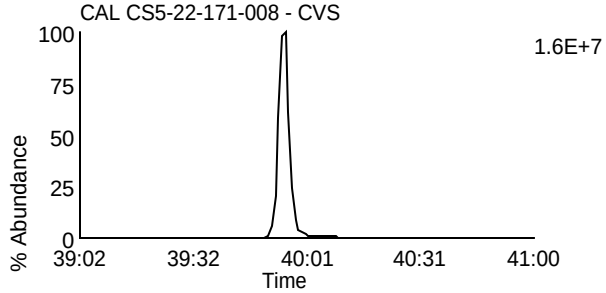
Data File: L230610A_04 G5 C11 - 469.7779
CAL CS5-22-171-008 - CVS



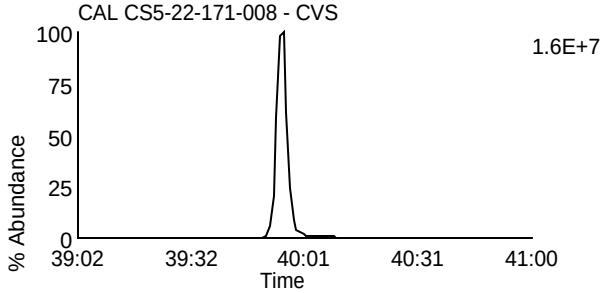
Data File: L230610A_04 G5 C11 - 469.7779
CAL CS5-22-171-008 - CVS



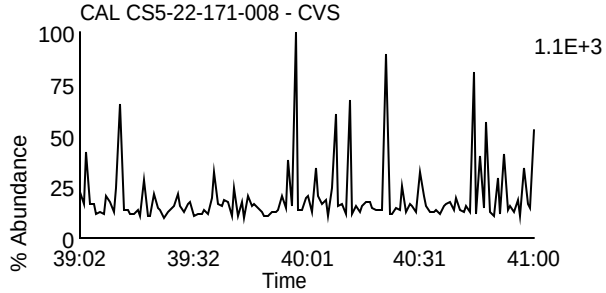
Data File: L230610A_04 G5 C12 - 471.7749
CAL CS5-22-171-008 - CVS



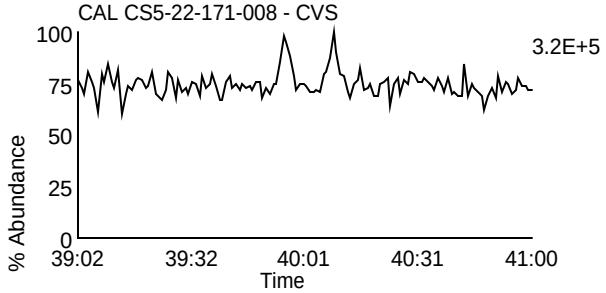
Data File: L230610A_04 G5 C12 - 471.7749
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G5 C13 - 513.6775
CAL CS5-22-171-008 - CVS



Data File: L230610A_04 G5 C2 - 430.9728
CAL CS5-22-171-008 - CVS

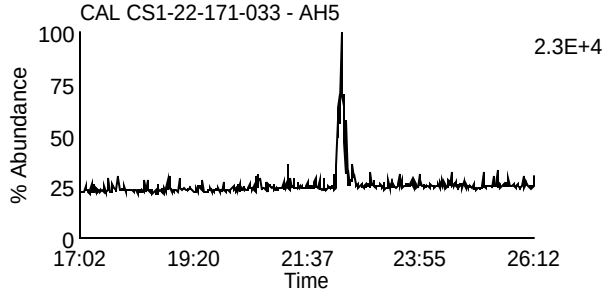


Homologue Group: Tetras

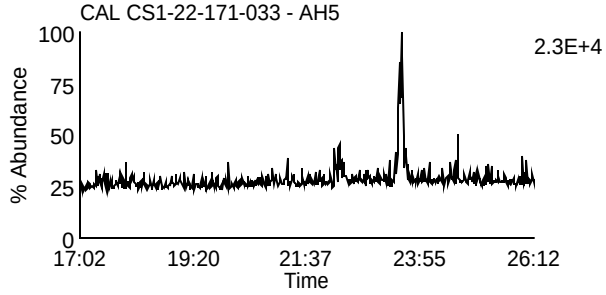
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

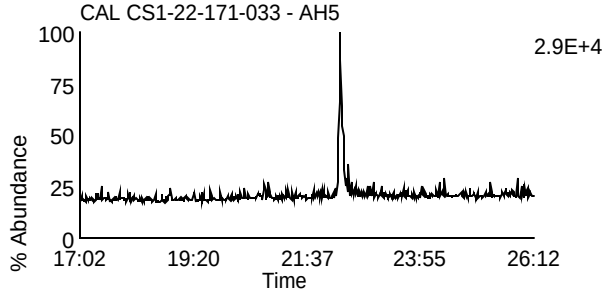
Data File: U230524B_04 G1 C1 - 303.9016
CAL CS1-22-171-033 - AH5



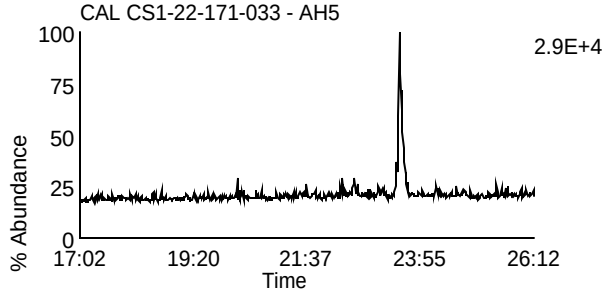
Data File: U230524B_04 G1 C7 - 319.8965
CAL CS1-22-171-033 - AH5



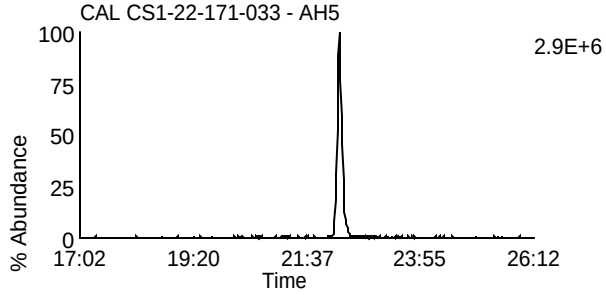
Data File: U230524B_04 G1 C2 - 305.8987
CAL CS1-22-171-033 - AH5



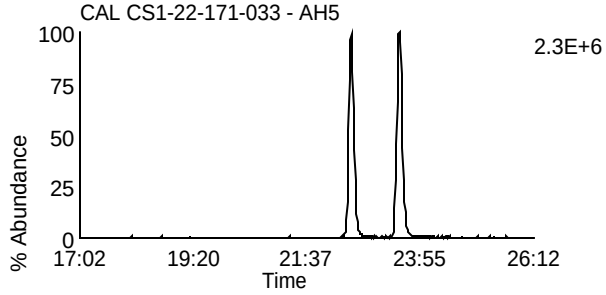
Data File: U230524B_04 G1 C8 - 321.8936
CAL CS1-22-171-033 - AH5



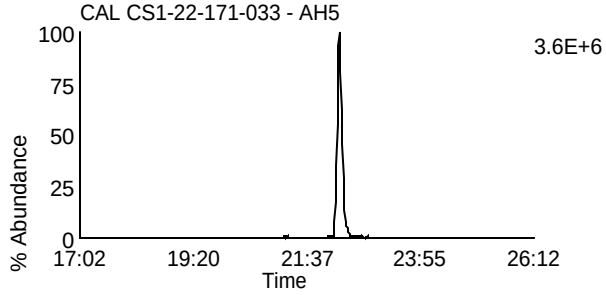
Data File: U230524B_04 G1 C3 - 315.9418
CAL CS1-22-171-033 - AH5



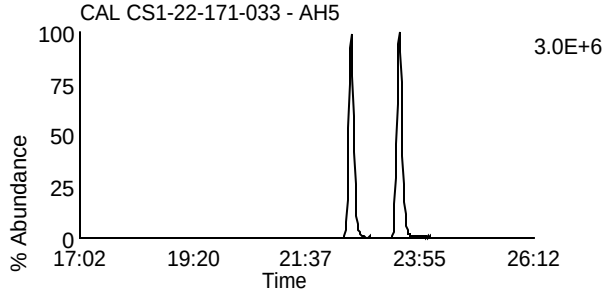
Data File: U230524B_04 G1 C10 - 331.9367
CAL CS1-22-171-033 - AH5



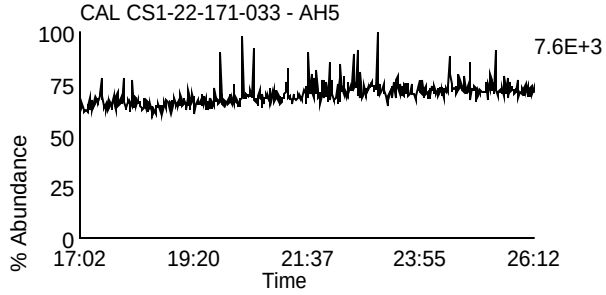
Data File: U230524B_04 G1 C4 - 317.9389
CAL CS1-22-171-033 - AH5



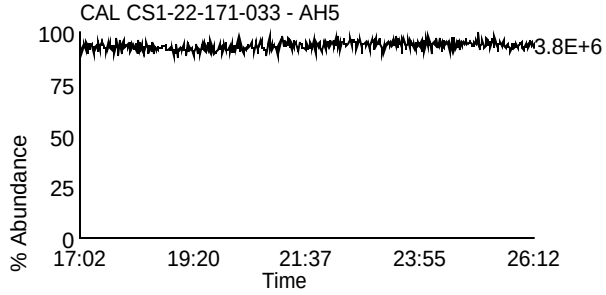
Data File: U230524B_04 G1 C11 - 333.9338
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C14 - 375.8364
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C5 - 318.9792
CAL CS1-22-171-033 - AH5

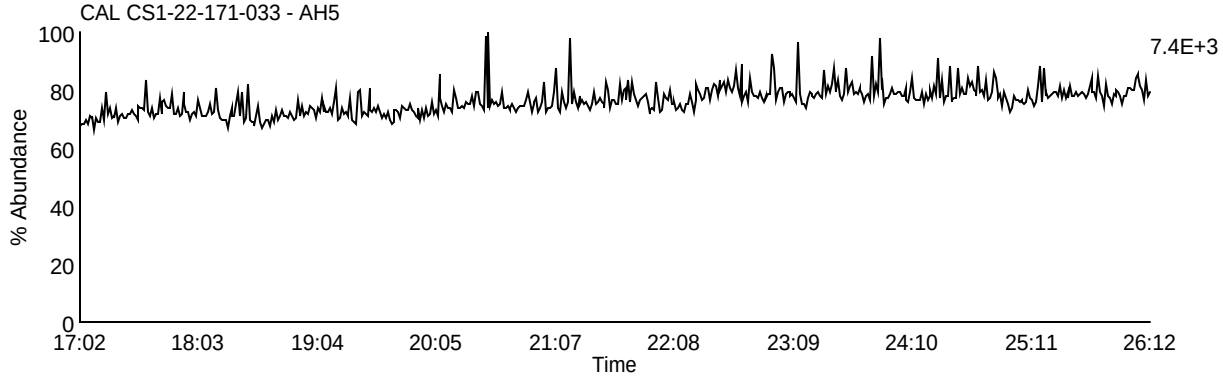


Homologue Group: Penta & Cleanup

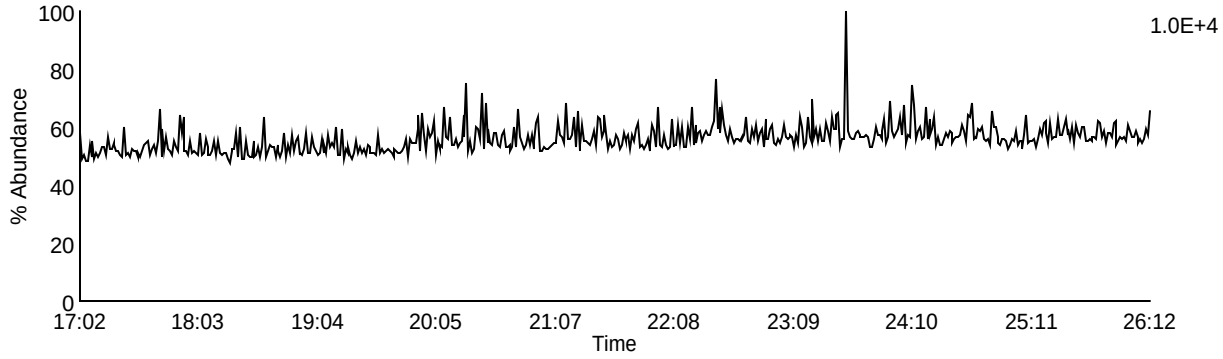
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

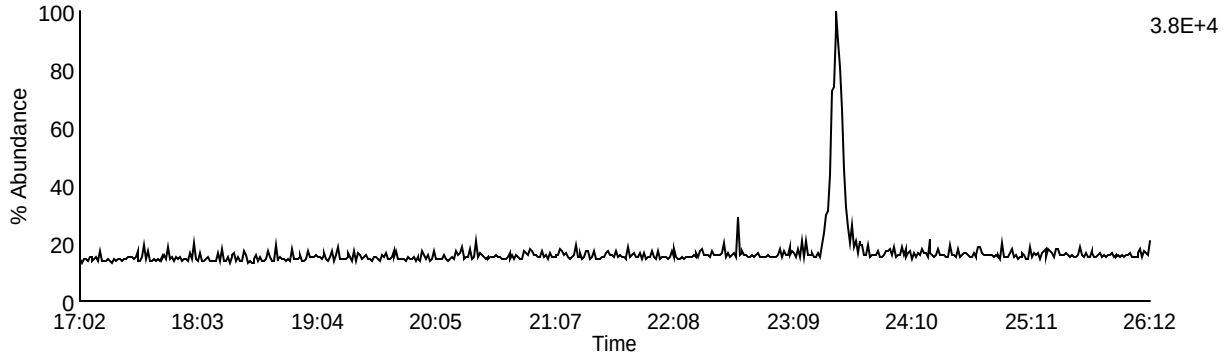
Data File: U230524B_04 G1 C12 - 339.8597
CAL CS1-22-171-033 - AH5



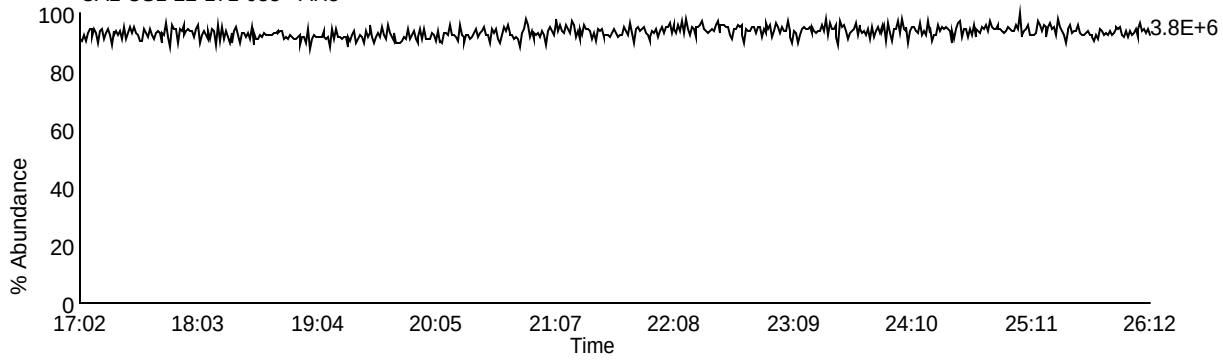
Data File: U230524B_04 G1 C13 - 341.8567
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C9 - 327.8847
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G1 C5 - 318.9792
CAL CS1-22-171-033 - AH5

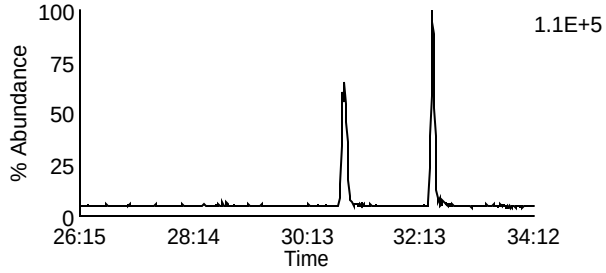


Homologue Group: Pentas

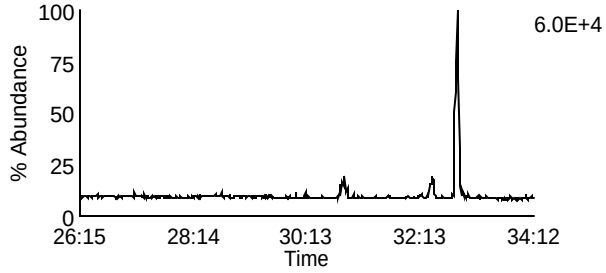
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

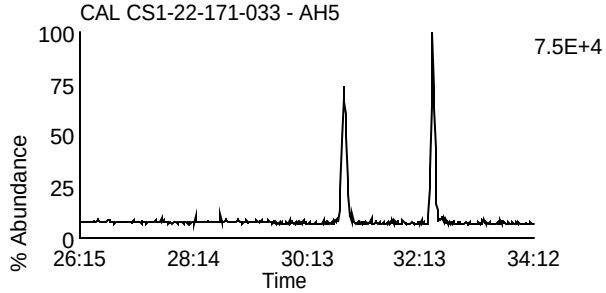
Data File: U230524B_04 G2 C1 - 339.8597
CAL CS1-22-171-033 - AH5



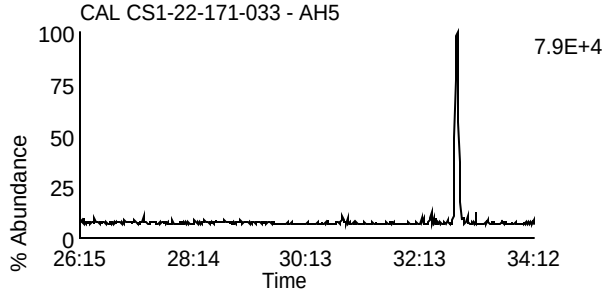
Data File: U230524B_04 G2 C4 - 353.8576
CAL CS1-22-171-033 - AH5



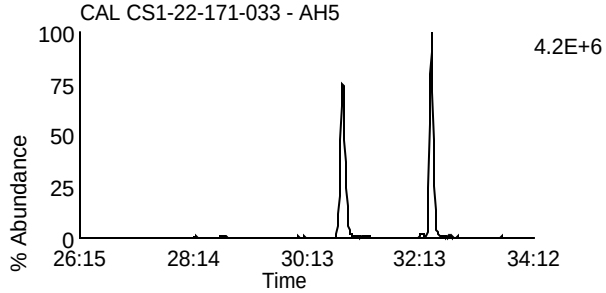
Data File: U230524B_04 G2 C2 - 341.8567
CAL CS1-22-171-033 - AH5



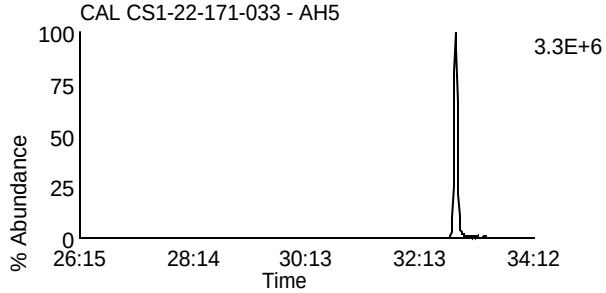
Data File: U230524B_04 G2 C8 - 355.8546
CAL CS1-22-171-033 - AH5



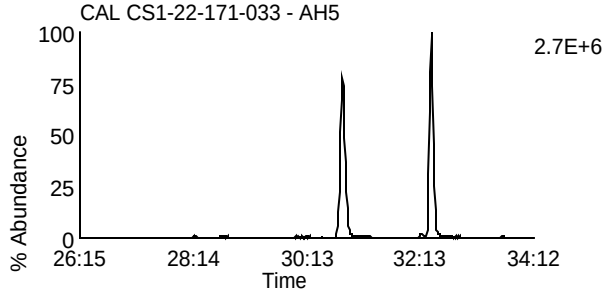
Data File: U230524B_04 G2 C3 - 351.8999
CAL CS1-22-171-033 - AH5



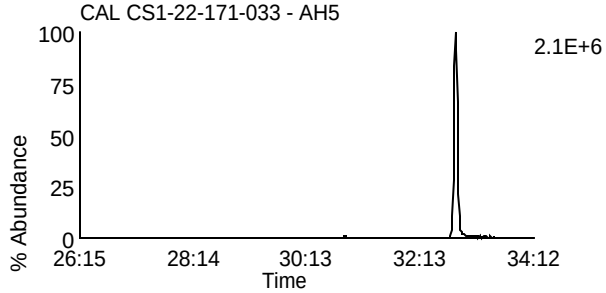
Data File: U230524B_04 G2 C10 - 367.8948
CAL CS1-22-171-033 - AH5



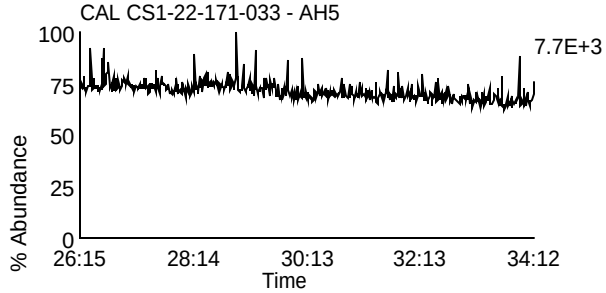
Data File: U230524B_04 G2 C5 - 353.8969
CAL CS1-22-171-033 - AH5



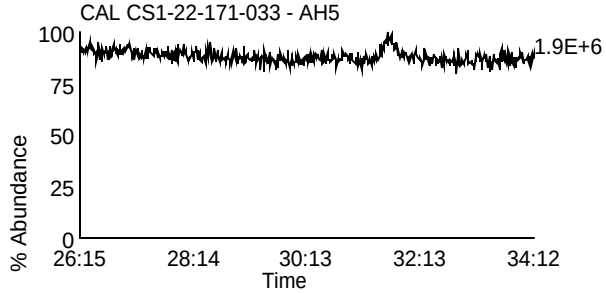
Data File: U230524B_04 G2 C11 - 369.8918
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G2 C12 - 409.7974
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G2 C6 - 354.9792
CAL CS1-22-171-033 - AH5

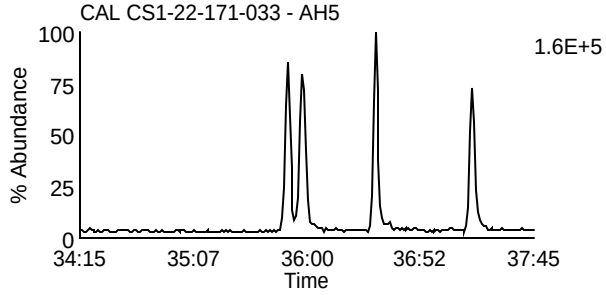


Homologue Group: Hexas

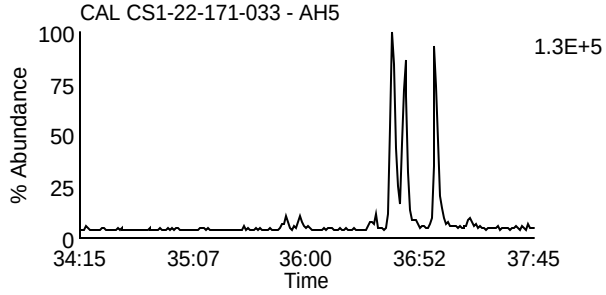
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

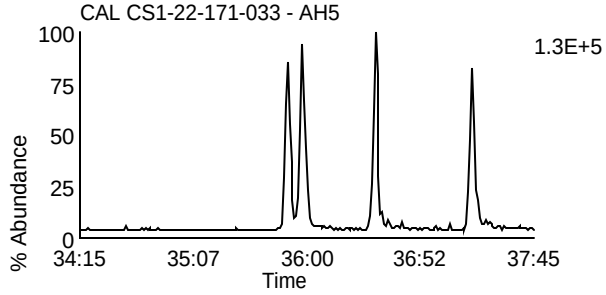
Data File: U230524B_04 G3 C1 - 373.8207
CAL CS1-22-171-033 - AH5



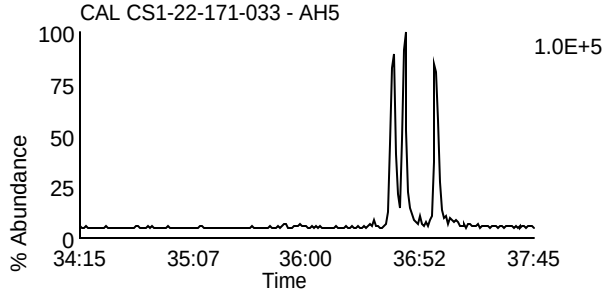
Data File: U230524B_04 G3 C7 - 389.8156
CAL CS1-22-171-033 - AH5



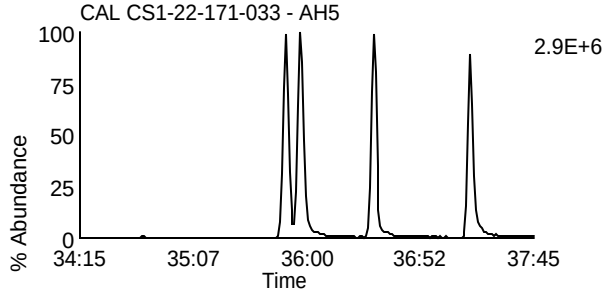
Data File: U230524B_04 G3 C2 - 375.8178
CAL CS1-22-171-033 - AH5



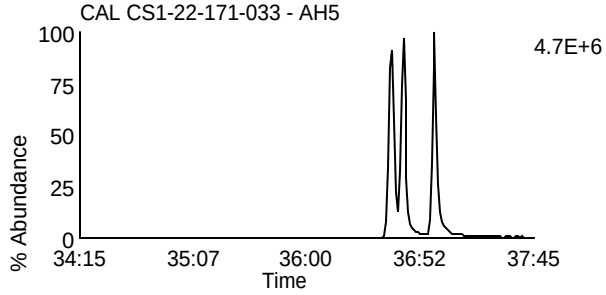
Data File: U230524B_04 G3 C8 - 391.8127
CAL CS1-22-171-033 - AH5



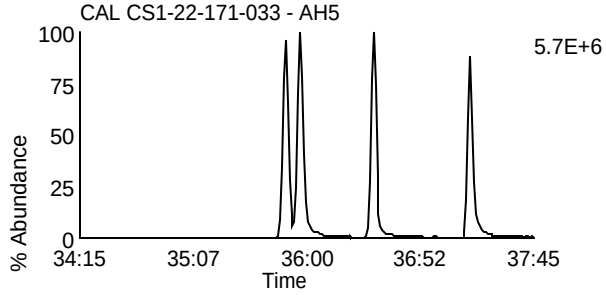
Data File: U230524B_04 G3 C5 - 383.8639
CAL CS1-22-171-033 - AH5



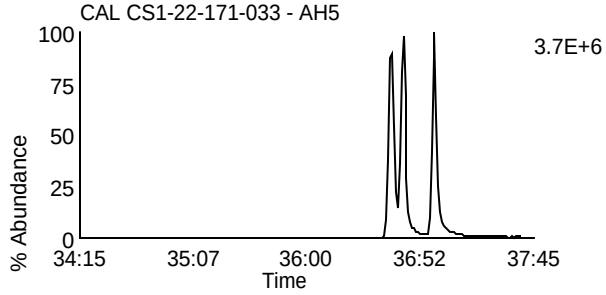
Data File: U230524B_04 G3 C9 - 401.8559
CAL CS1-22-171-033 - AH5



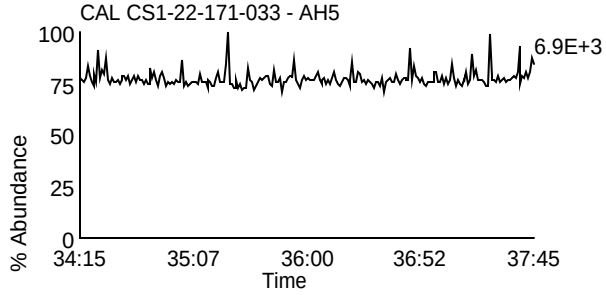
Data File: U230524B_04 G3 C6 - 385.861
CAL CS1-22-171-033 - AH5



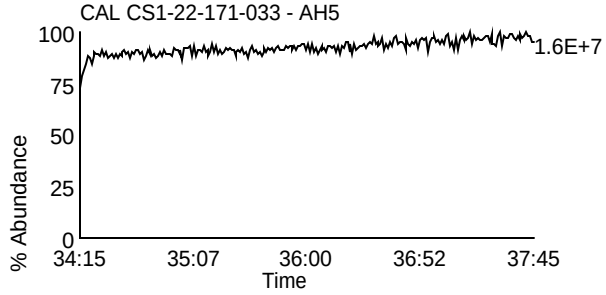
Data File: U230524B_04 G3 C10 - 403.8529
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G3 C11 - 445.7555
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G3 C3 - 380.976
CAL CS1-22-171-033 - AH5

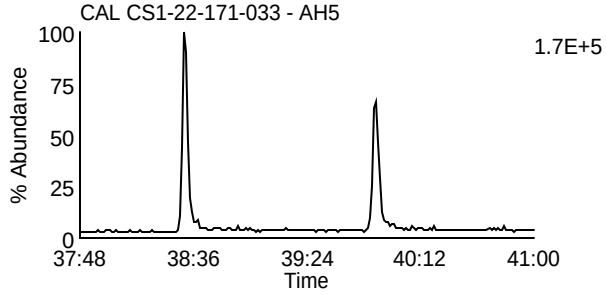


Homologue Group: Heptas

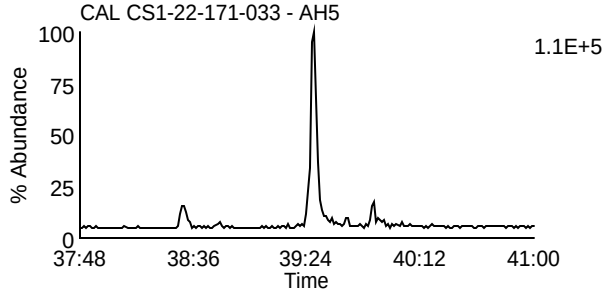
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

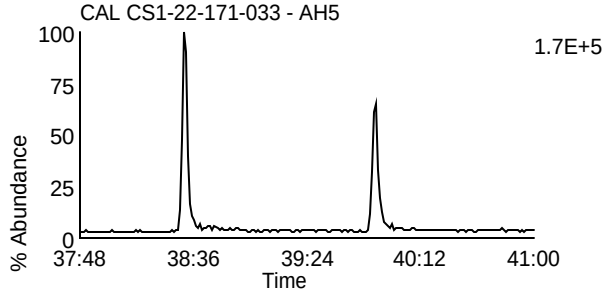
Data File: U230524B_04 G4 C3 - 407.7818
CAL CS1-22-171-033 - AH5



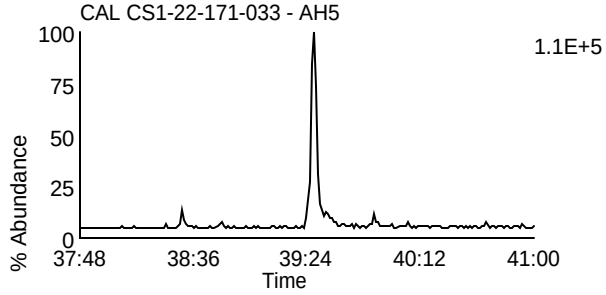
Data File: U230524B_04 G4 C8 - 423.7767
CAL CS1-22-171-033 - AH5



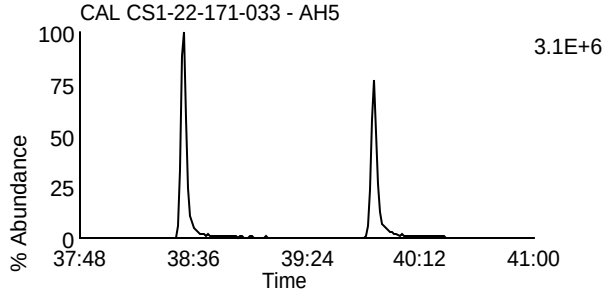
Data File: U230524B_04 G4 C4 - 409.7788
CAL CS1-22-171-033 - AH5



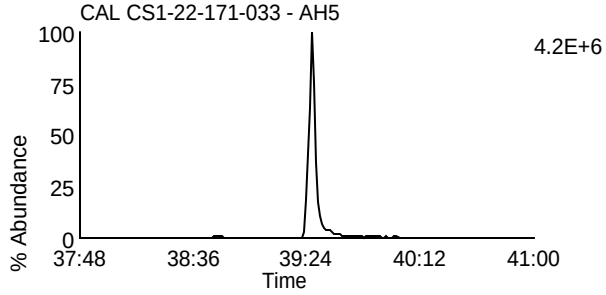
Data File: U230524B_04 G4 C9 - 425.7737
CAL CS1-22-171-033 - AH5



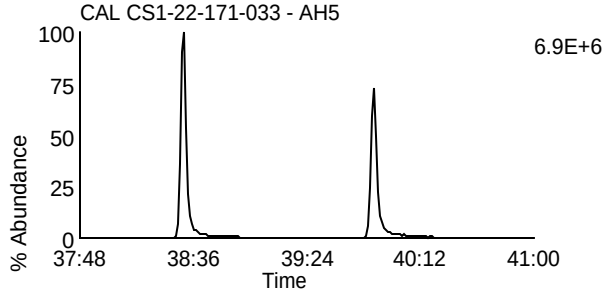
Data File: U230524B_04 G4 C6 - 417.825
CAL CS1-22-171-033 - AH5



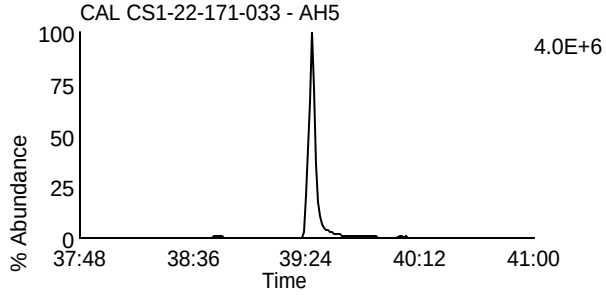
Data File: U230524B_04 G4 C11 - 435.8169
CAL CS1-22-171-033 - AH5



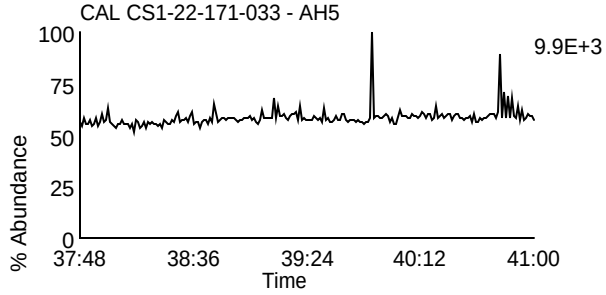
Data File: U230524B_04 G4 C7 - 419.822
CAL CS1-22-171-033 - AH5



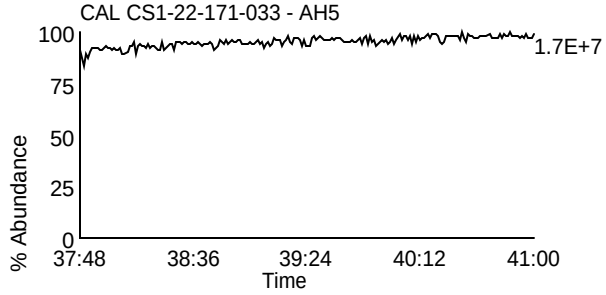
Data File: U230524B_04 G4 C12 - 437.814
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G4 C13 - 479.7165
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G4 C1 - 380.976
CAL CS1-22-171-033 - AH5

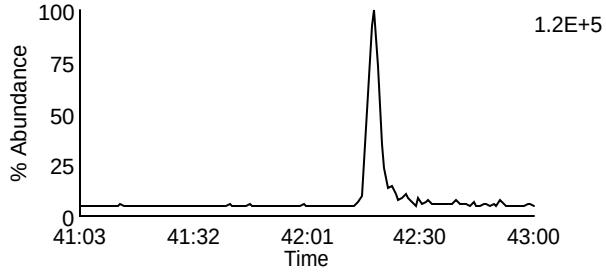


Homologue Group: Octas

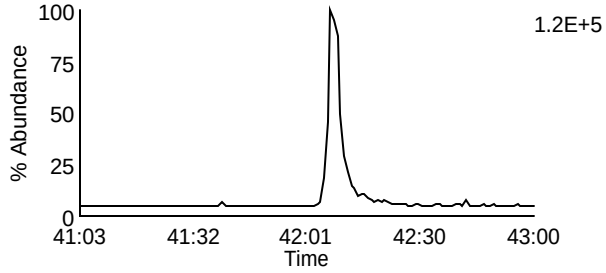
Data File Name: U230524B_04
Date Acquired: 5/24/2023
Sample Description: CAL CS1-22-171-033 - AH5

Lab Sample ID: CS1-22-171-033
Client Sample ID:
Instrument: 10MSHR06 (U)

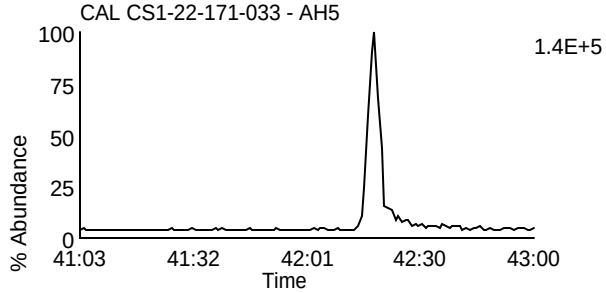
Data File: U230524B_04 G5 C4 - 441.7428
CAL CS1-22-171-033 - AH5



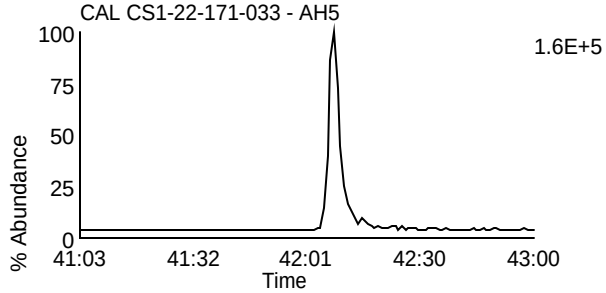
Data File: U230524B_04 G5 C8 - 457.7377
CAL CS1-22-171-033 - AH5



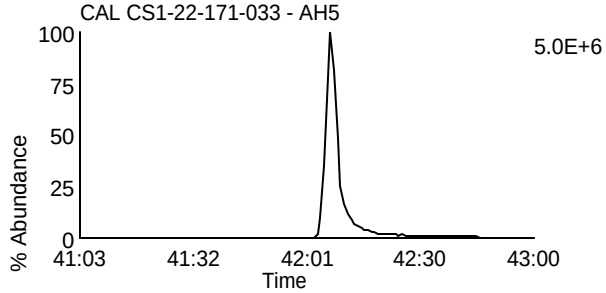
Data File: U230524B_04 G5 C5 - 443.7398
CAL CS1-22-171-033 - AH5



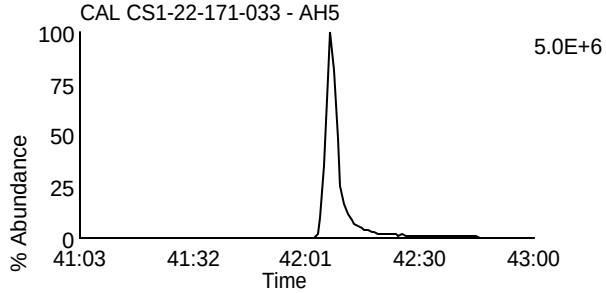
Data File: U230524B_04 G5 C9 - 459.7347
CAL CS1-22-171-033 - AH5



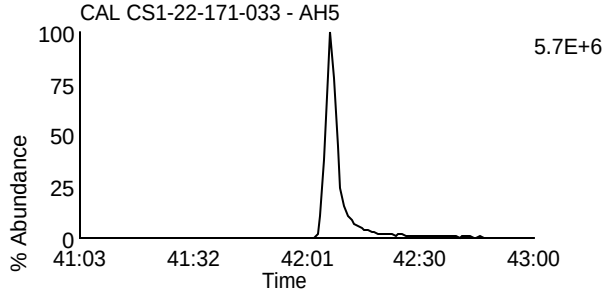
Data File: U230524B_04 G5 C11 - 469.7779
CAL CS1-22-171-033 - AH5



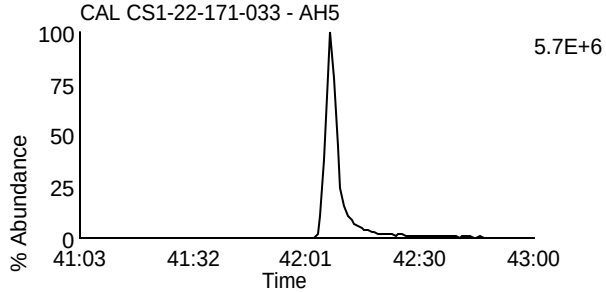
Data File: U230524B_04 G5 C11 - 469.7779
CAL CS1-22-171-033 - AH5



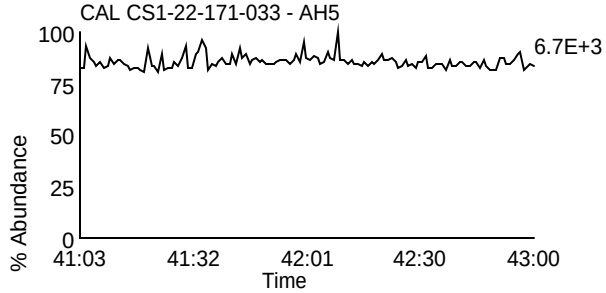
Data File: U230524B_04 G5 C12 - 471.7749
CAL CS1-22-171-033 - AH5



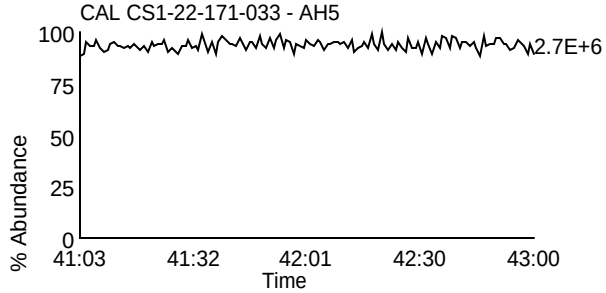
Data File: U230524B_04 G5 C12 - 471.7749
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G5 C13 - 513.6775
CAL CS1-22-171-033 - AH5



Data File: U230524B_04 G5 C2 - 430.9728
CAL CS1-22-171-033 - AH5

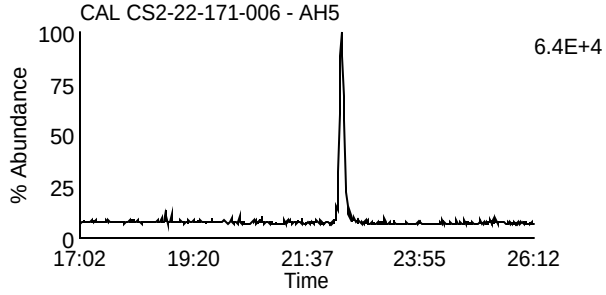


Homologue Group: Tetras

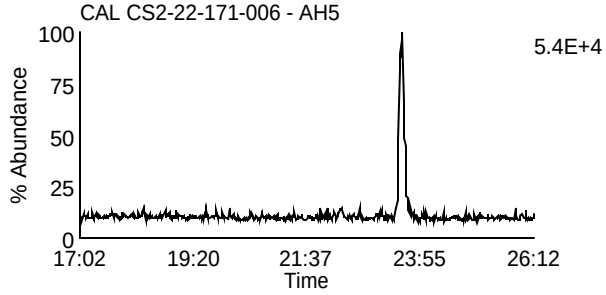
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

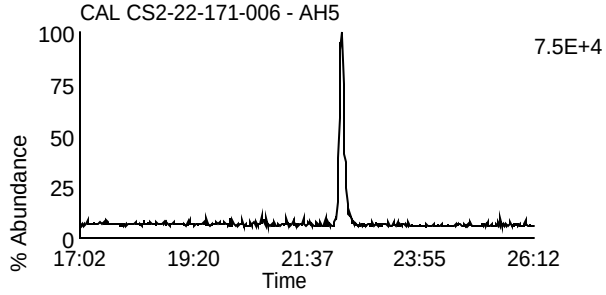
Data File: U230524B_03 G1 C1 - 303.9016
CAL CS2-22-171-006 - AH5



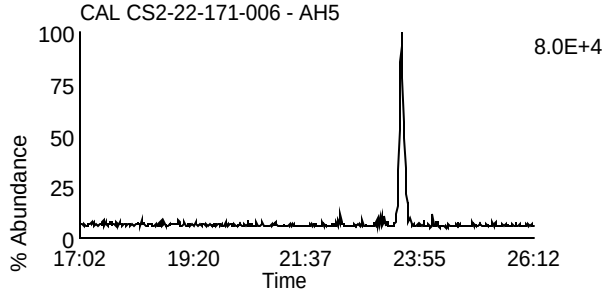
Data File: U230524B_03 G1 C7 - 319.8965
CAL CS2-22-171-006 - AH5



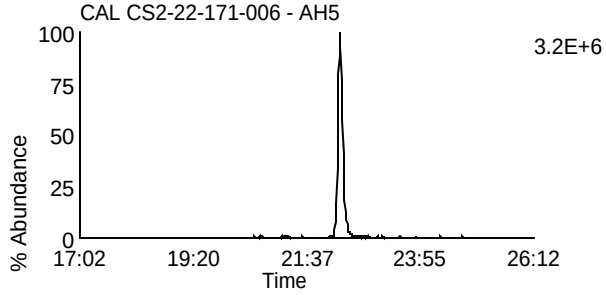
Data File: U230524B_03 G1 C2 - 305.8987
CAL CS2-22-171-006 - AH5



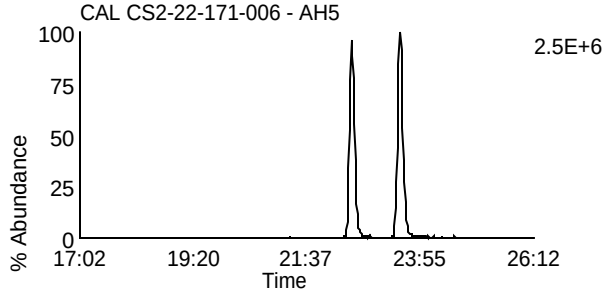
Data File: U230524B_03 G1 C8 - 321.8936
CAL CS2-22-171-006 - AH5



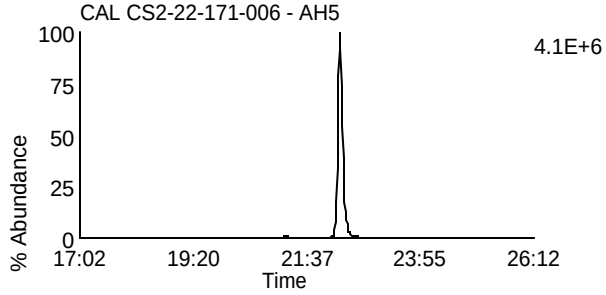
Data File: U230524B_03 G1 C3 - 315.9418
CAL CS2-22-171-006 - AH5



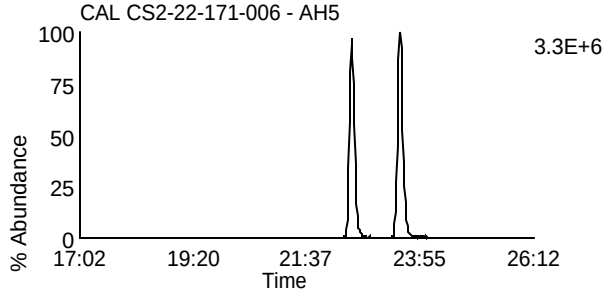
Data File: U230524B_03 G1 C10 - 331.9367
CAL CS2-22-171-006 - AH5



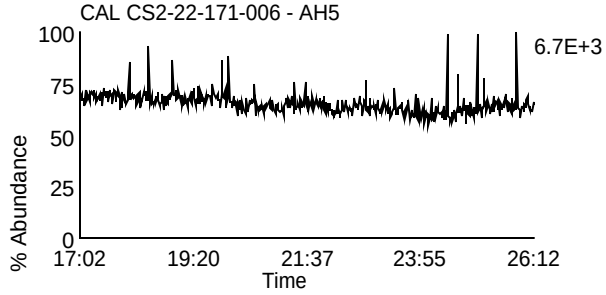
Data File: U230524B_03 G1 C4 - 317.9389
CAL CS2-22-171-006 - AH5



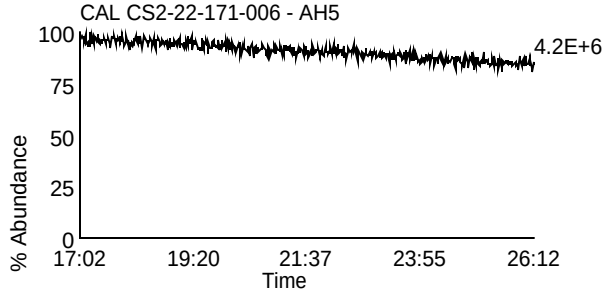
Data File: U230524B_03 G1 C11 - 333.9338
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C14 - 375.8364
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - AH5

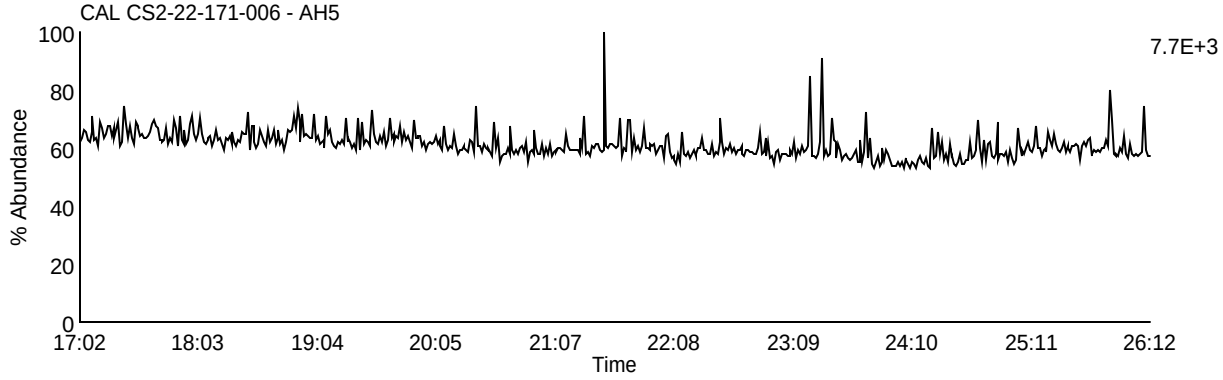


Homologue Group: Penta & Cleanup

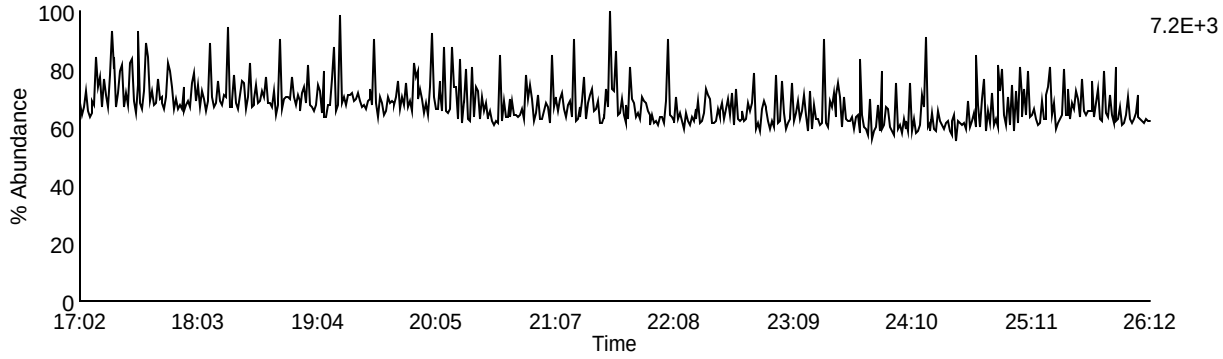
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

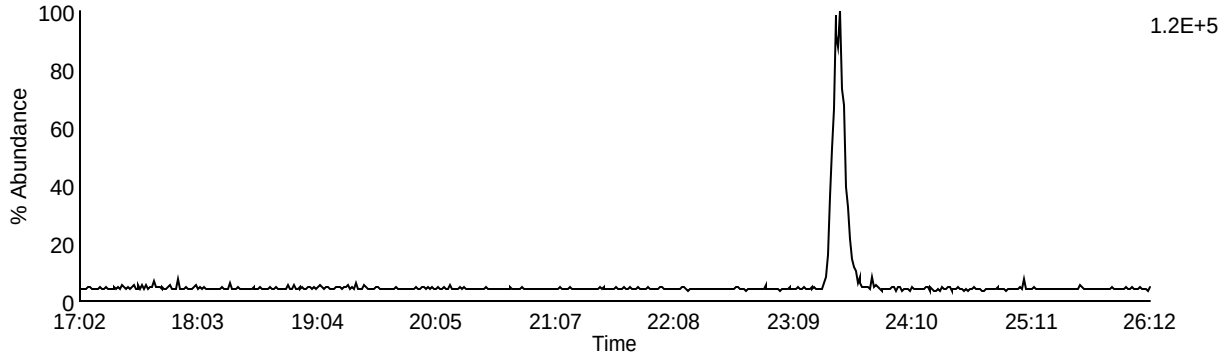
Data File: U230524B_03 G1 C12 - 339.8597
CAL CS2-22-171-006 - AH5



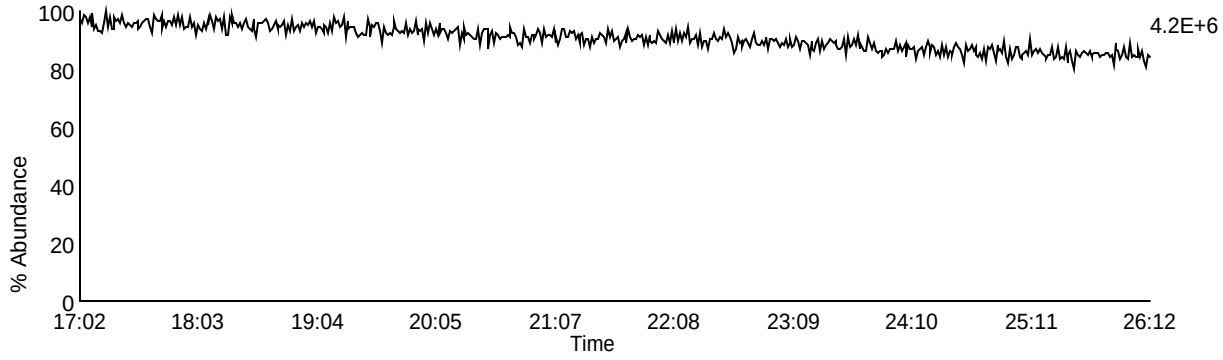
Data File: U230524B_03 G1 C13 - 341.8567
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C9 - 327.8847
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G1 C5 - 318.9792
CAL CS2-22-171-006 - AH5

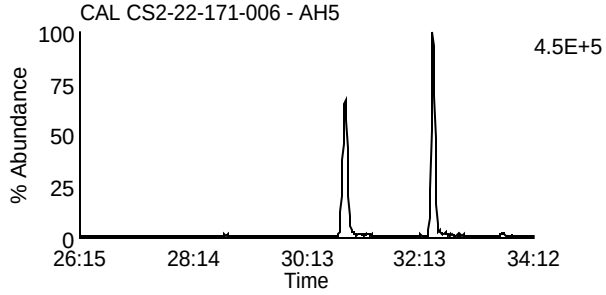


Homologue Group: Pentas

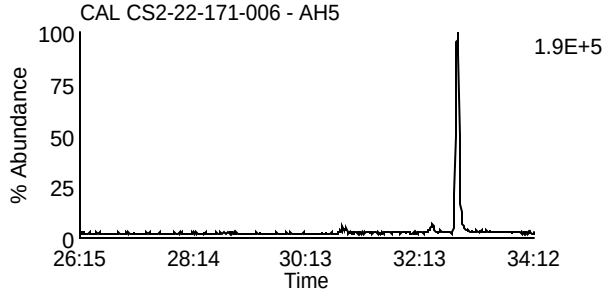
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

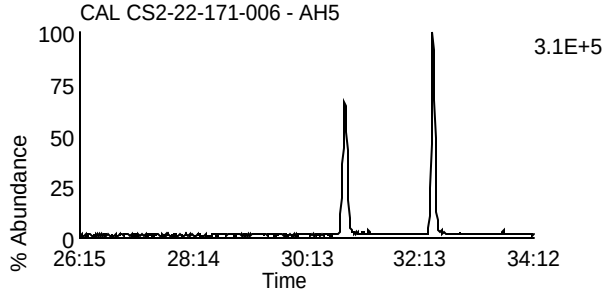
Data File: U230524B_03 G2 C1 - 339.8597
CAL CS2-22-171-006 - AH5



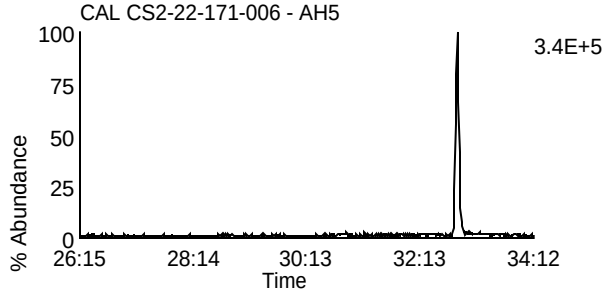
Data File: U230524B_03 G2 C4 - 353.8576
CAL CS2-22-171-006 - AH5



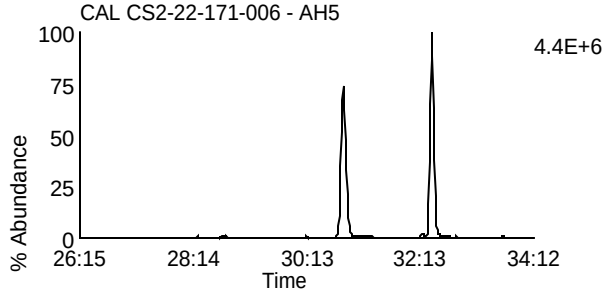
Data File: U230524B_03 G2 C2 - 341.8567
CAL CS2-22-171-006 - AH5



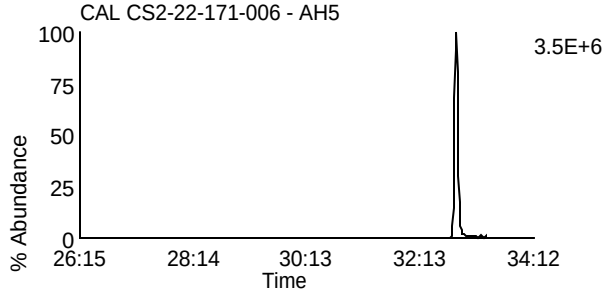
Data File: U230524B_03 G2 C8 - 355.8546
CAL CS2-22-171-006 - AH5



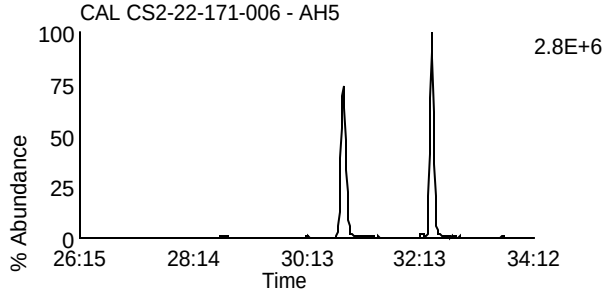
Data File: U230524B_03 G2 C3 - 351.8999
CAL CS2-22-171-006 - AH5



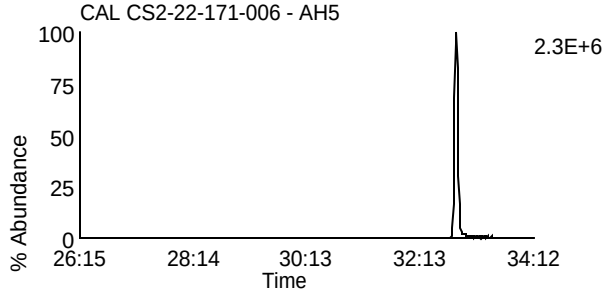
Data File: U230524B_03 G2 C10 - 367.8948
CAL CS2-22-171-006 - AH5



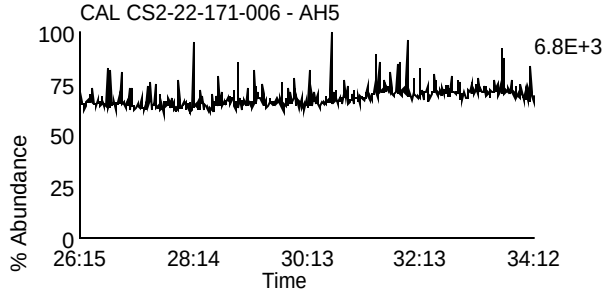
Data File: U230524B_03 G2 C5 - 353.8969
CAL CS2-22-171-006 - AH5



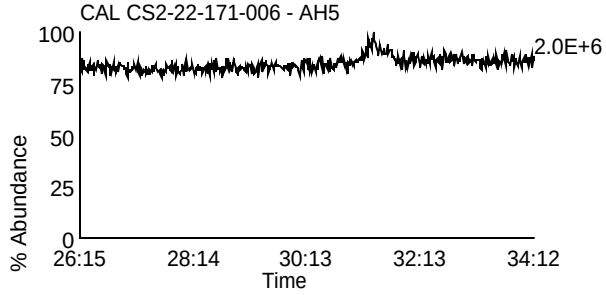
Data File: U230524B_03 G2 C11 - 369.8918
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G2 C12 - 409.7974
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G2 C6 - 354.9792
CAL CS2-22-171-006 - AH5

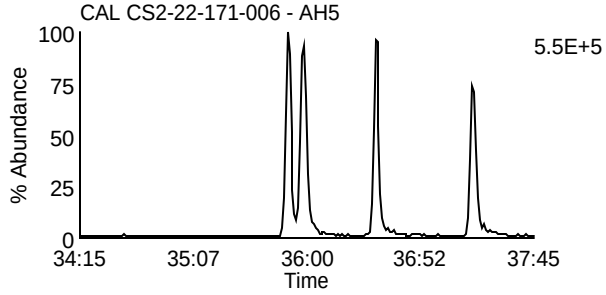


Homologue Group: Hexas

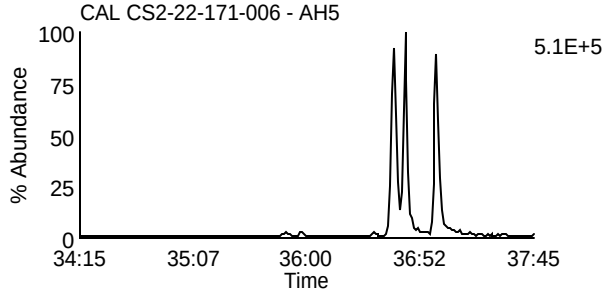
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

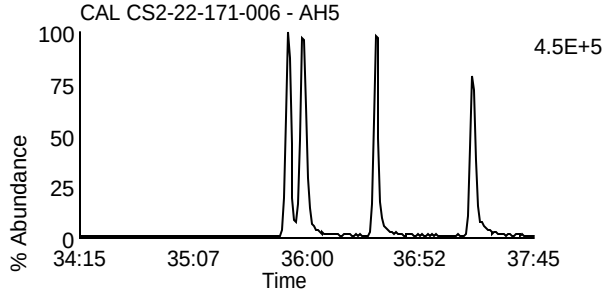
Data File: U230524B_03 G3 C1 - 373.8207
CAL CS2-22-171-006 - AH5



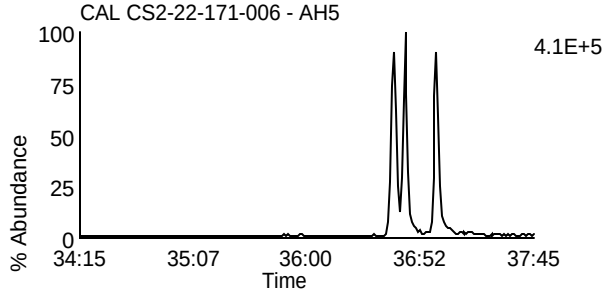
Data File: U230524B_03 G3 C7 - 389.8156
CAL CS2-22-171-006 - AH5



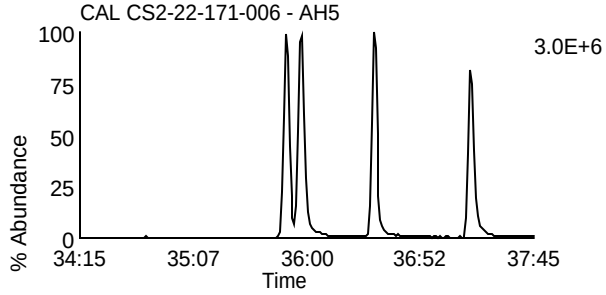
Data File: U230524B_03 G3 C2 - 375.8178
CAL CS2-22-171-006 - AH5



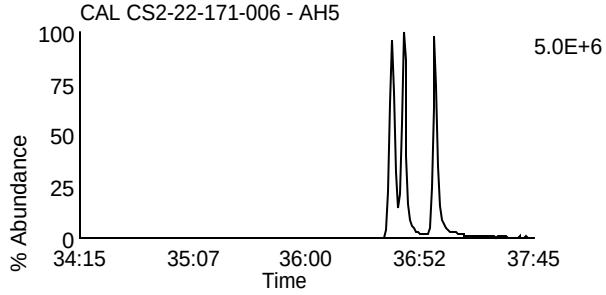
Data File: U230524B_03 G3 C8 - 391.8127
CAL CS2-22-171-006 - AH5



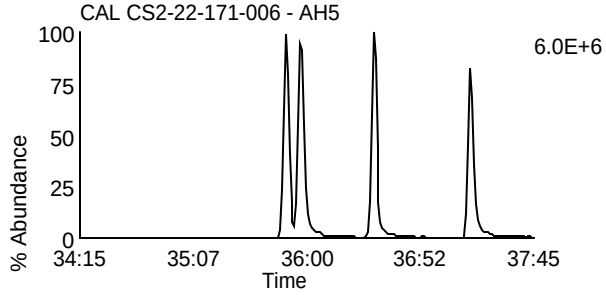
Data File: U230524B_03 G3 C5 - 383.8639
CAL CS2-22-171-006 - AH5



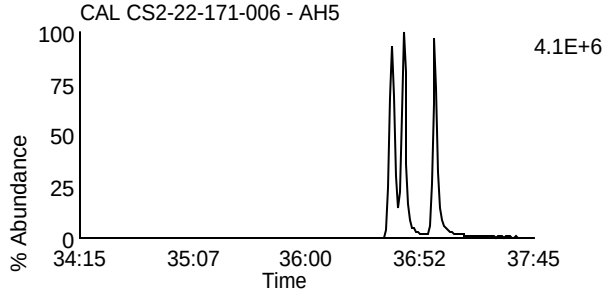
Data File: U230524B_03 G3 C9 - 401.8559
CAL CS2-22-171-006 - AH5



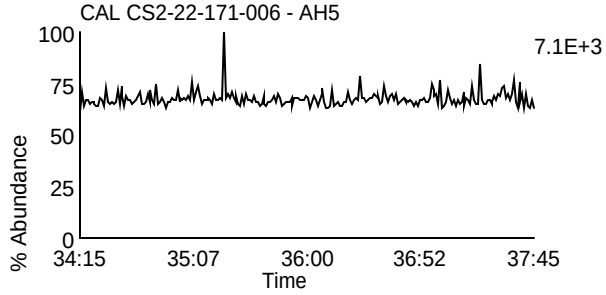
Data File: U230524B_03 G3 C6 - 385.861
CAL CS2-22-171-006 - AH5



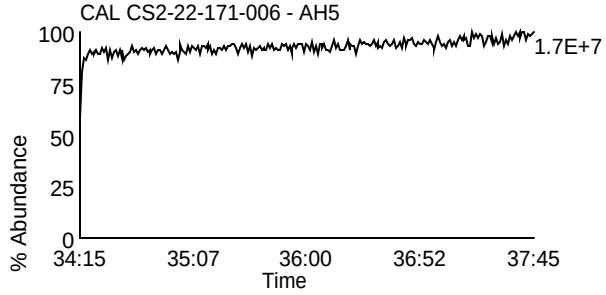
Data File: U230524B_03 G3 C10 - 403.8529
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G3 C11 - 445.7555
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G3 C3 - 380.976
CAL CS2-22-171-006 - AH5

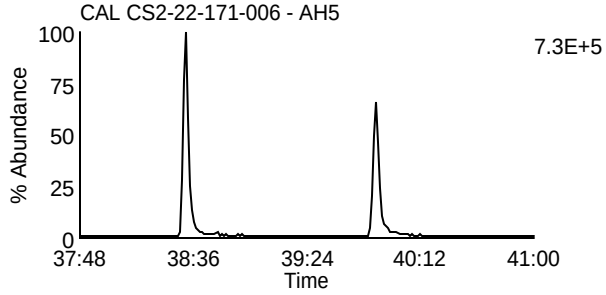


Homologue Group: Heptas

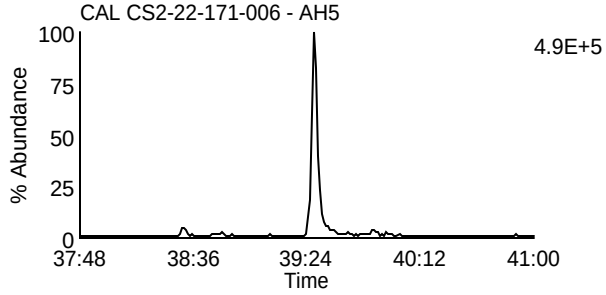
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

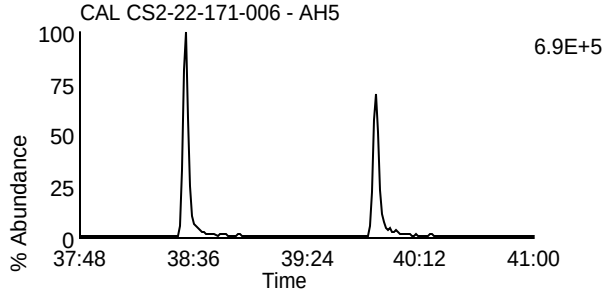
Data File: U230524B_03 G4 C3 - 407.7818
CAL CS2-22-171-006 - AH5



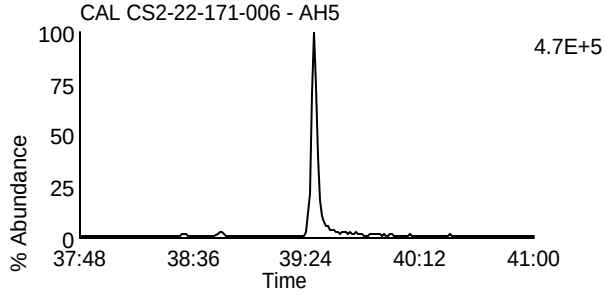
Data File: U230524B_03 G4 C8 - 423.7767
CAL CS2-22-171-006 - AH5



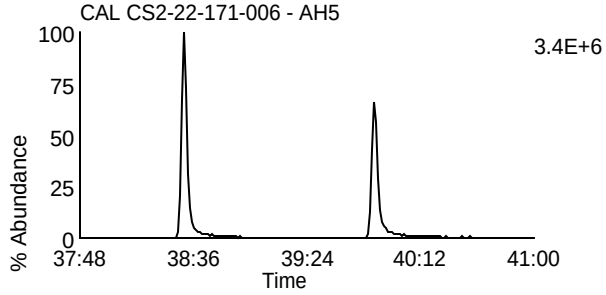
Data File: U230524B_03 G4 C4 - 409.7788
CAL CS2-22-171-006 - AH5



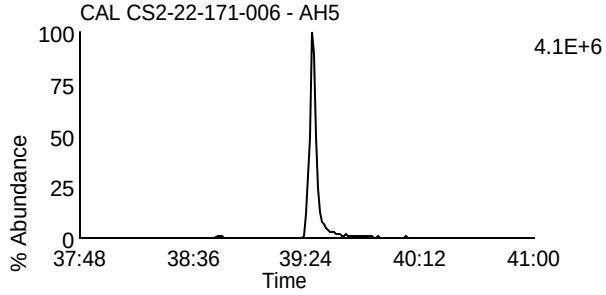
Data File: U230524B_03 G4 C9 - 425.7737
CAL CS2-22-171-006 - AH5



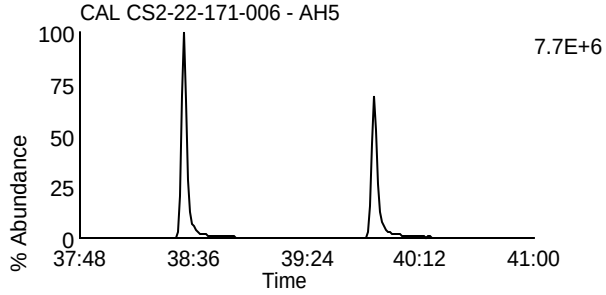
Data File: U230524B_03 G4 C6 - 417.825
CAL CS2-22-171-006 - AH5



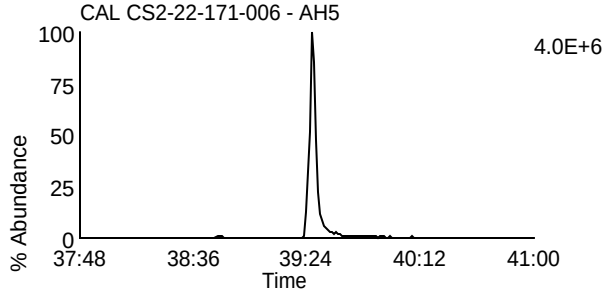
Data File: U230524B_03 G4 C11 - 435.8169
CAL CS2-22-171-006 - AH5



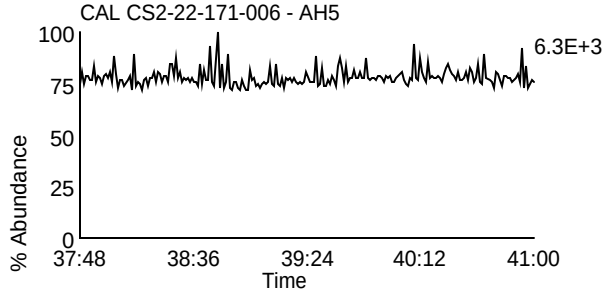
Data File: U230524B_03 G4 C7 - 419.822
CAL CS2-22-171-006 - AH5



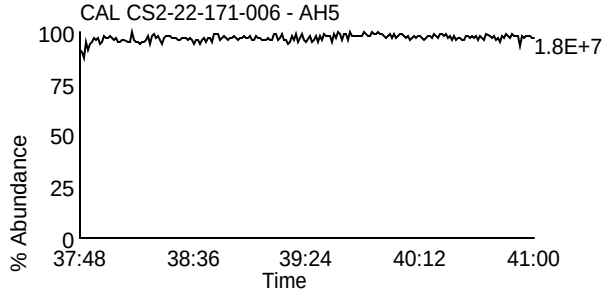
Data File: U230524B_03 G4 C12 - 437.814
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G4 C13 - 479.7165
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G4 C1 - 380.976
CAL CS2-22-171-006 - AH5

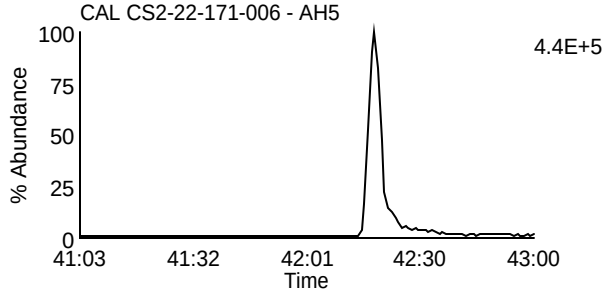


Homologue Group: Octas

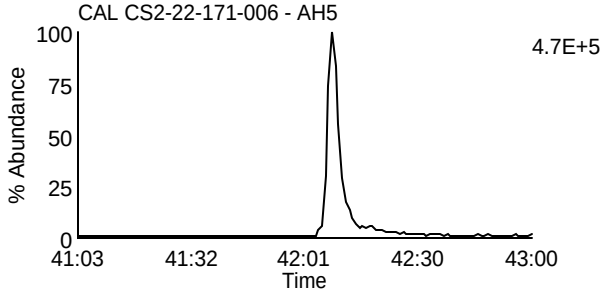
Data File Name: U230524B_03
Date Acquired: 5/24/2023
Sample Description: CAL CS2-22-171-006 - AH5

Lab Sample ID: CS2-22-171-006
Client Sample ID:
Instrument: 10MSHR06 (U)

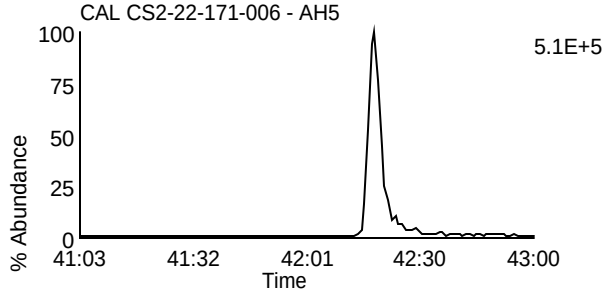
Data File: U230524B_03 G5 C4 - 441.7428
CAL CS2-22-171-006 - AH5



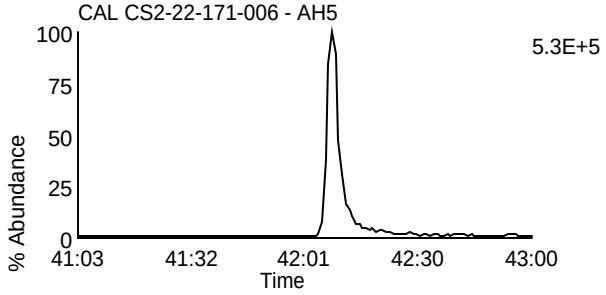
Data File: U230524B_03 G5 C8 - 457.7377
CAL CS2-22-171-006 - AH5



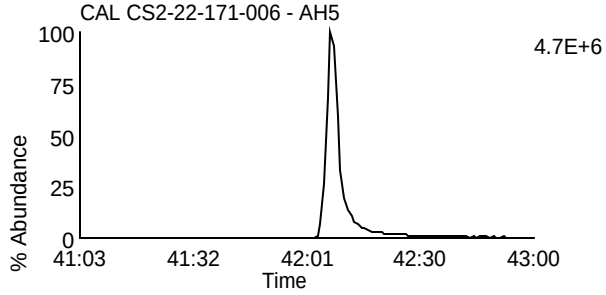
Data File: U230524B_03 G5 C5 - 443.7398
CAL CS2-22-171-006 - AH5



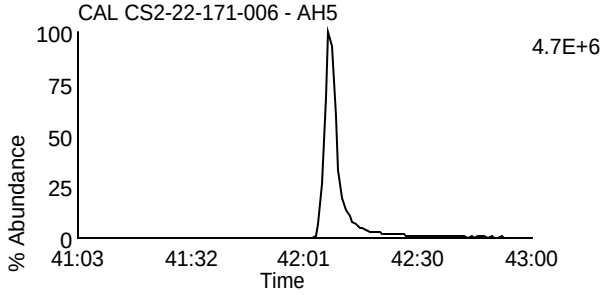
Data File: U230524B_03 G5 C9 - 459.7347
CAL CS2-22-171-006 - AH5



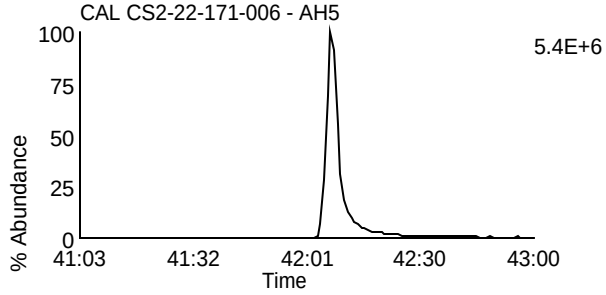
Data File: U230524B_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - AH5



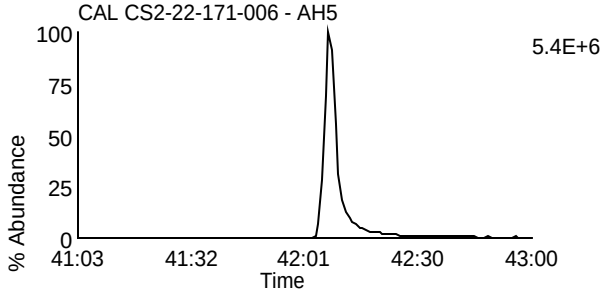
Data File: U230524B_03 G5 C11 - 469.7779
CAL CS2-22-171-006 - AH5



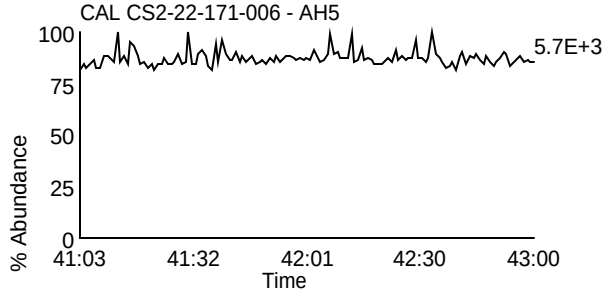
Data File: U230524B_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - AH5



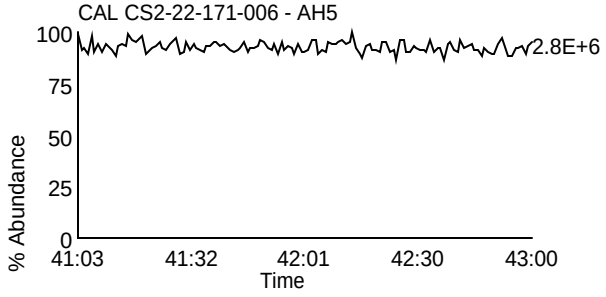
Data File: U230524B_03 G5 C12 - 471.7749
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G5 C13 - 513.6775
CAL CS2-22-171-006 - AH5



Data File: U230524B_03 G5 C2 - 430.9728
CAL CS2-22-171-006 - AH5

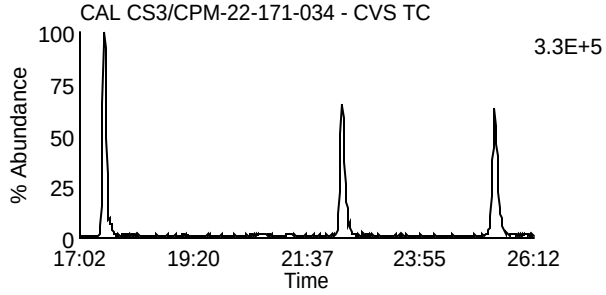


Homologue Group: Tetras

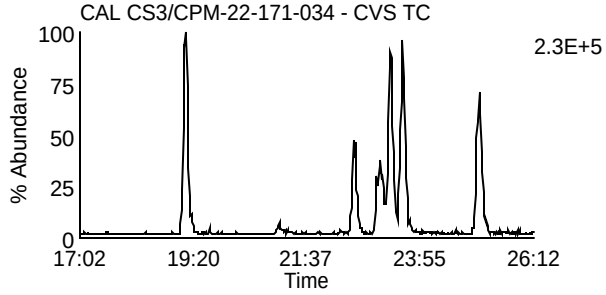
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

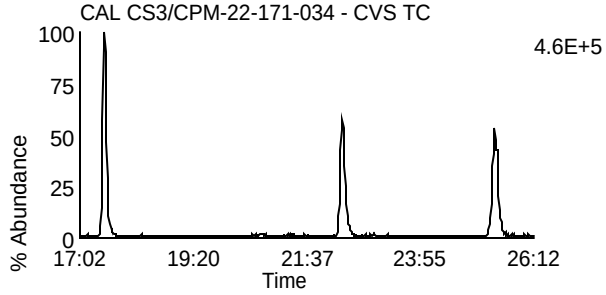
Data File: U230524B_02 G1 C1 - 303.9016
CAL CS3/CPM-22-171-034 - CVS TC



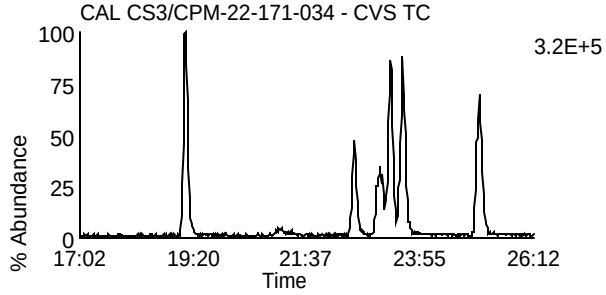
Data File: U230524B_02 G1 C7 - 319.8965
CAL CS3/CPM-22-171-034 - CVS TC



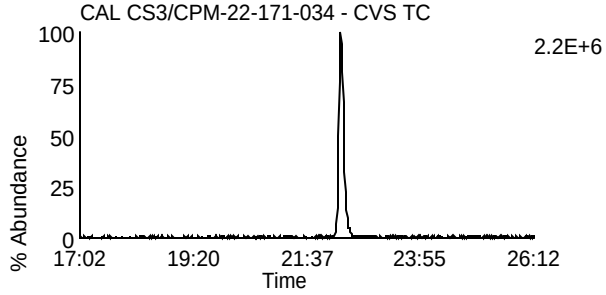
Data File: U230524B_02 G1 C2 - 305.8987
CAL CS3/CPM-22-171-034 - CVS TC



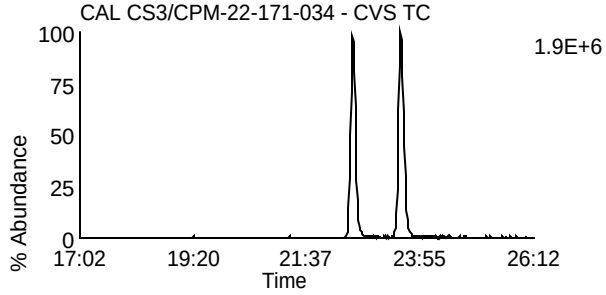
Data File: U230524B_02 G1 C8 - 321.8936
CAL CS3/CPM-22-171-034 - CVS TC



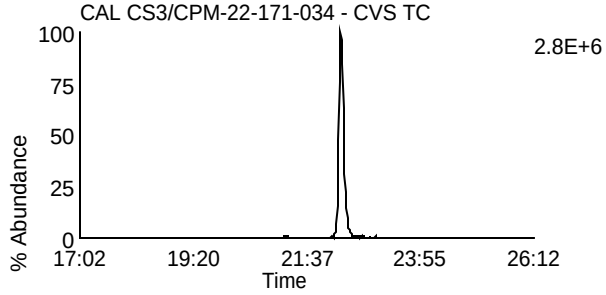
Data File: U230524B_02 G1 C3 - 315.9418
CAL CS3/CPM-22-171-034 - CVS TC



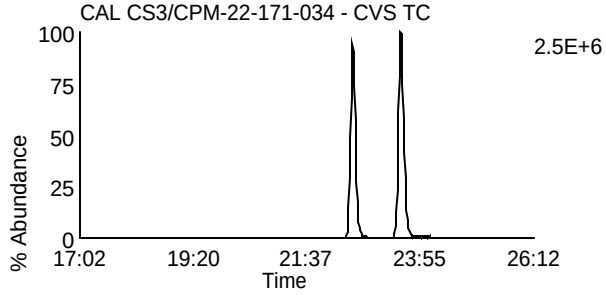
Data File: U230524B_02 G1 C10 - 331.9367
CAL CS3/CPM-22-171-034 - CVS TC



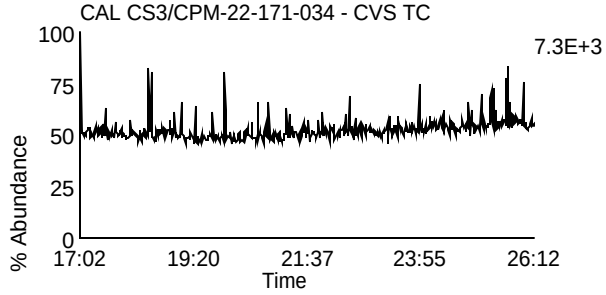
Data File: U230524B_02 G1 C4 - 317.9389
CAL CS3/CPM-22-171-034 - CVS TC



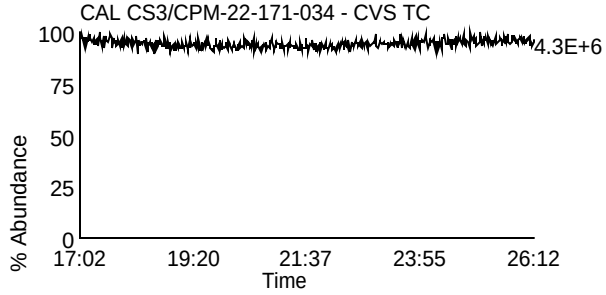
Data File: U230524B_02 G1 C11 - 333.9338
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G1 C14 - 375.8364
CAL CS3/CPM-22-171-034 - CVS TC



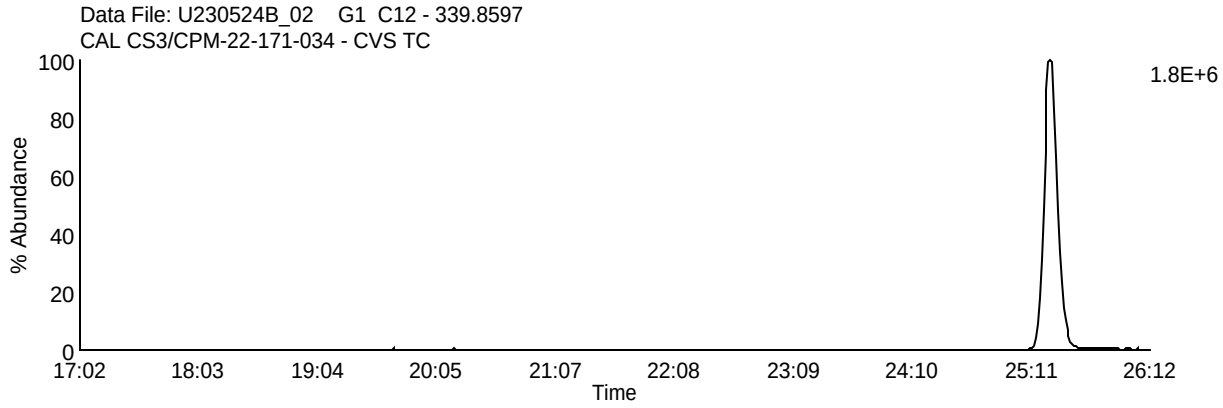
Data File: U230524B_02 G1 C5 - 318.9792
CAL CS3/CPM-22-171-034 - CVS TC

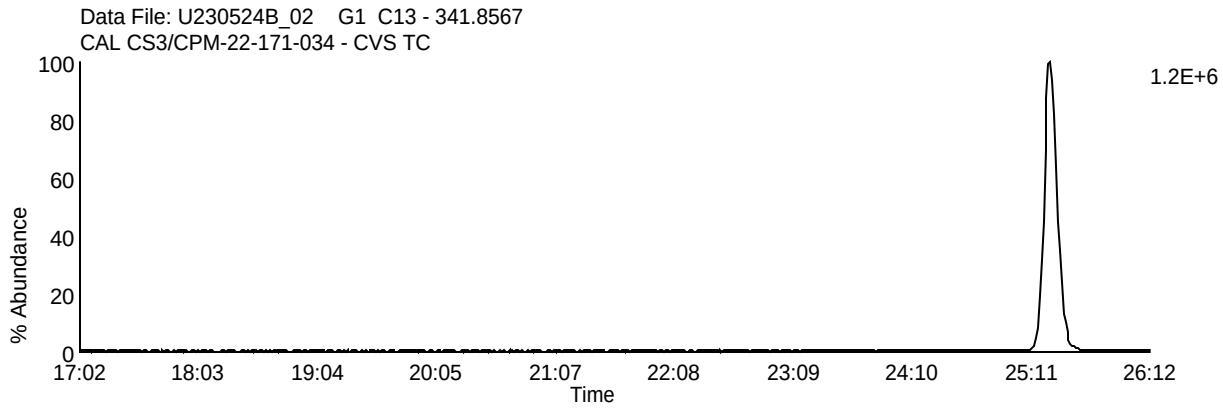


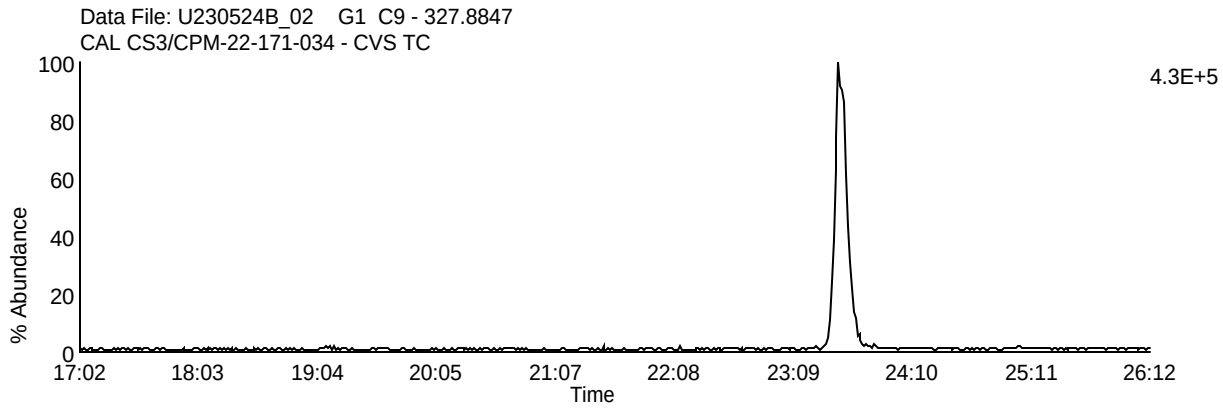
Homologue Group: Penta & Cleanup

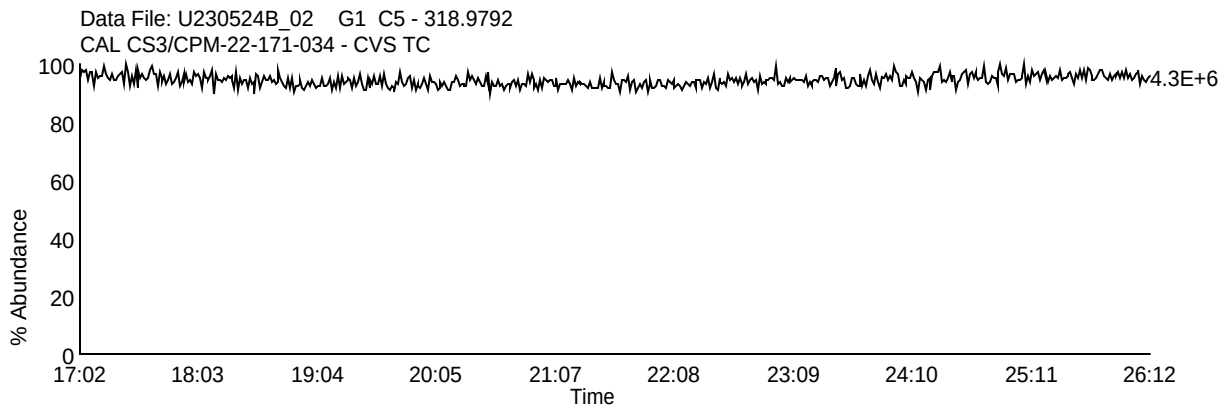
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)







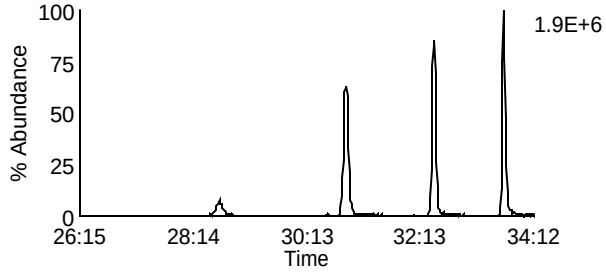


Homologue Group: Pentas

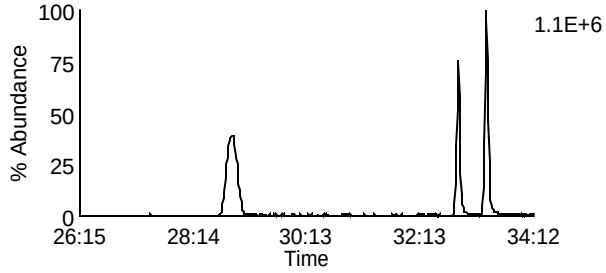
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

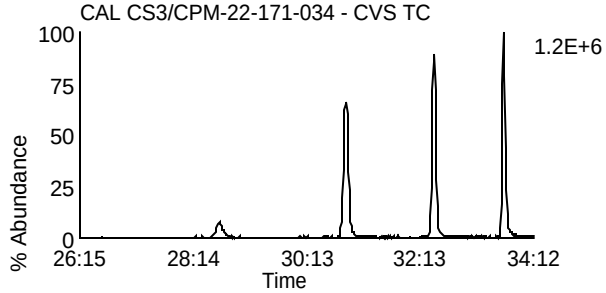
Data File: U230524B_02 G2 C1 - 339.8597
CAL CS3/CPM-22-171-034 - CVS TC



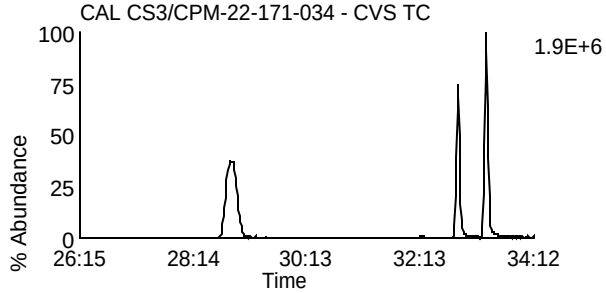
Data File: U230524B_02 G2 C4 - 353.8576
CAL CS3/CPM-22-171-034 - CVS TC



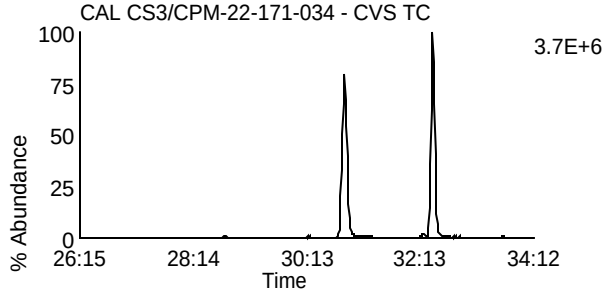
Data File: U230524B_02 G2 C2 - 341.8567
CAL CS3/CPM-22-171-034 - CVS TC



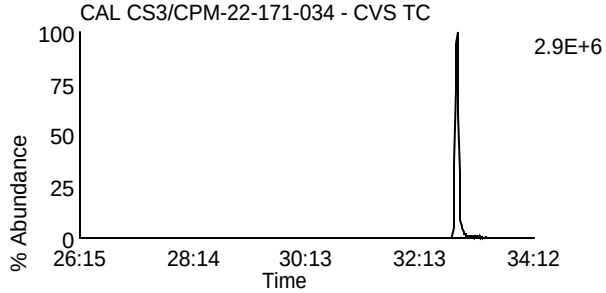
Data File: U230524B_02 G2 C8 - 355.8546
CAL CS3/CPM-22-171-034 - CVS TC



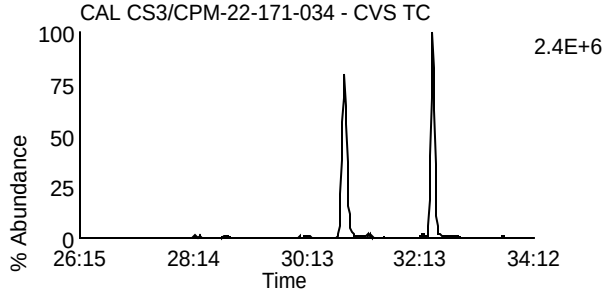
Data File: U230524B_02 G2 C3 - 351.8999
CAL CS3/CPM-22-171-034 - CVS TC



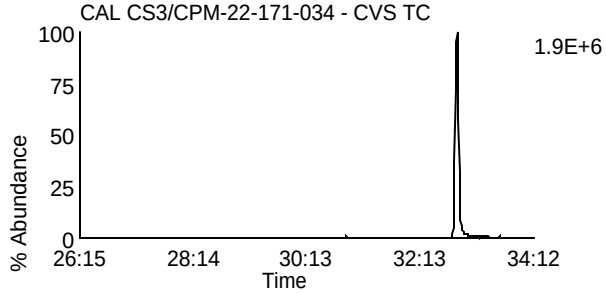
Data File: U230524B_02 G2 C10 - 367.8948
CAL CS3/CPM-22-171-034 - CVS TC



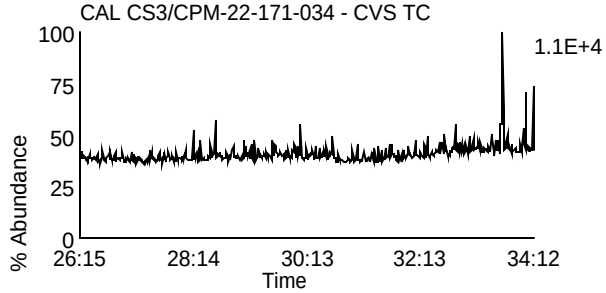
Data File: U230524B_02 G2 C5 - 353.8969
CAL CS3/CPM-22-171-034 - CVS TC



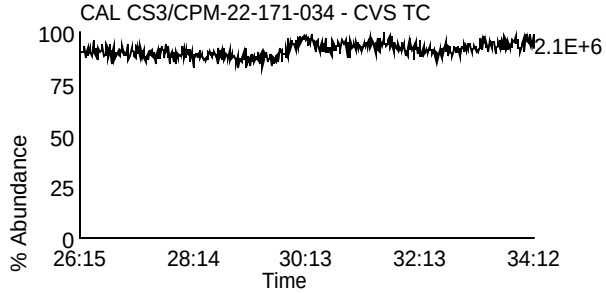
Data File: U230524B_02 G2 C11 - 369.8918
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C12 - 409.7974
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C6 - 354.9792
CAL CS3/CPM-22-171-034 - CVS TC

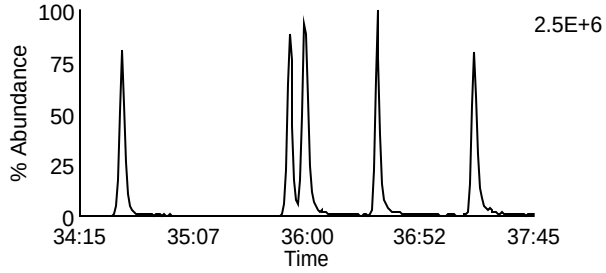


Homologue Group: Hexas

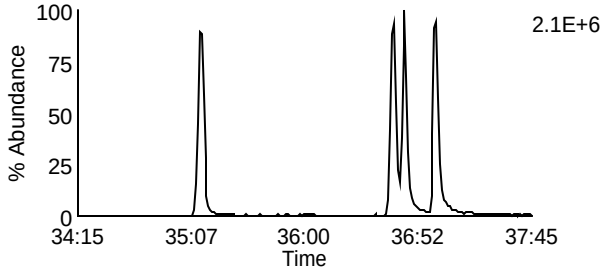
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

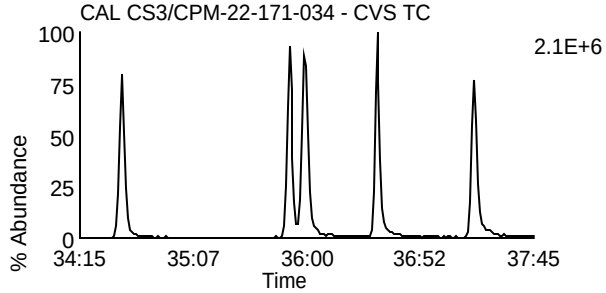
Data File: U230524B_02 G3 C1 - 373.8207
CAL CS3/CPM-22-171-034 - CVS TC



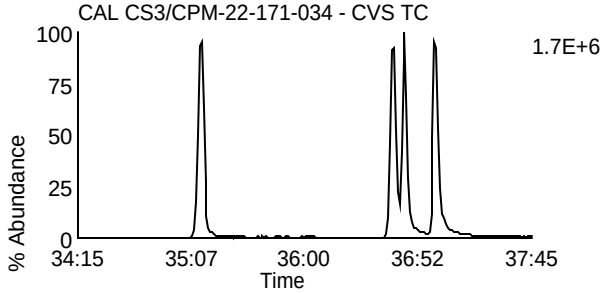
Data File: U230524B_02 G3 C7 - 389.8156
CAL CS3/CPM-22-171-034 - CVS TC



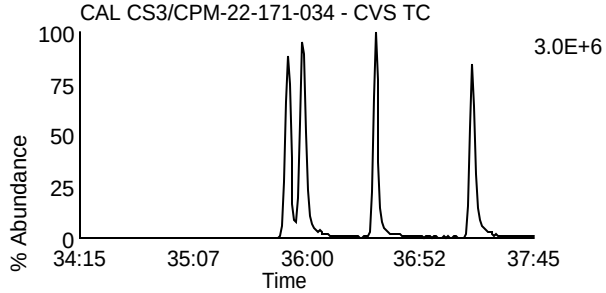
Data File: U230524B_02 G3 C2 - 375.8178
CAL CS3/CPM-22-171-034 - CVS TC



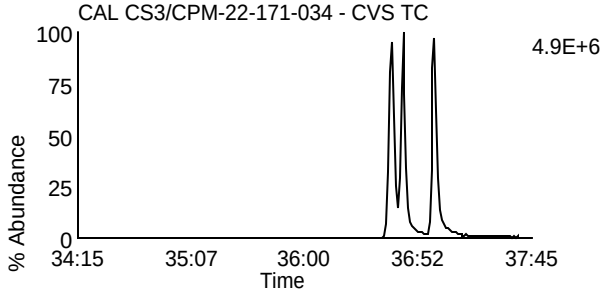
Data File: U230524B_02 G3 C8 - 391.8127
CAL CS3/CPM-22-171-034 - CVS TC



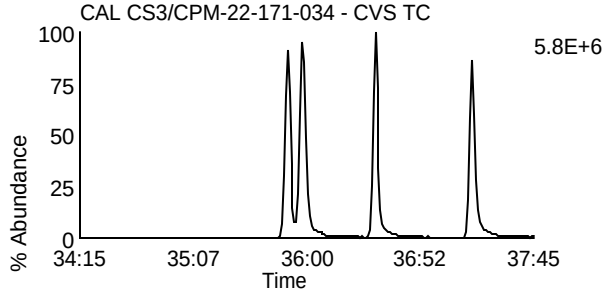
Data File: U230524B_02 G3 C5 - 383.8639
CAL CS3/CPM-22-171-034 - CVS TC



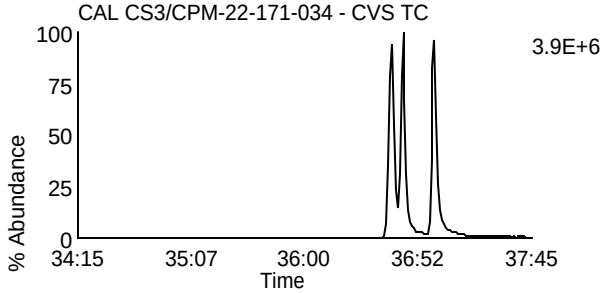
Data File: U230524B_02 G3 C9 - 401.8559
CAL CS3/CPM-22-171-034 - CVS TC



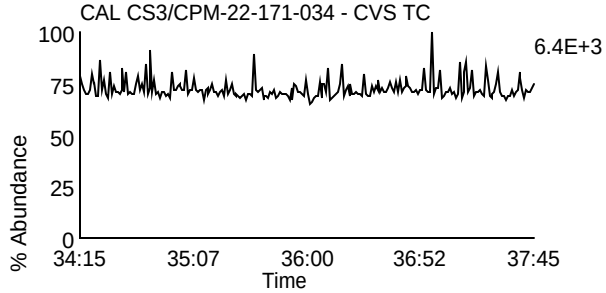
Data File: U230524B_02 G3 C6 - 385.861
CAL CS3/CPM-22-171-034 - CVS TC



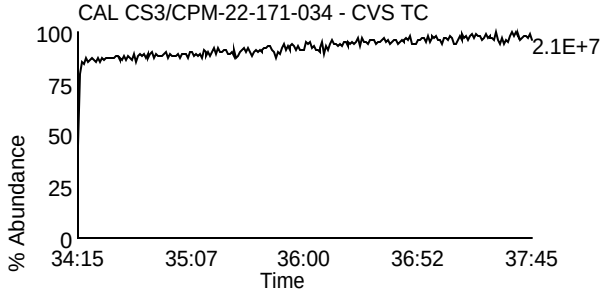
Data File: U230524B_02 G3 C10 - 403.8529
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C11 - 445.7555
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C3 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

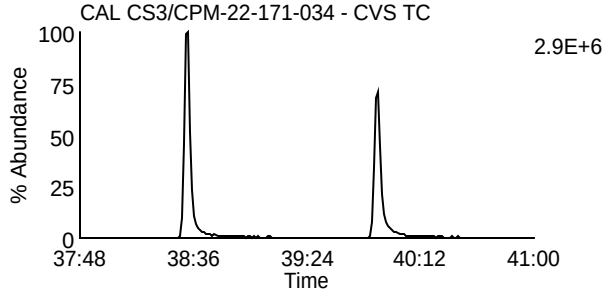


Homologue Group: Heptas

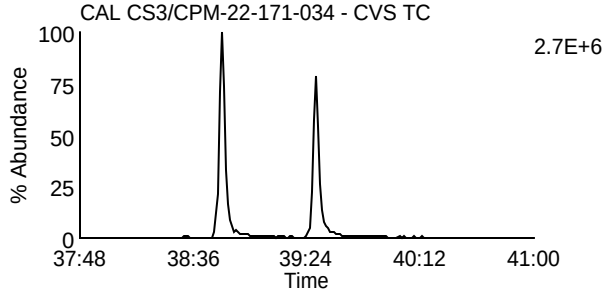
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

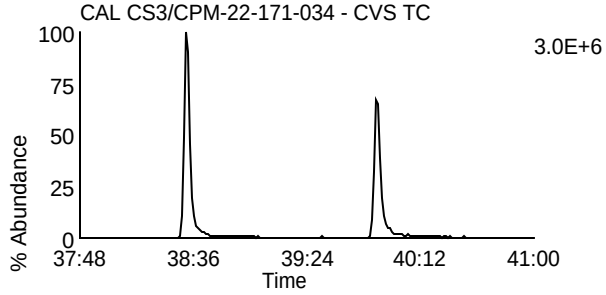
Data File: U230524B_02 G4 C3 - 407.7818
CAL CS3/CPM-22-171-034 - CVS TC



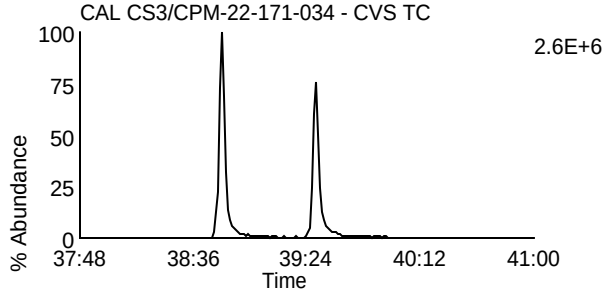
Data File: U230524B_02 G4 C8 - 423.7767
CAL CS3/CPM-22-171-034 - CVS TC



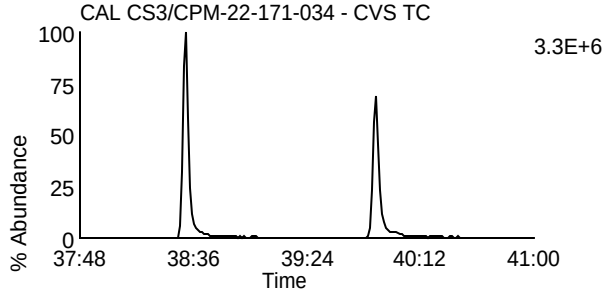
Data File: U230524B_02 G4 C4 - 409.7788
CAL CS3/CPM-22-171-034 - CVS TC



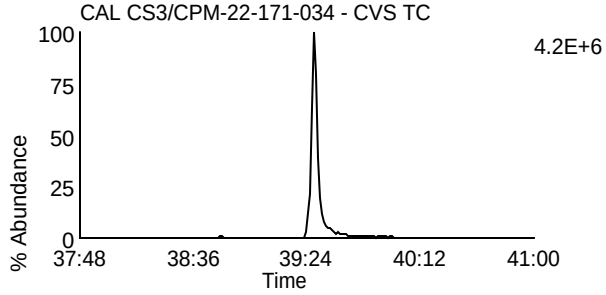
Data File: U230524B_02 G4 C9 - 425.7737
CAL CS3/CPM-22-171-034 - CVS TC



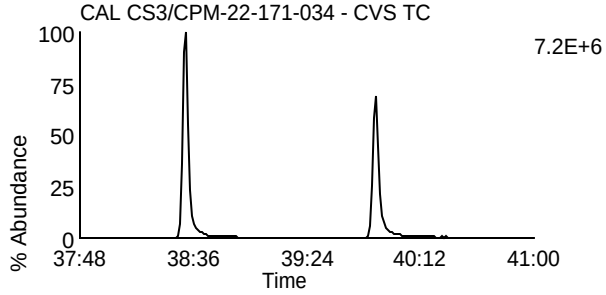
Data File: U230524B_02 G4 C6 - 417.825
CAL CS3/CPM-22-171-034 - CVS TC



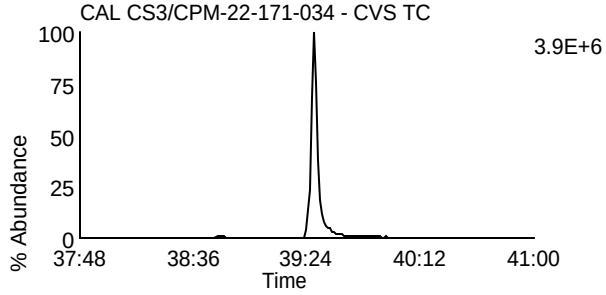
Data File: U230524B_02 G4 C11 - 435.8169
CAL CS3/CPM-22-171-034 - CVS TC



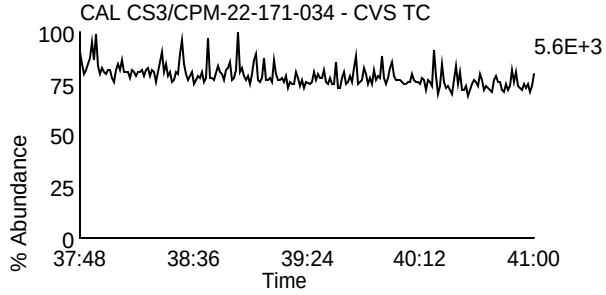
Data File: U230524B_02 G4 C7 - 419.822
CAL CS3/CPM-22-171-034 - CVS TC



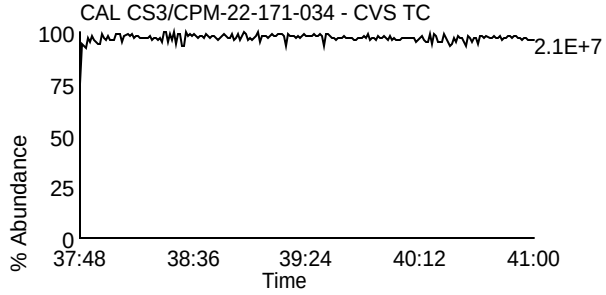
Data File: U230524B_02 G4 C12 - 437.814
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C13 - 479.7165
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C1 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

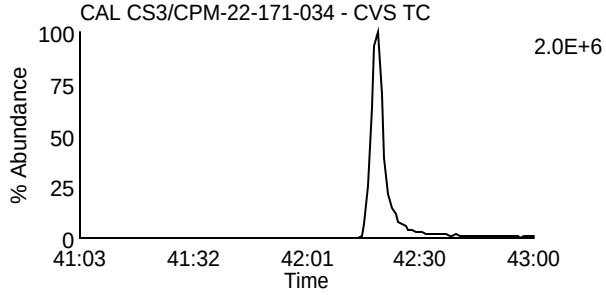


Homologue Group: Octas

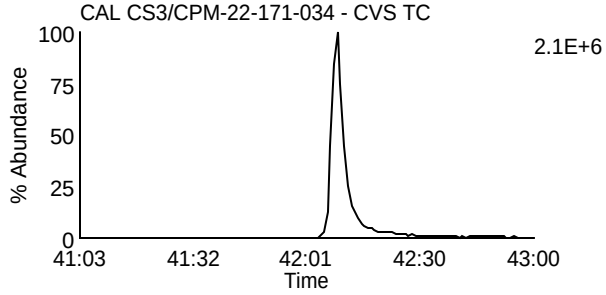
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID:
Instrument: 10MSHR06 (U)

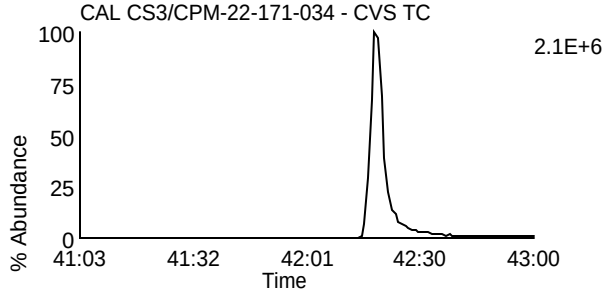
Data File: U230524B_02 G5 C4 - 441.7428
CAL CS3/CPM-22-171-034 - CVS TC



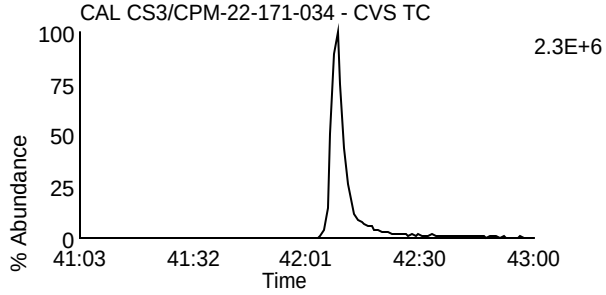
Data File: U230524B_02 G5 C8 - 457.7377
CAL CS3/CPM-22-171-034 - CVS TC



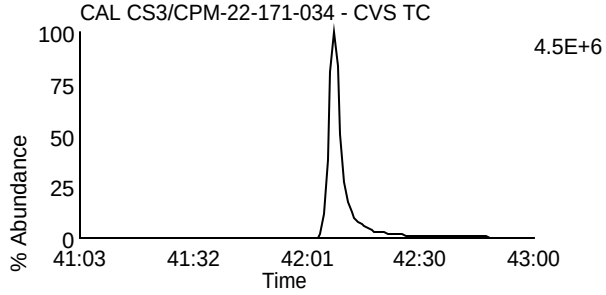
Data File: U230524B_02 G5 C5 - 443.7398
CAL CS3/CPM-22-171-034 - CVS TC



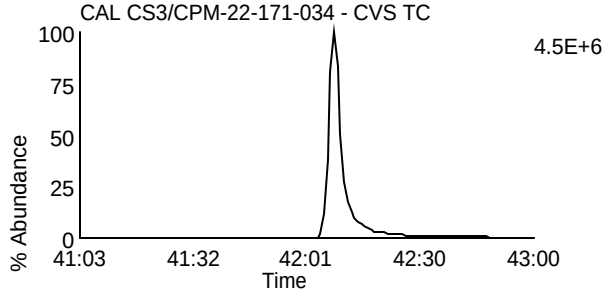
Data File: U230524B_02 G5 C9 - 459.7347
CAL CS3/CPM-22-171-034 - CVS TC



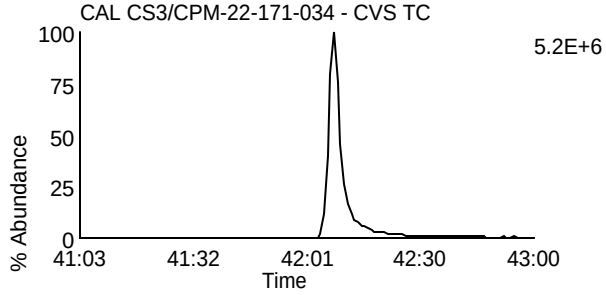
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



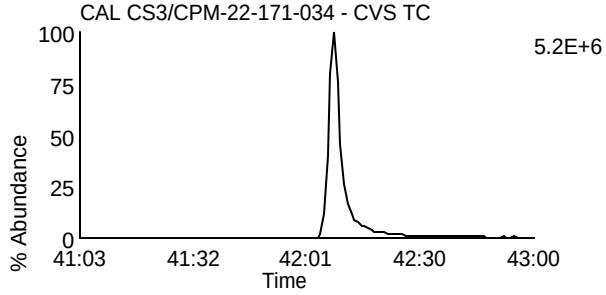
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



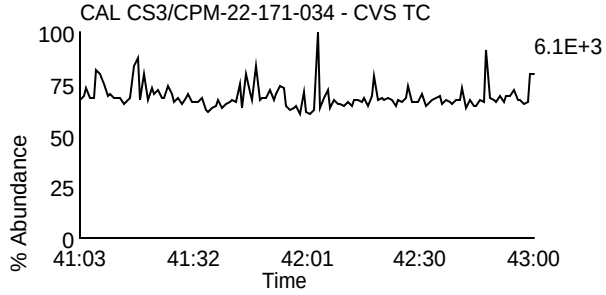
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



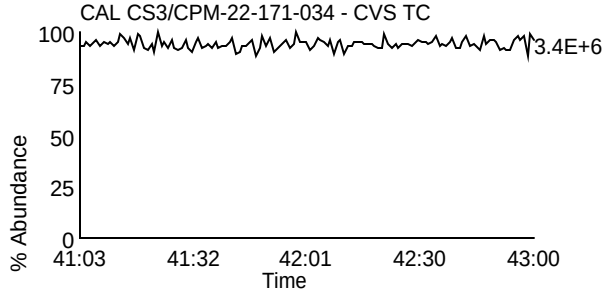
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C13 - 513.6775
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C2 - 430.9728
CAL CS3/CPM-22-171-034 - CVS TC

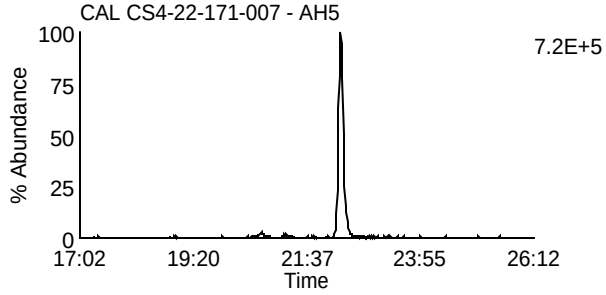


Homologue Group: Tetras

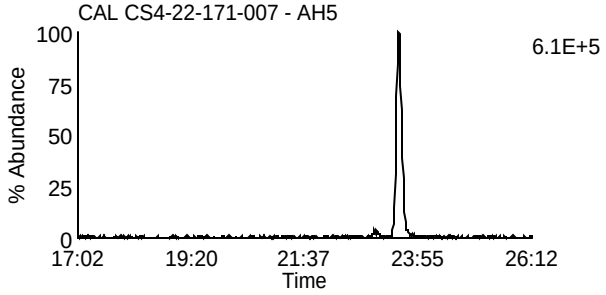
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

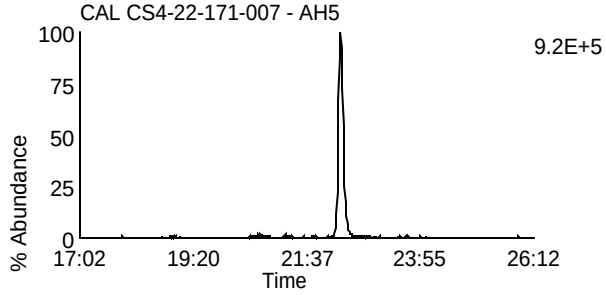
Data File: U230524B_06 G1 C1 - 303.9016
CAL CS4-22-171-007 - AH5



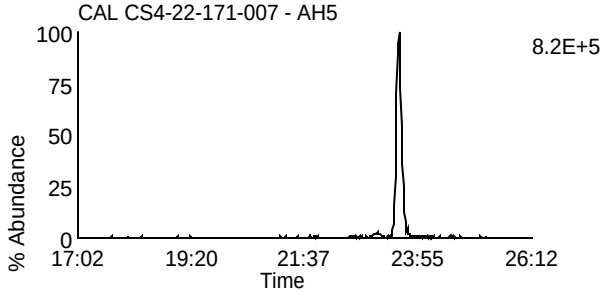
Data File: U230524B_06 G1 C7 - 319.8965
CAL CS4-22-171-007 - AH5



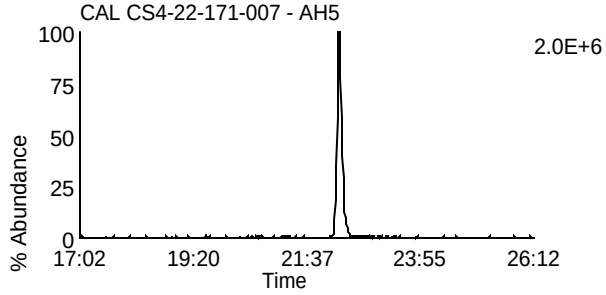
Data File: U230524B_06 G1 C2 - 305.8987
CAL CS4-22-171-007 - AH5



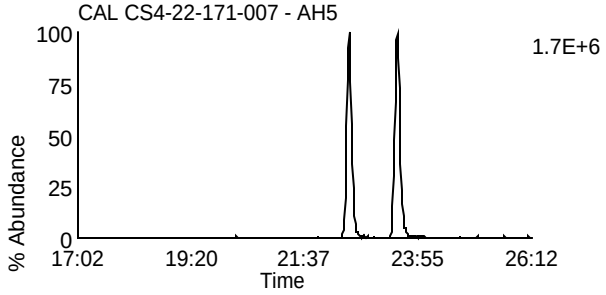
Data File: U230524B_06 G1 C8 - 321.8936
CAL CS4-22-171-007 - AH5



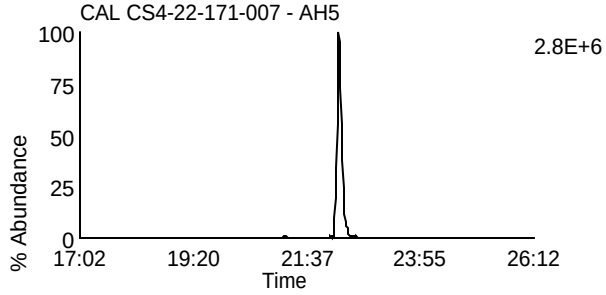
Data File: U230524B_06 G1 C3 - 315.9418
CAL CS4-22-171-007 - AH5



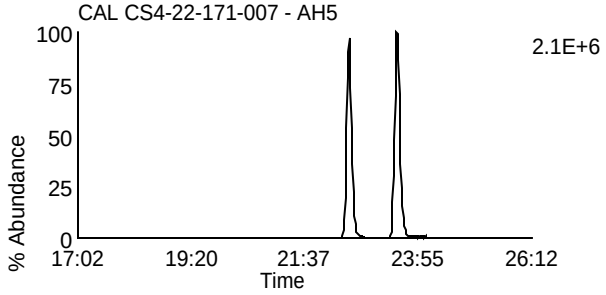
Data File: U230524B_06 G1 C10 - 331.9367
CAL CS4-22-171-007 - AH5



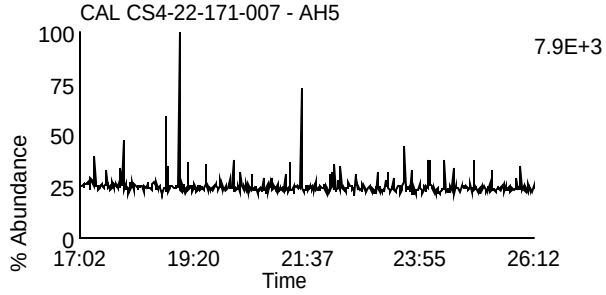
Data File: U230524B_06 G1 C4 - 317.9389
CAL CS4-22-171-007 - AH5



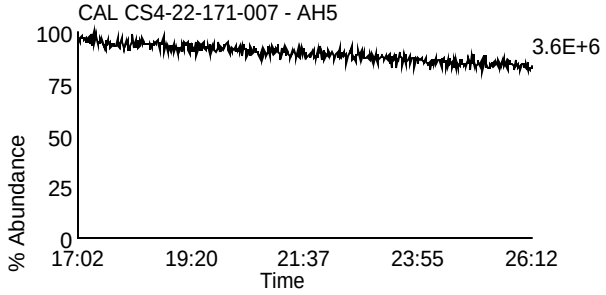
Data File: U230524B_06 G1 C11 - 333.9338
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C14 - 375.8364
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C5 - 318.9792
CAL CS4-22-171-007 - AH5

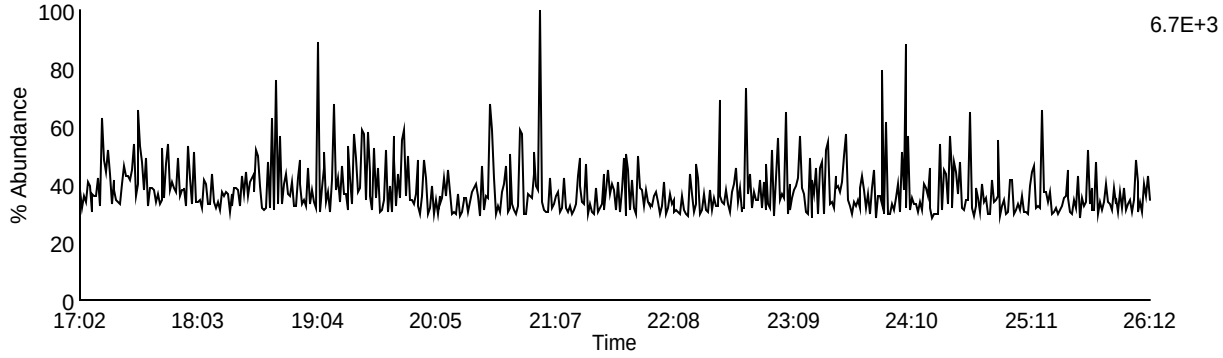


Homologue Group: Penta & Cleanup

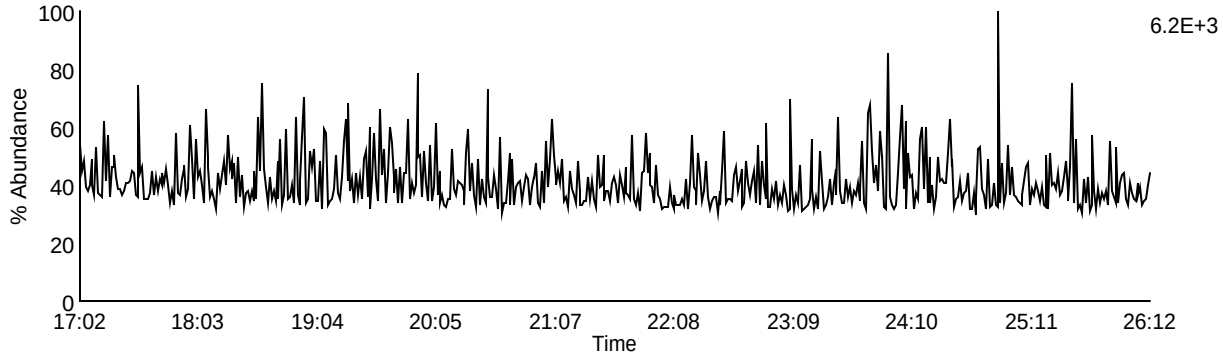
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

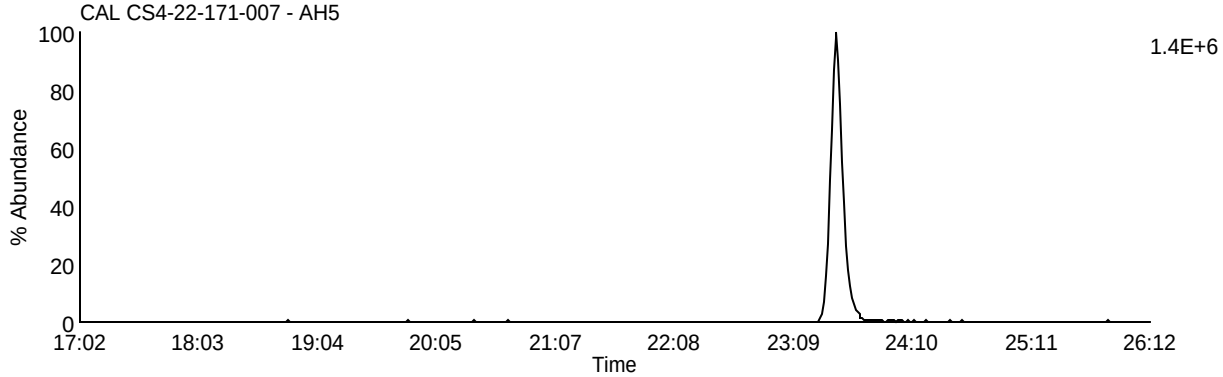
Data File: U230524B_06 G1 C12 - 339.8597
CAL CS4-22-171-007 - AH5



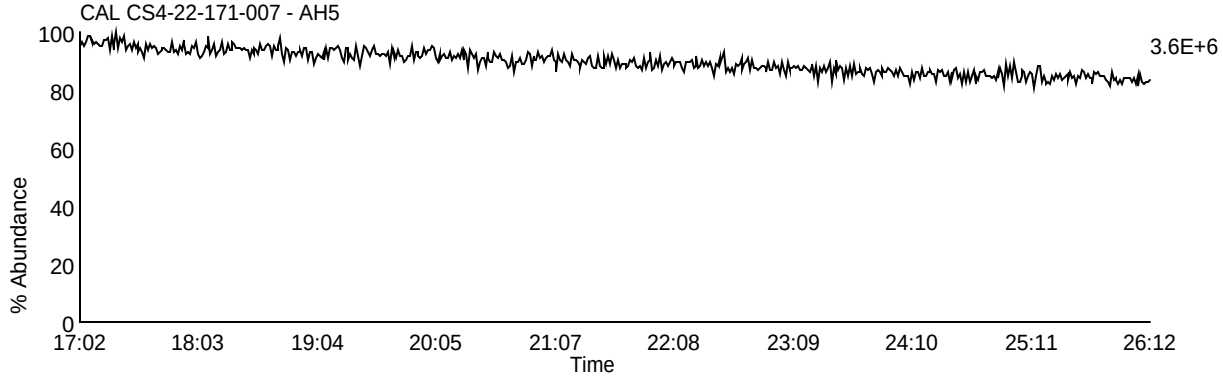
Data File: U230524B_06 G1 C13 - 341.8567
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C9 - 327.8847
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G1 C5 - 318.9792
CAL CS4-22-171-007 - AH5

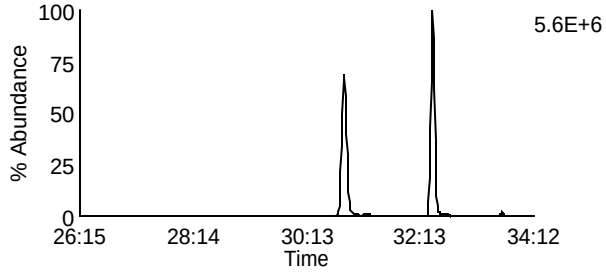


Homologue Group: Pentas

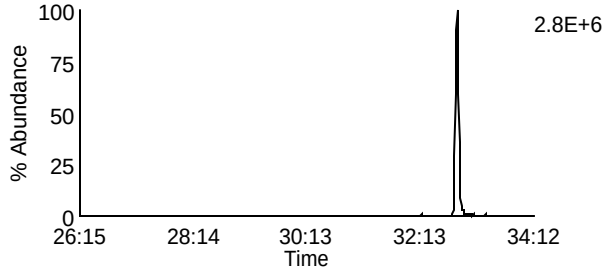
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

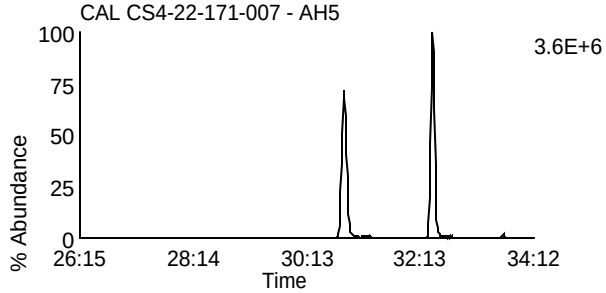
Data File: U230524B_06 G2 C1 - 339.8597
CAL CS4-22-171-007 - AH5



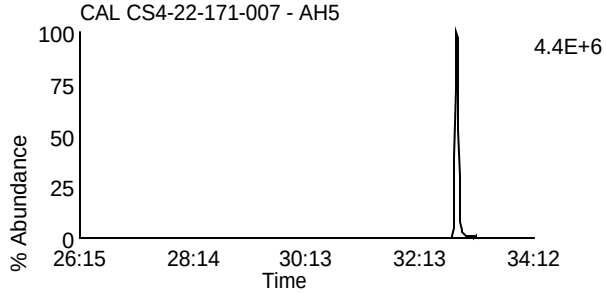
Data File: U230524B_06 G2 C4 - 353.8576
CAL CS4-22-171-007 - AH5



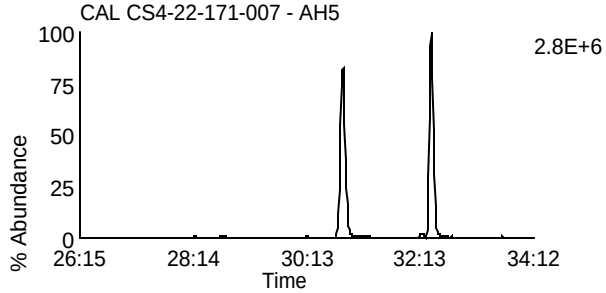
Data File: U230524B_06 G2 C2 - 341.8567
CAL CS4-22-171-007 - AH5



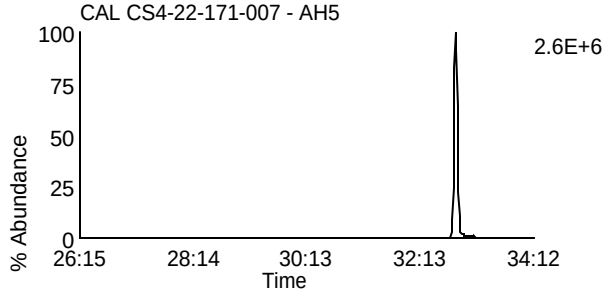
Data File: U230524B_06 G2 C8 - 355.8546
CAL CS4-22-171-007 - AH5



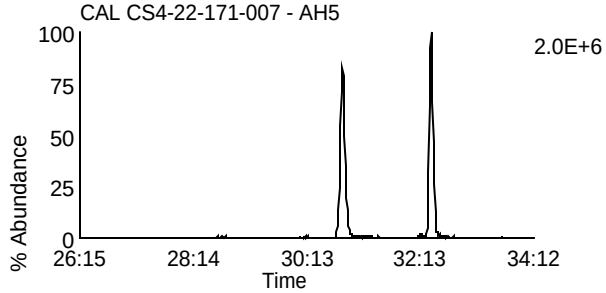
Data File: U230524B_06 G2 C3 - 351.8999
CAL CS4-22-171-007 - AH5



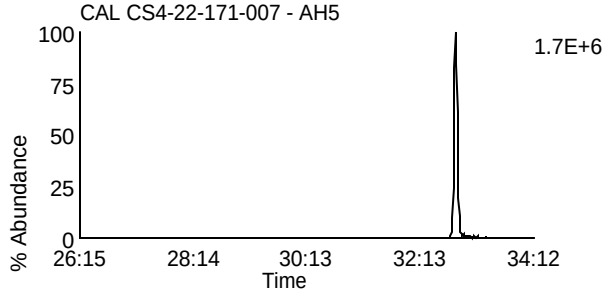
Data File: U230524B_06 G2 C10 - 367.8948
CAL CS4-22-171-007 - AH5



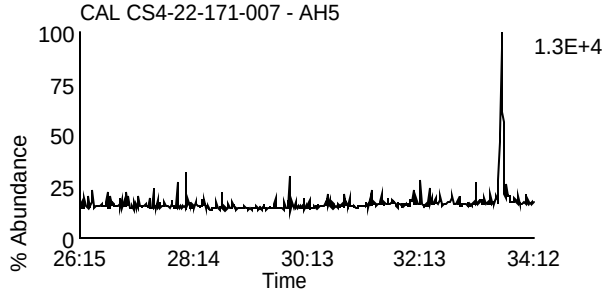
Data File: U230524B_06 G2 C5 - 353.8969
CAL CS4-22-171-007 - AH5



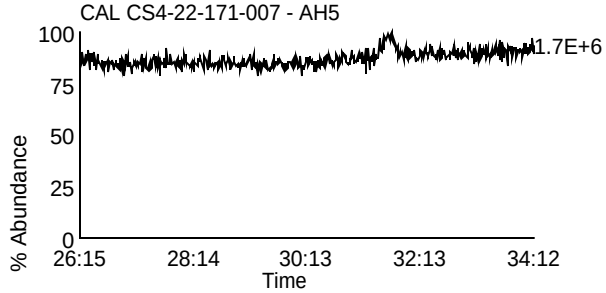
Data File: U230524B_06 G2 C11 - 369.8918
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G2 C12 - 409.7974
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G2 C6 - 354.9792
CAL CS4-22-171-007 - AH5

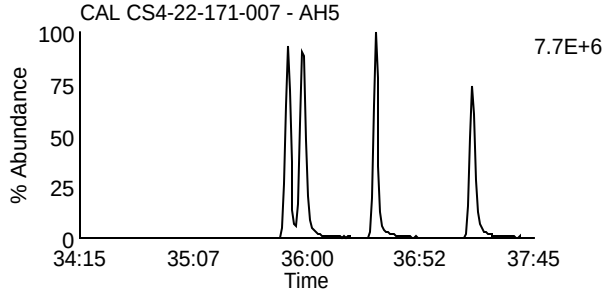


Homologue Group: Hexas

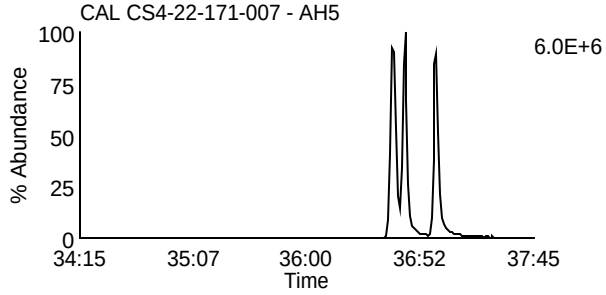
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

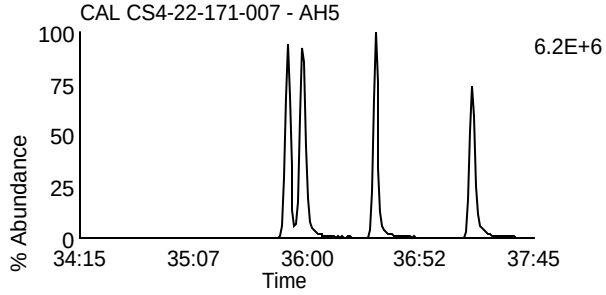
Data File: U230524B_06 G3 C1 - 373.8207
CAL CS4-22-171-007 - AH5



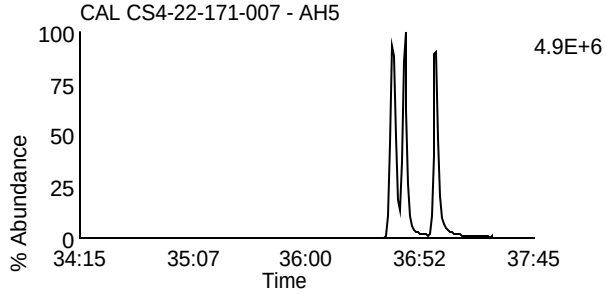
Data File: U230524B_06 G3 C7 - 389.8156
CAL CS4-22-171-007 - AH5



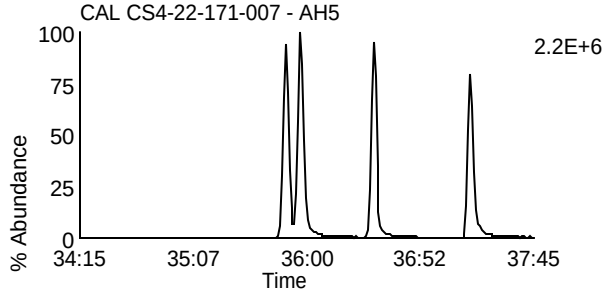
Data File: U230524B_06 G3 C2 - 375.8178
CAL CS4-22-171-007 - AH5



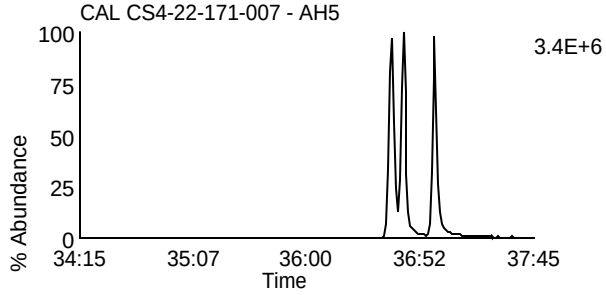
Data File: U230524B_06 G3 C8 - 391.8127
CAL CS4-22-171-007 - AH5



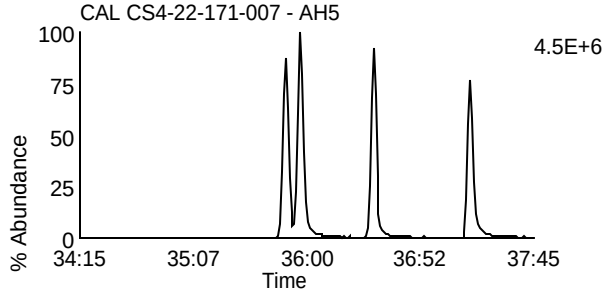
Data File: U230524B_06 G3 C5 - 383.8639
CAL CS4-22-171-007 - AH5



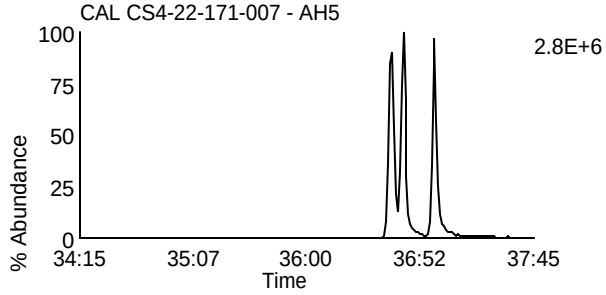
Data File: U230524B_06 G3 C9 - 401.8559
CAL CS4-22-171-007 - AH5



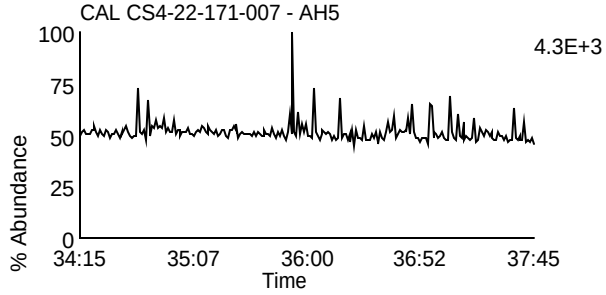
Data File: U230524B_06 G3 C6 - 385.861
CAL CS4-22-171-007 - AH5



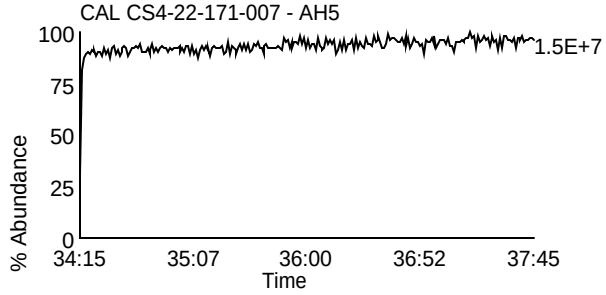
Data File: U230524B_06 G3 C10 - 403.8529
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G3 C11 - 445.7555
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G3 C3 - 380.976
CAL CS4-22-171-007 - AH5

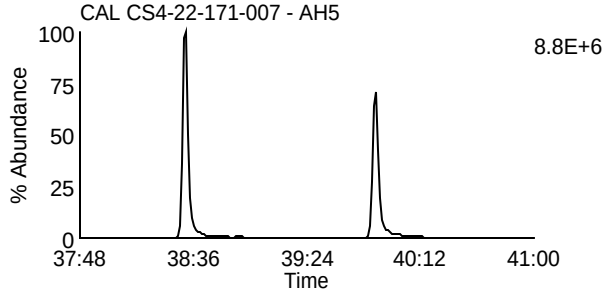


Homologue Group: Heptas

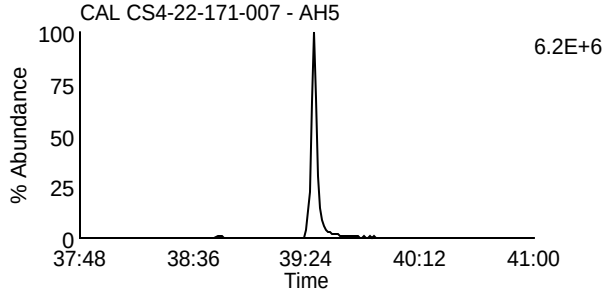
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

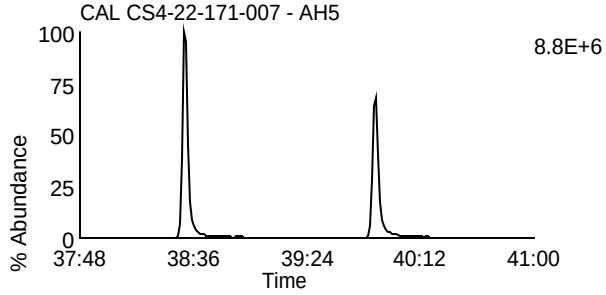
Data File: U230524B_06 G4 C3 - 407.7818
CAL CS4-22-171-007 - AH5



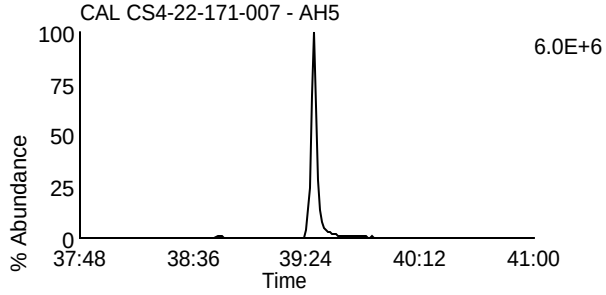
Data File: U230524B_06 G4 C8 - 423.7767
CAL CS4-22-171-007 - AH5



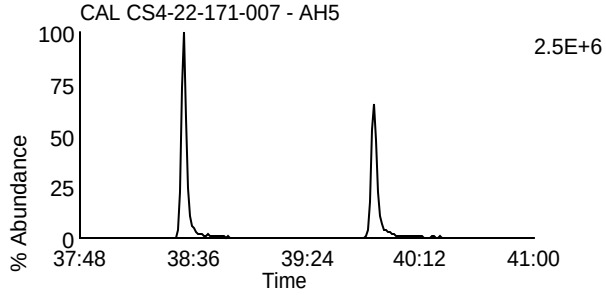
Data File: U230524B_06 G4 C4 - 409.7788
CAL CS4-22-171-007 - AH5



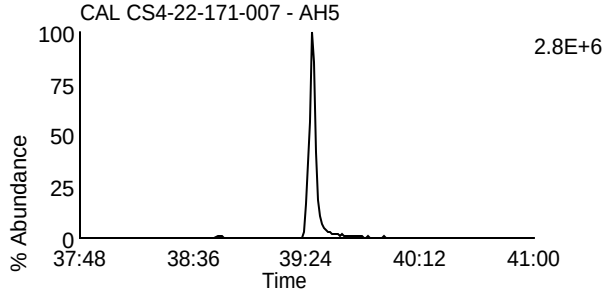
Data File: U230524B_06 G4 C9 - 425.7737
CAL CS4-22-171-007 - AH5



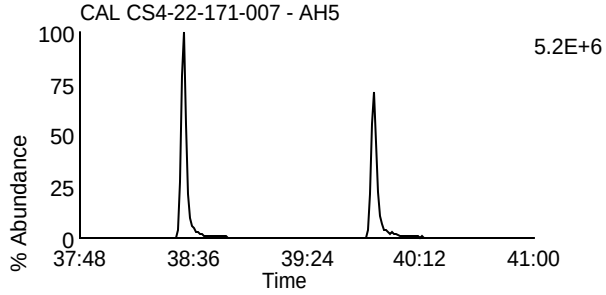
Data File: U230524B_06 G4 C6 - 417.825
CAL CS4-22-171-007 - AH5



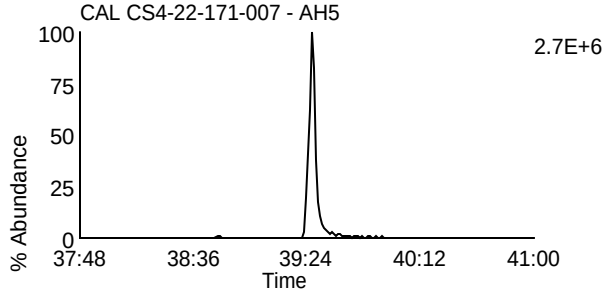
Data File: U230524B_06 G4 C11 - 435.8169
CAL CS4-22-171-007 - AH5



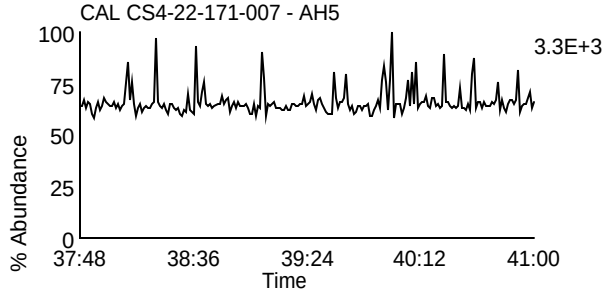
Data File: U230524B_06 G4 C7 - 419.822
CAL CS4-22-171-007 - AH5



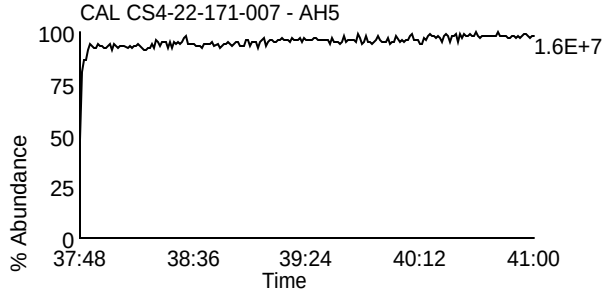
Data File: U230524B_06 G4 C12 - 437.814
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G4 C13 - 479.7165
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G4 C1 - 380.976
CAL CS4-22-171-007 - AH5

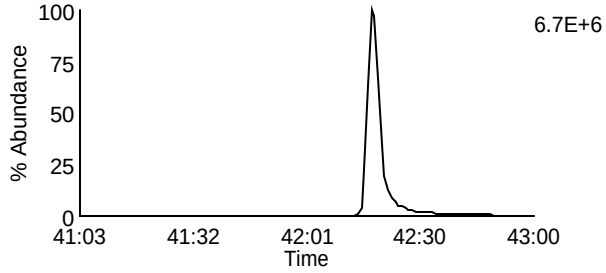


Homologue Group: Octas

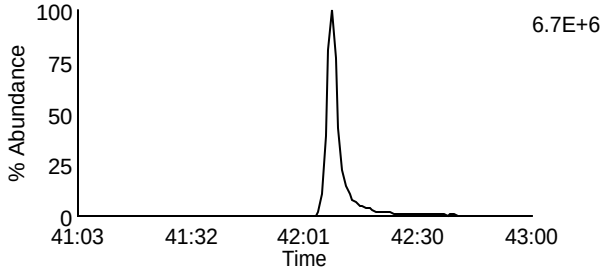
Data File Name: U230524B_06
Date Acquired: 5/24/2023
Sample Description: CAL CS4-22-171-007 - AH5

Lab Sample ID: CS4-22-171-007
Client Sample ID:
Instrument: 10MSHR06 (U)

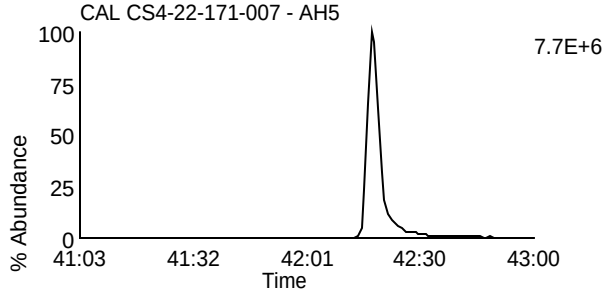
Data File: U230524B_06 G5 C4 - 441.7428
CAL CS4-22-171-007 - AH5



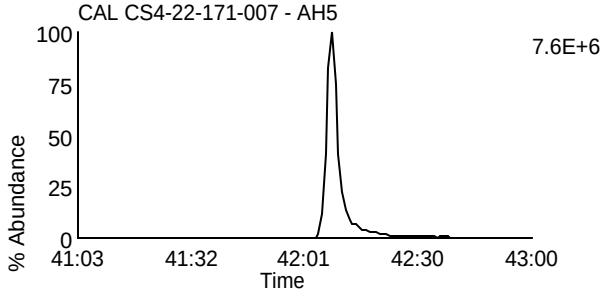
Data File: U230524B_06 G5 C8 - 457.7377
CAL CS4-22-171-007 - AH5



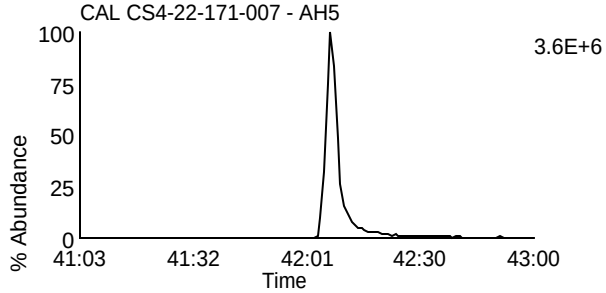
Data File: U230524B_06 G5 C5 - 443.7398
CAL CS4-22-171-007 - AH5



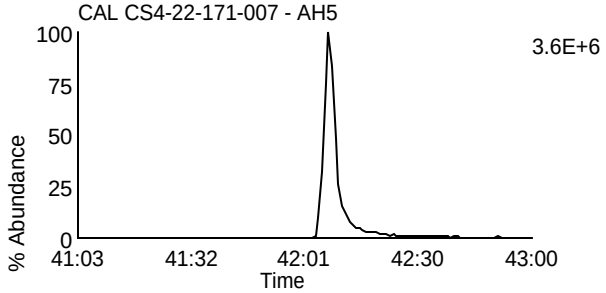
Data File: U230524B_06 G5 C9 - 459.7347
CAL CS4-22-171-007 - AH5



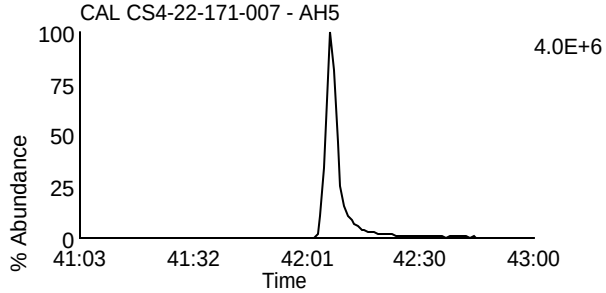
Data File: U230524B_06 G5 C11 - 469.7779
CAL CS4-22-171-007 - AH5



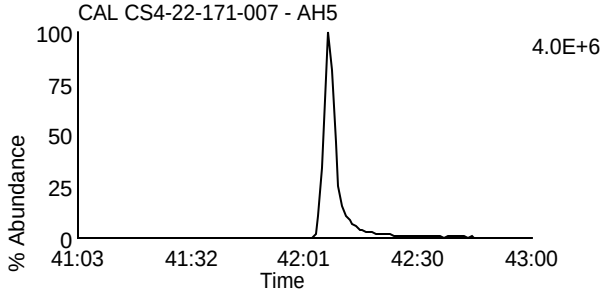
Data File: U230524B_06 G5 C11 - 469.7779
CAL CS4-22-171-007 - AH5



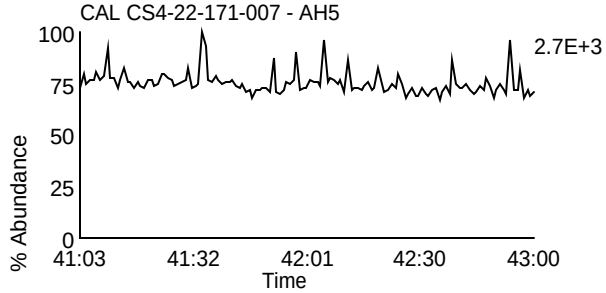
Data File: U230524B_06 G5 C12 - 471.7749
CAL CS4-22-171-007 - AH5



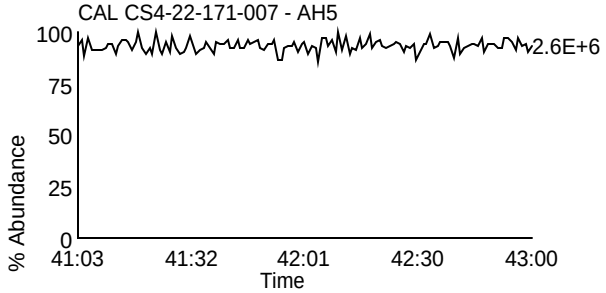
Data File: U230524B_06 G5 C12 - 471.7749
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G5 C13 - 513.6775
CAL CS4-22-171-007 - AH5



Data File: U230524B_06 G5 C2 - 430.9728
CAL CS4-22-171-007 - AH5

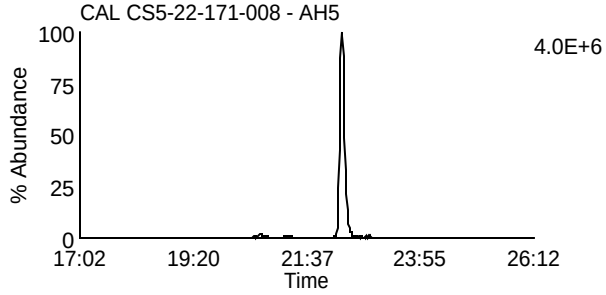


Homologue Group: Tetras

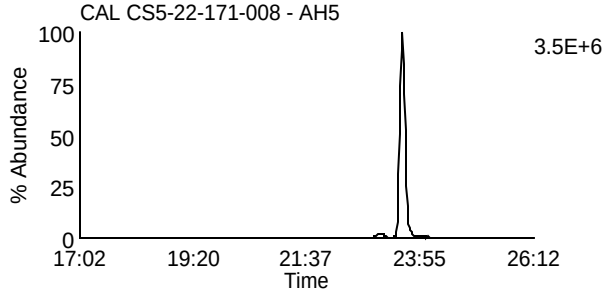
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

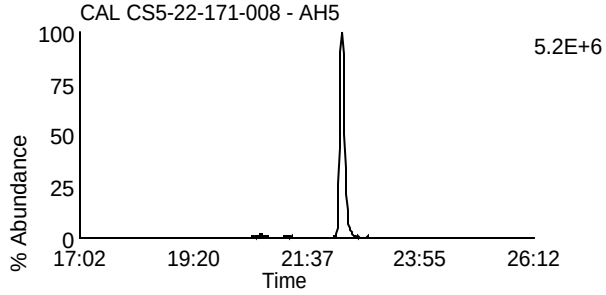
Data File: U230524B_05 G1 C1 - 303.9016
CAL CS5-22-171-008 - AH5



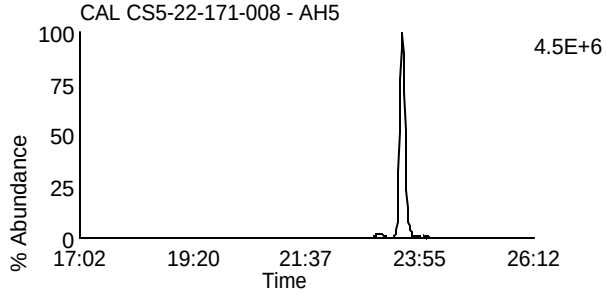
Data File: U230524B_05 G1 C7 - 319.8965
CAL CS5-22-171-008 - AH5



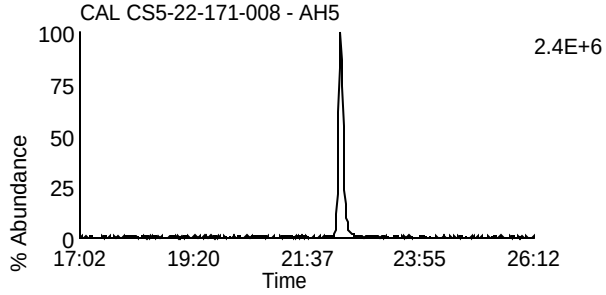
Data File: U230524B_05 G1 C2 - 305.8987
CAL CS5-22-171-008 - AH5



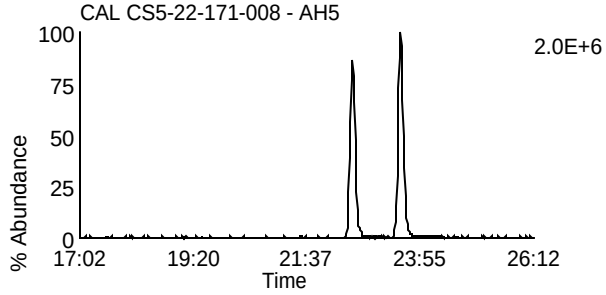
Data File: U230524B_05 G1 C8 - 321.8936
CAL CS5-22-171-008 - AH5



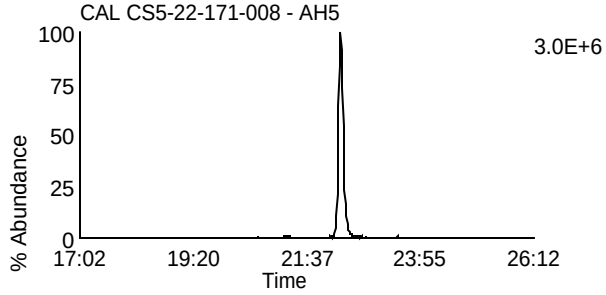
Data File: U230524B_05 G1 C3 - 315.9418
CAL CS5-22-171-008 - AH5



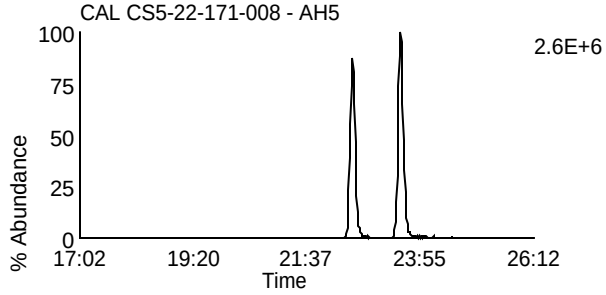
Data File: U230524B_05 G1 C10 - 331.9367
CAL CS5-22-171-008 - AH5



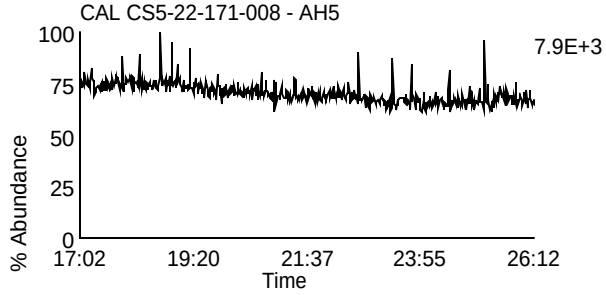
Data File: U230524B_05 G1 C4 - 317.9389
CAL CS5-22-171-008 - AH5



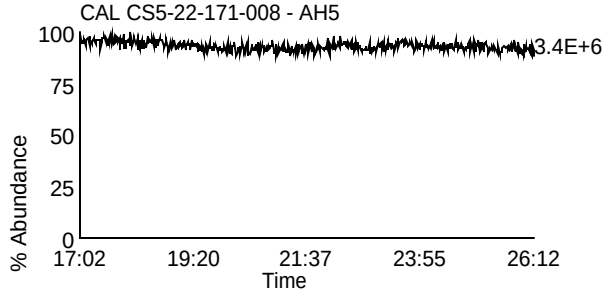
Data File: U230524B_05 G1 C11 - 333.9338
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G1 C14 - 375.8364
CAL CS5-22-171-008 - AH5



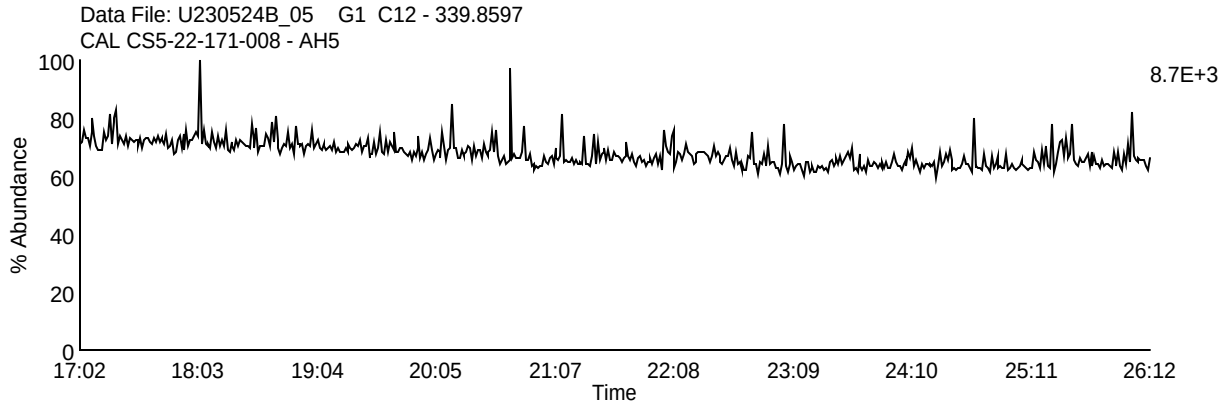
Data File: U230524B_05 G1 C5 - 318.9792
CAL CS5-22-171-008 - AH5

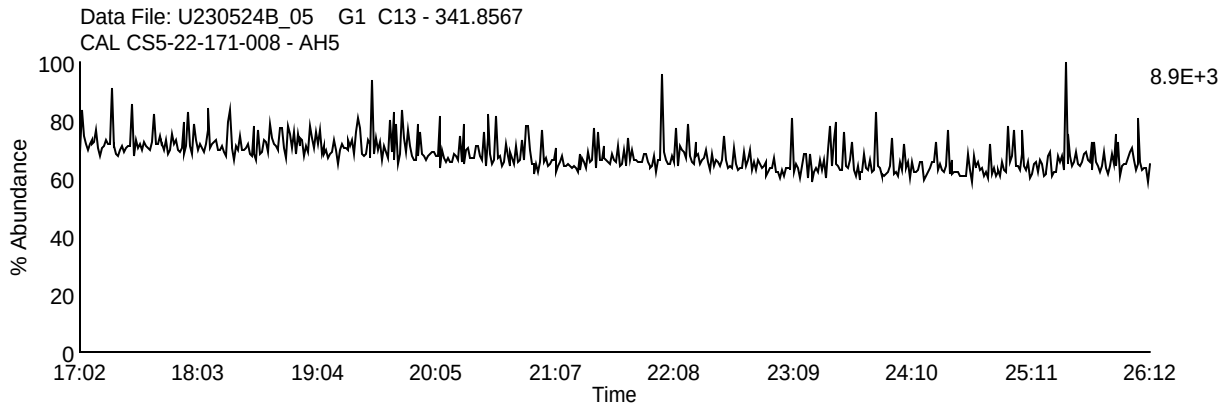


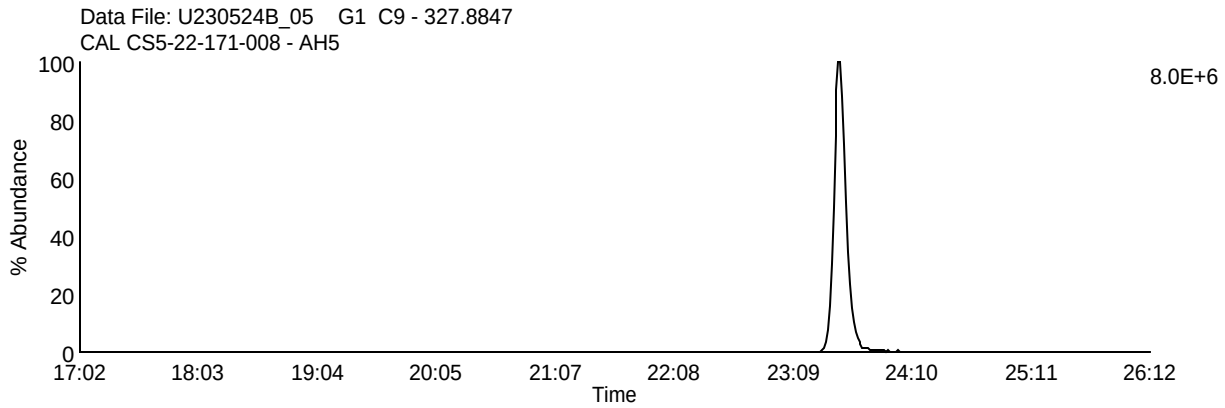
Homologue Group: Penta & Cleanup

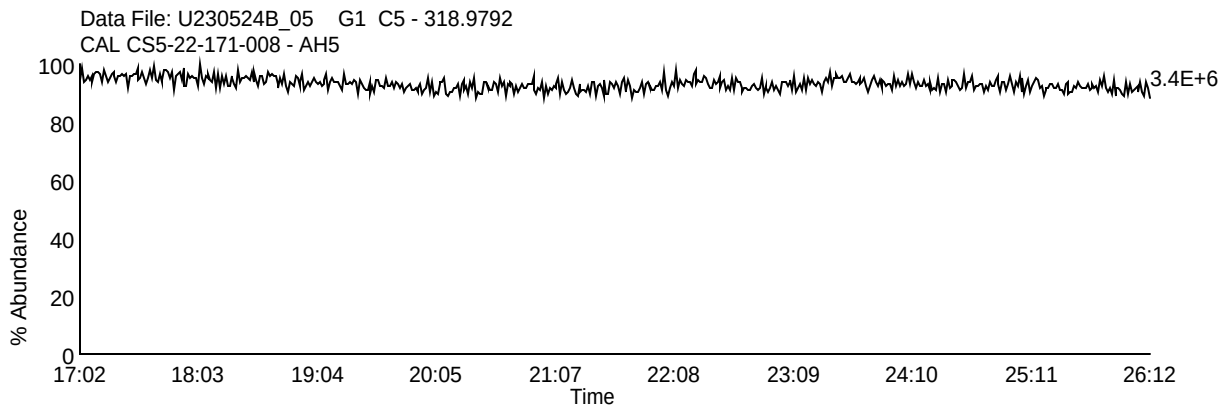
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)







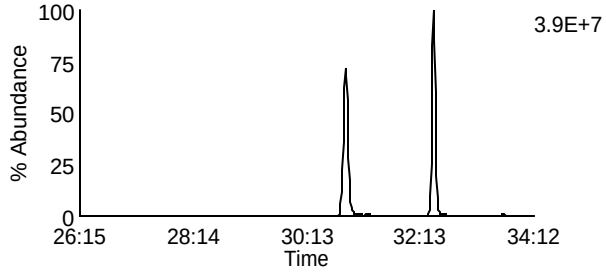


Homologue Group: Pentas

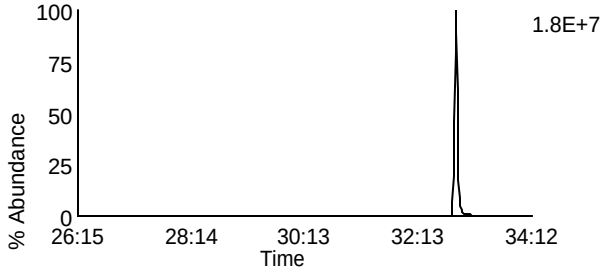
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

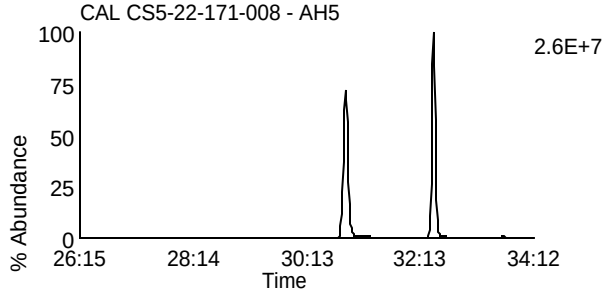
Data File: U230524B_05 G2 C1 - 339.8597
CAL CS5-22-171-008 - AH5



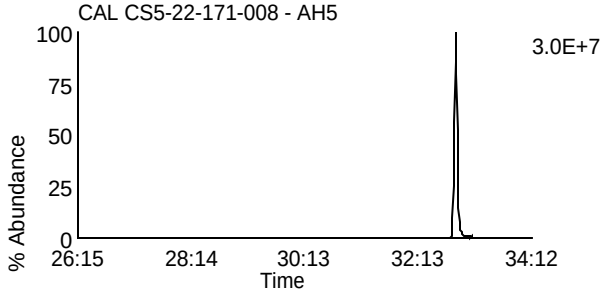
Data File: U230524B_05 G2 C4 - 353.8576
CAL CS5-22-171-008 - AH5



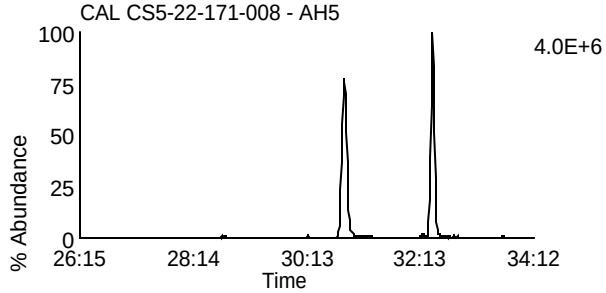
Data File: U230524B_05 G2 C2 - 341.8567
CAL CS5-22-171-008 - AH5



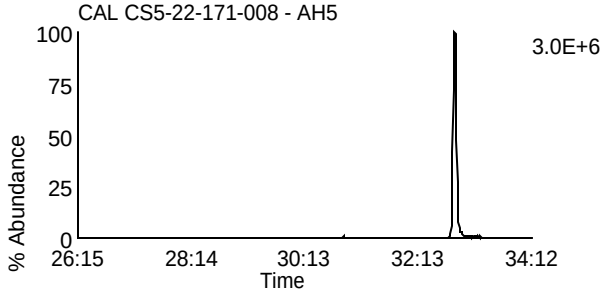
Data File: U230524B_05 G2 C8 - 355.8546
CAL CS5-22-171-008 - AH5



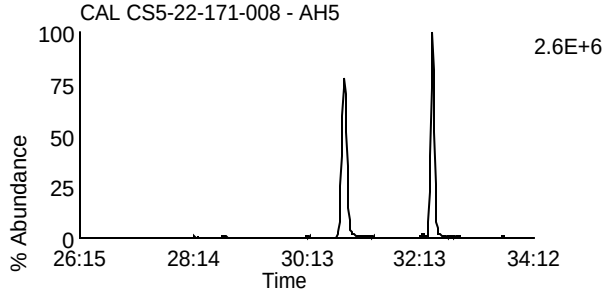
Data File: U230524B_05 G2 C3 - 351.8999
CAL CS5-22-171-008 - AH5



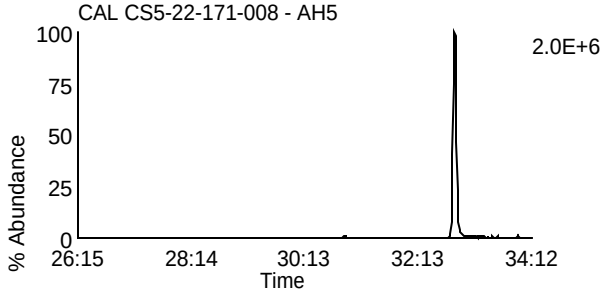
Data File: U230524B_05 G2 C10 - 367.8948
CAL CS5-22-171-008 - AH5



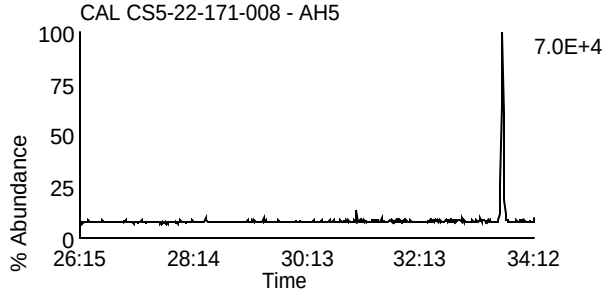
Data File: U230524B_05 G2 C5 - 353.8969
CAL CS5-22-171-008 - AH5



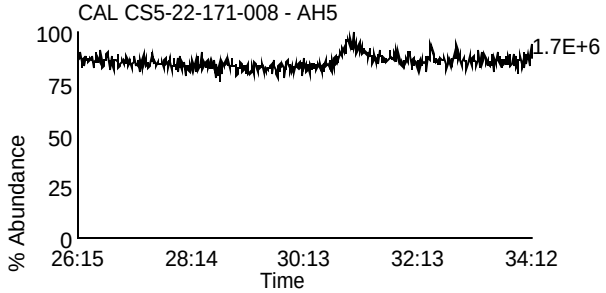
Data File: U230524B_05 G2 C11 - 369.8918
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G2 C12 - 409.7974
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G2 C6 - 354.9792
CAL CS5-22-171-008 - AH5

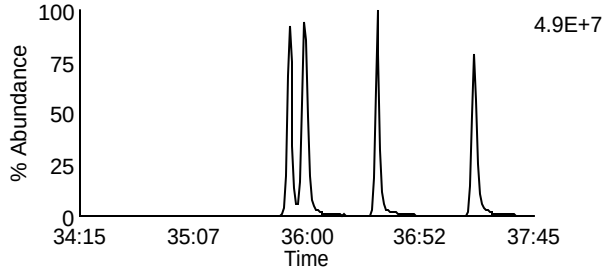


Homologue Group: Hexas

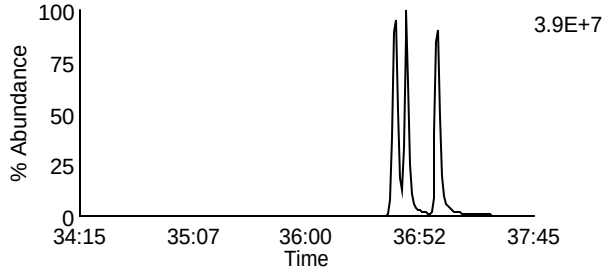
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

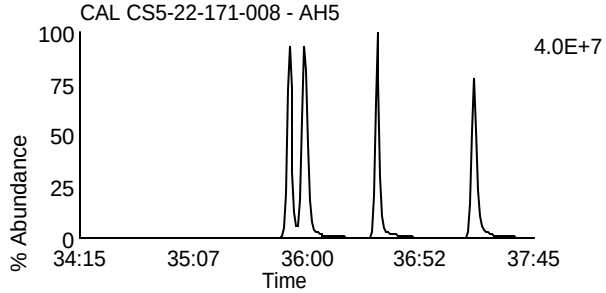
Data File: U230524B_05 G3 C1 - 373.8207
CAL CS5-22-171-008 - AH5



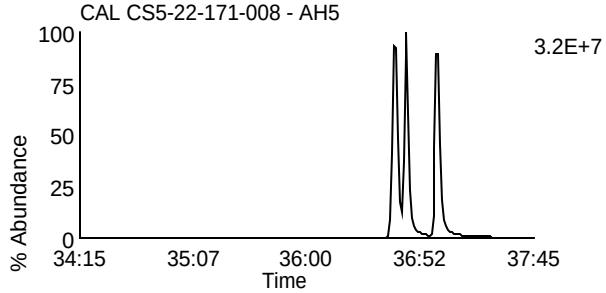
Data File: U230524B_05 G3 C7 - 389.8156
CAL CS5-22-171-008 - AH5



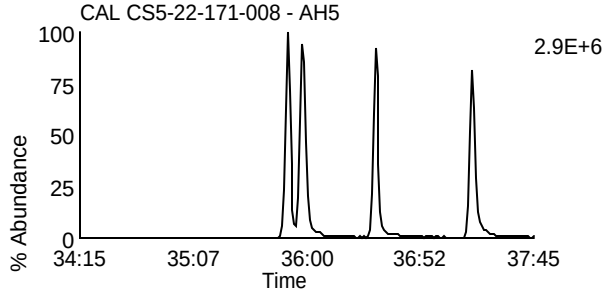
Data File: U230524B_05 G3 C2 - 375.8178
CAL CS5-22-171-008 - AH5



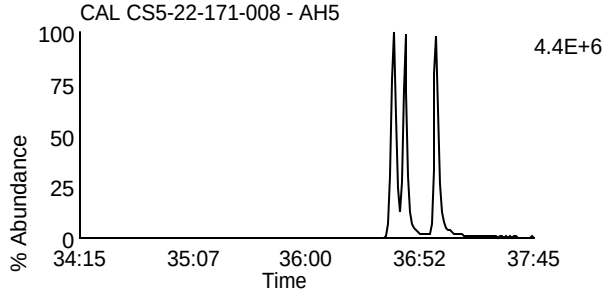
Data File: U230524B_05 G3 C8 - 391.8127
CAL CS5-22-171-008 - AH5



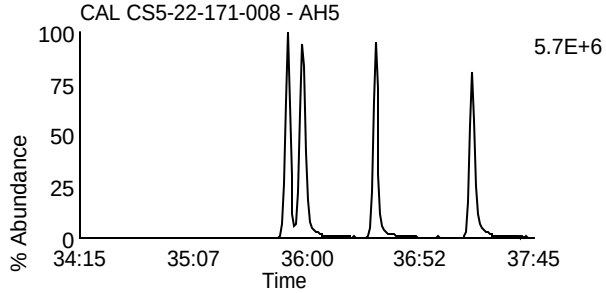
Data File: U230524B_05 G3 C5 - 383.8639
CAL CS5-22-171-008 - AH5



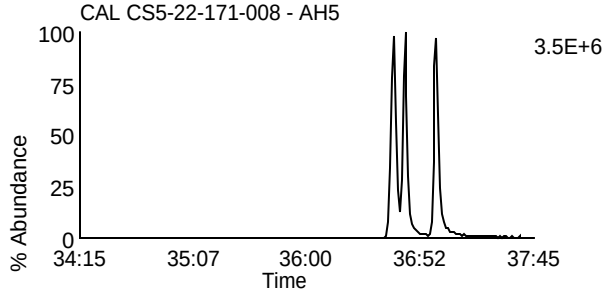
Data File: U230524B_05 G3 C9 - 401.8559
CAL CS5-22-171-008 - AH5



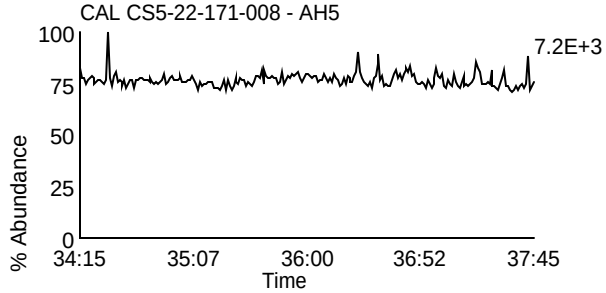
Data File: U230524B_05 G3 C6 - 385.861
CAL CS5-22-171-008 - AH5



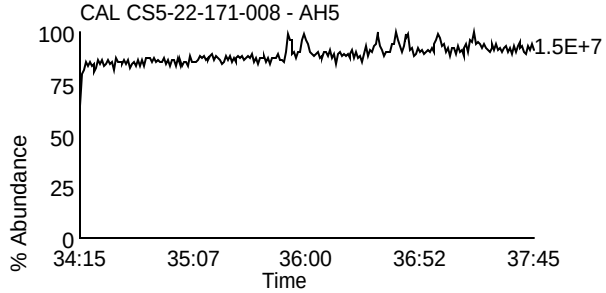
Data File: U230524B_05 G3 C10 - 403.8529
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G3 C11 - 445.7555
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G3 C3 - 380.976
CAL CS5-22-171-008 - AH5

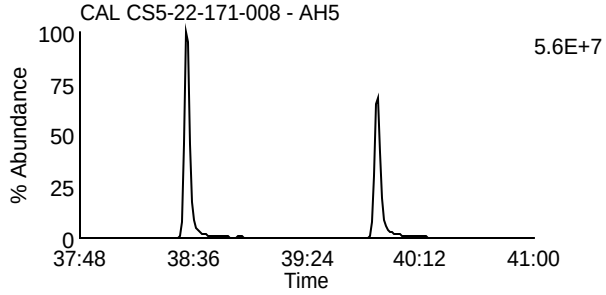


Homologue Group: Heptas

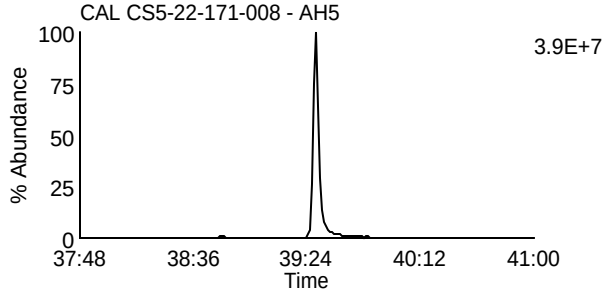
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

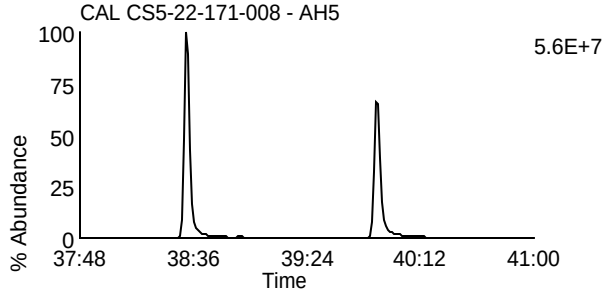
Data File: U230524B_05 G4 C3 - 407.7818
CAL CS5-22-171-008 - AH5



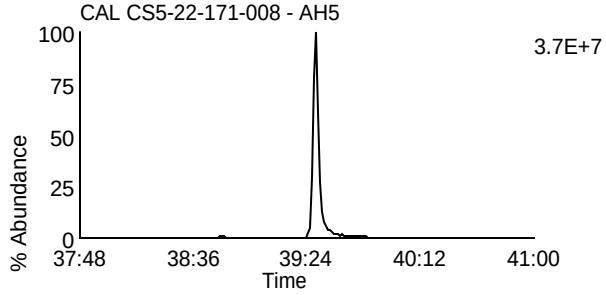
Data File: U230524B_05 G4 C8 - 423.7767
CAL CS5-22-171-008 - AH5



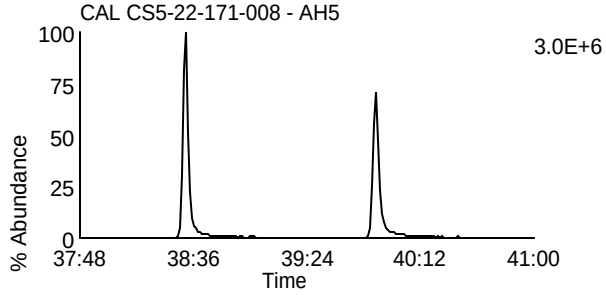
Data File: U230524B_05 G4 C4 - 409.7788
CAL CS5-22-171-008 - AH5



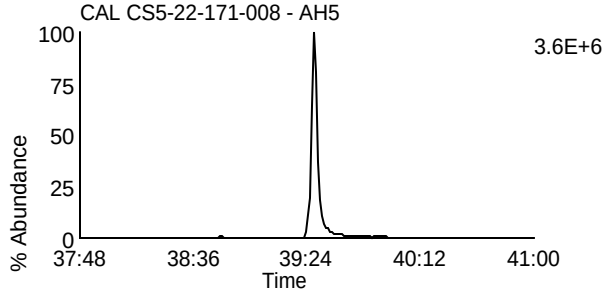
Data File: U230524B_05 G4 C9 - 425.7737
CAL CS5-22-171-008 - AH5



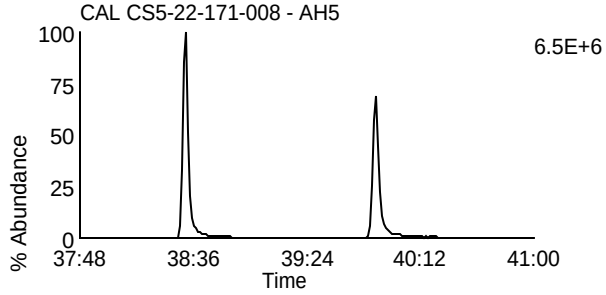
Data File: U230524B_05 G4 C6 - 417.825
CAL CS5-22-171-008 - AH5



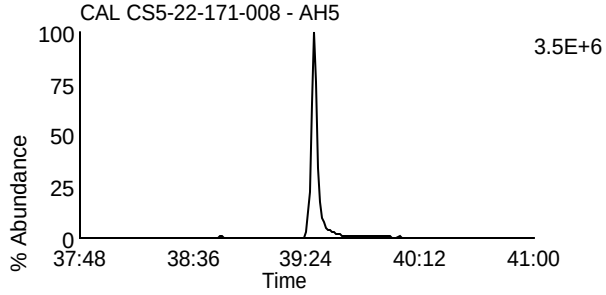
Data File: U230524B_05 G4 C11 - 435.8169
CAL CS5-22-171-008 - AH5



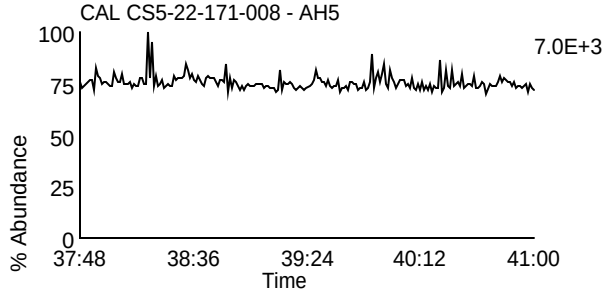
Data File: U230524B_05 G4 C7 - 419.822
CAL CS5-22-171-008 - AH5



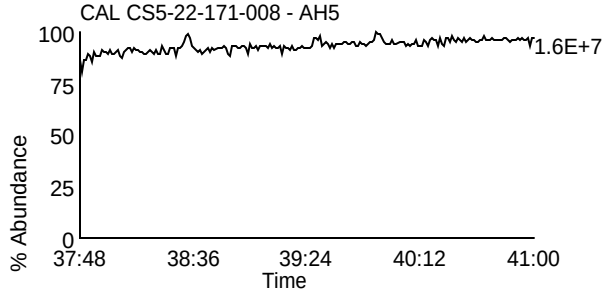
Data File: U230524B_05 G4 C12 - 437.814
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G4 C13 - 479.7165
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G4 C1 - 380.976
CAL CS5-22-171-008 - AH5

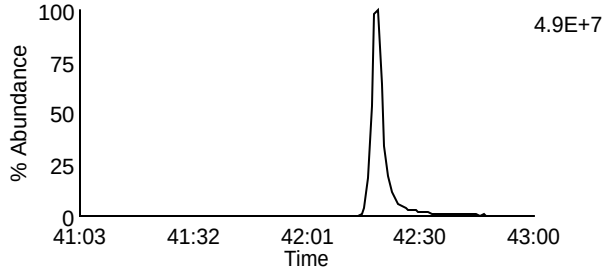


Homologue Group: Octas

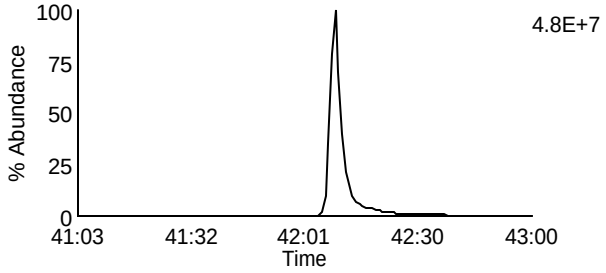
Data File Name: U230524B_05
Date Acquired: 5/24/2023
Sample Description: CAL CS5-22-171-008 - AH5

Lab Sample ID: CS5-22-171-008
Client Sample ID:
Instrument: 10MSHR06 (U)

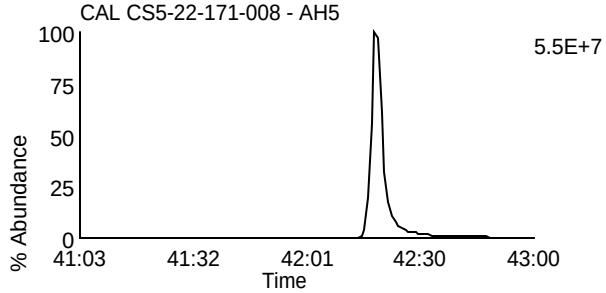
Data File: U230524B_05 G5 C4 - 441.7428
CAL CS5-22-171-008 - AH5



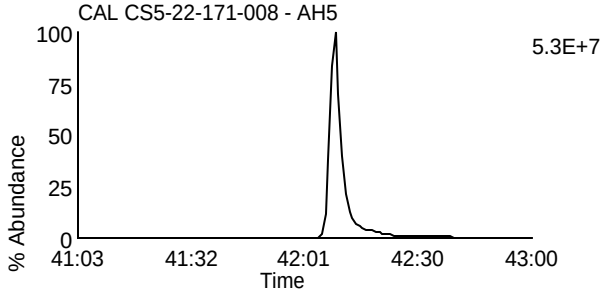
Data File: U230524B_05 G5 C8 - 457.7377
CAL CS5-22-171-008 - AH5



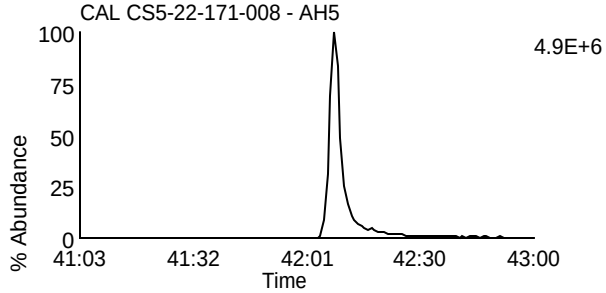
Data File: U230524B_05 G5 C5 - 443.7398
CAL CS5-22-171-008 - AH5



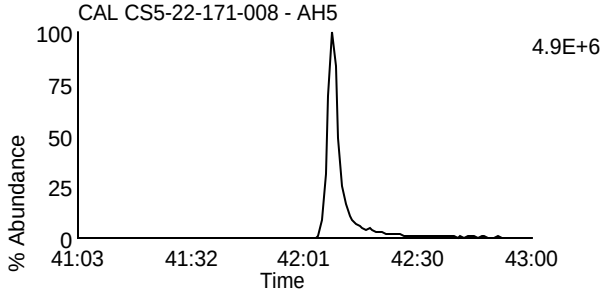
Data File: U230524B_05 G5 C9 - 459.7347
CAL CS5-22-171-008 - AH5



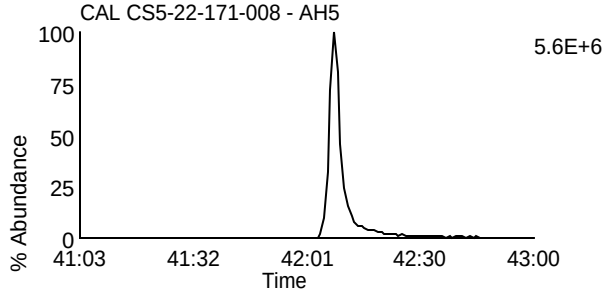
Data File: U230524B_05 G5 C11 - 469.7779
CAL CS5-22-171-008 - AH5



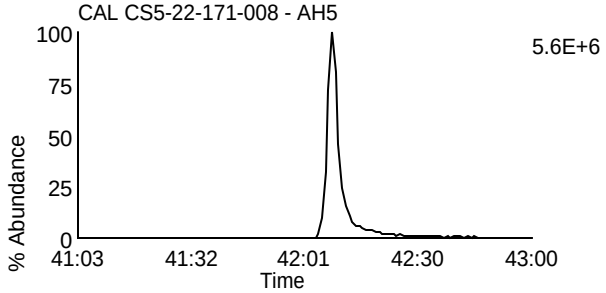
Data File: U230524B_05 G5 C11 - 469.7779
CAL CS5-22-171-008 - AH5



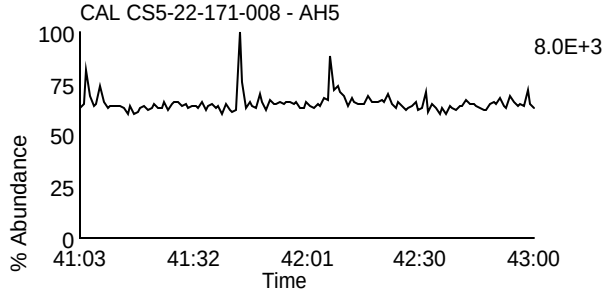
Data File: U230524B_05 G5 C12 - 471.7749
CAL CS5-22-171-008 - AH5



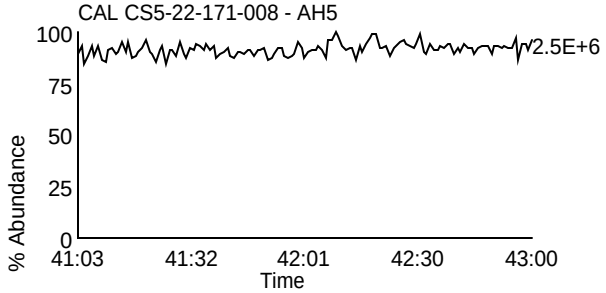
Data File: U230524B_05 G5 C12 - 471.7749
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G5 C13 - 513.6775
CAL CS5-22-171-008 - AH5



Data File: U230524B_05 G5 C2 - 430.9728
CAL CS5-22-171-008 - AH5

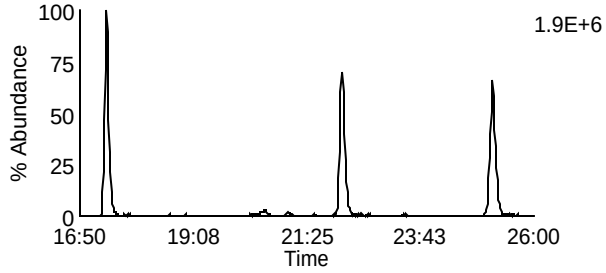


Homologue Group: Tetras

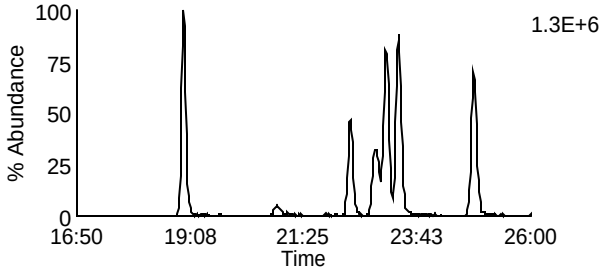
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

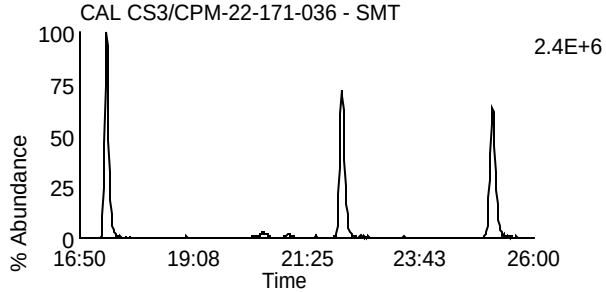
Data File: U230608A_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SMT



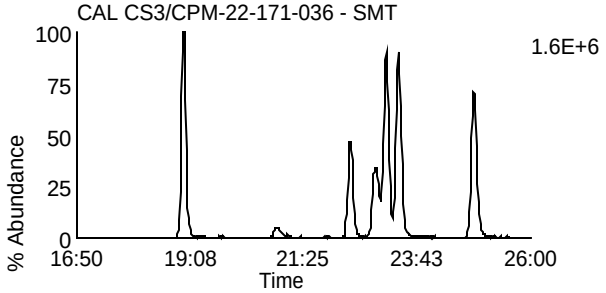
Data File: U230608A_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SMT



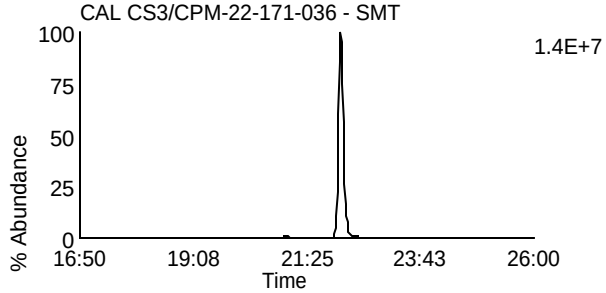
Data File: U230608A_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SMT



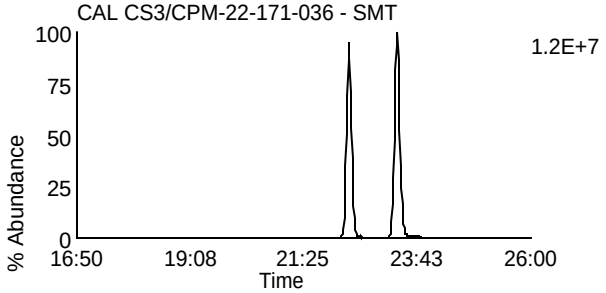
Data File: U230608A_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SMT



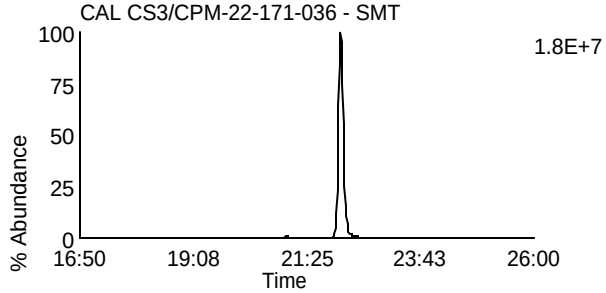
Data File: U230608A_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SMT



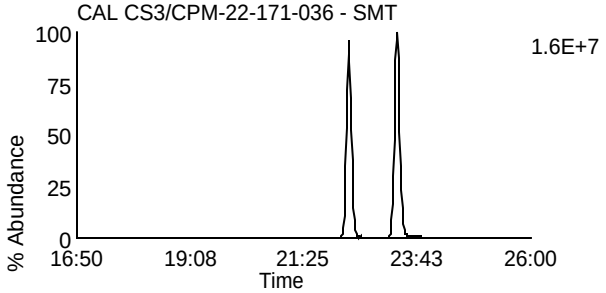
Data File: U230608A_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SMT



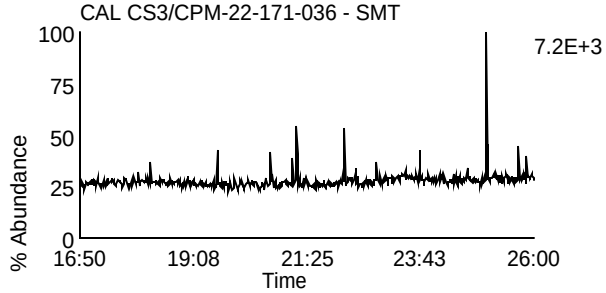
Data File: U230608A_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SMT



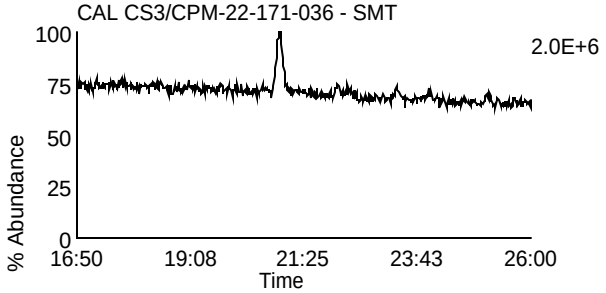
Data File: U230608A_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SMT



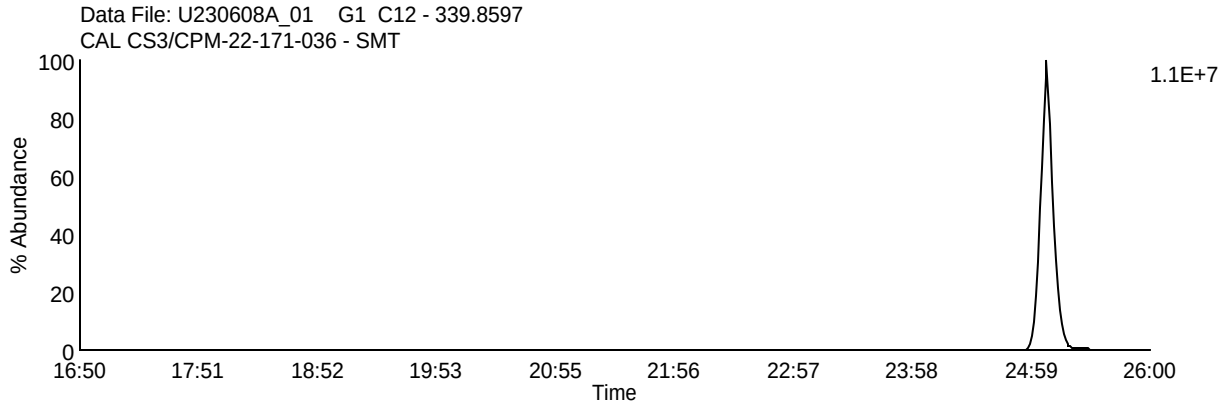
Data File: U230608A_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SMT

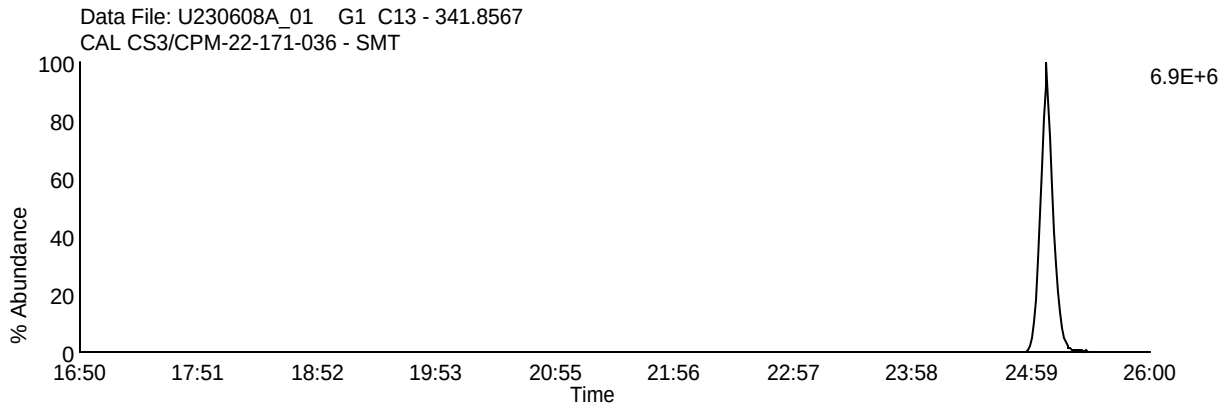


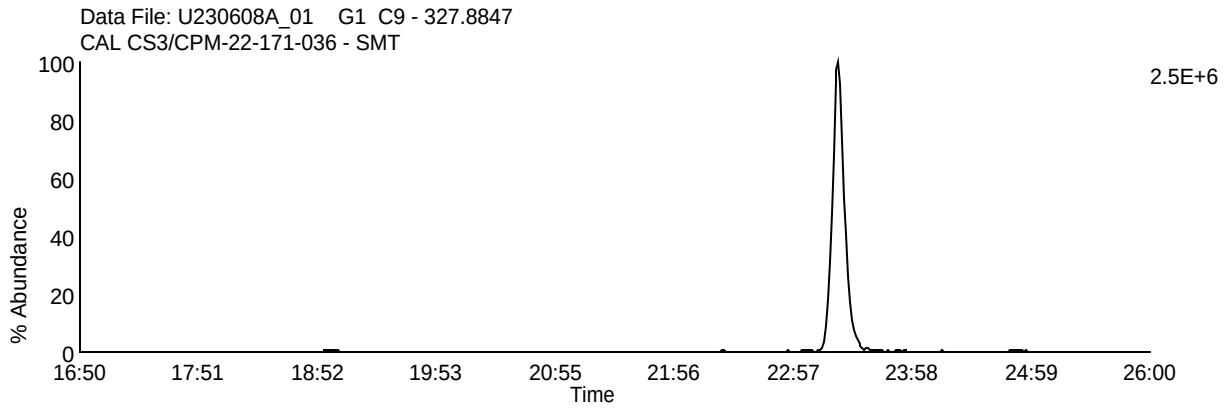
Homologue Group: Penta & Cleanup

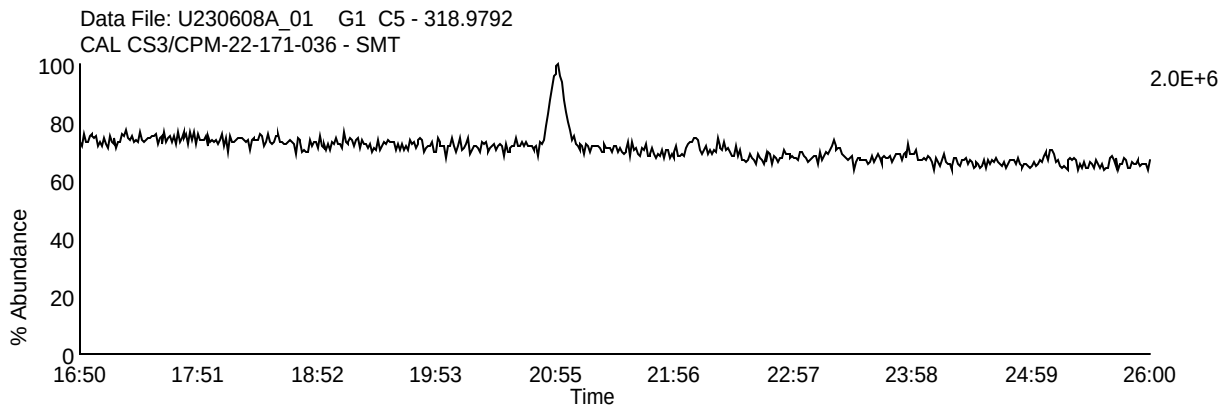
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)







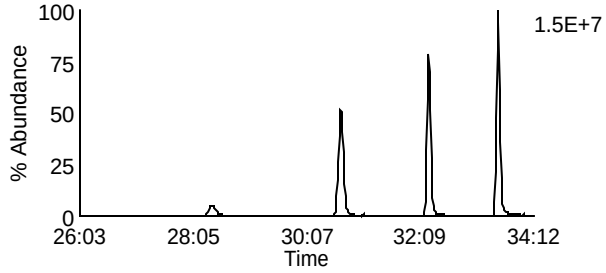


Homologue Group: Pentas

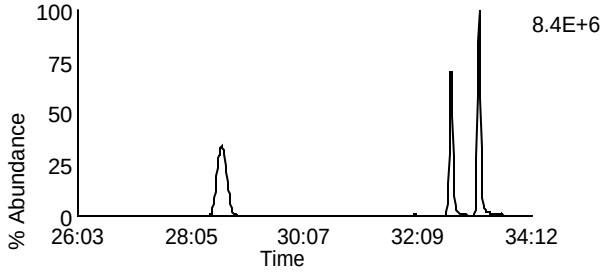
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

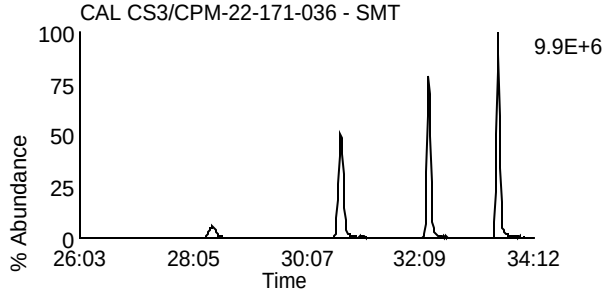
Data File: U230608A_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SMT



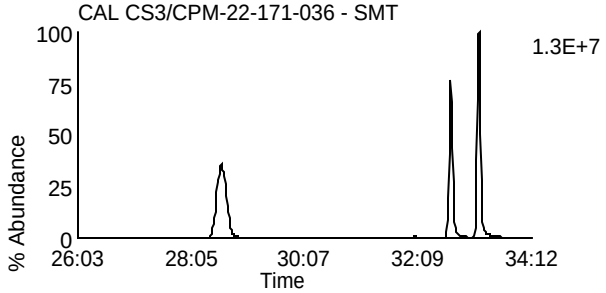
Data File: U230608A_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SMT



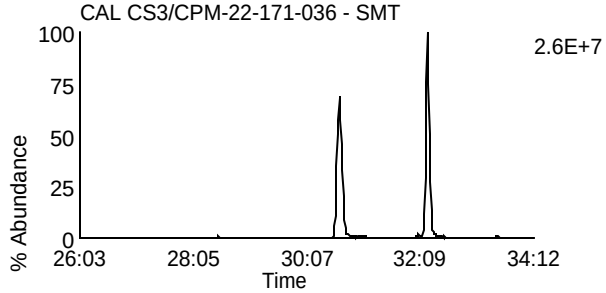
Data File: U230608A_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SMT



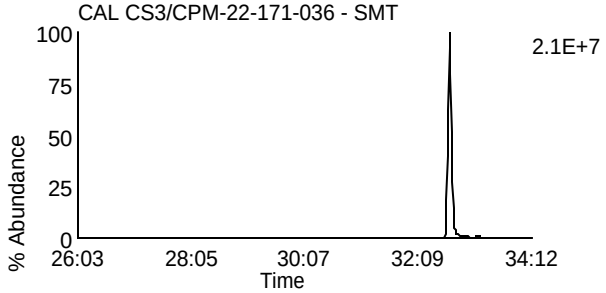
Data File: U230608A_01 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - SMT



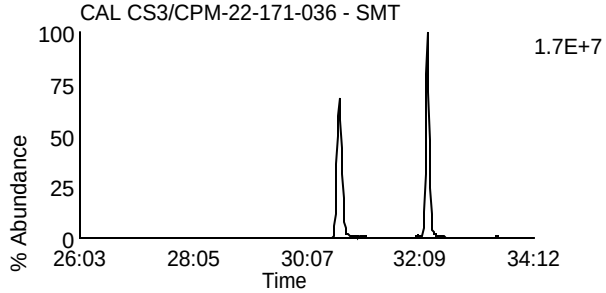
Data File: U230608A_01 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - SMT



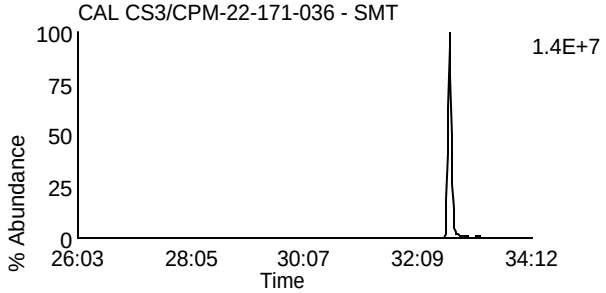
Data File: U230608A_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SMT



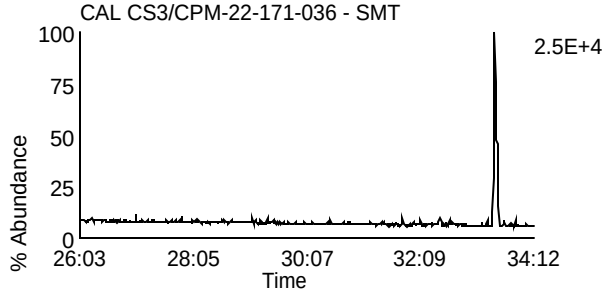
Data File: U230608A_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SMT



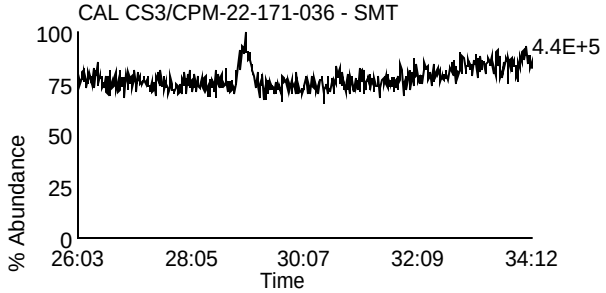
Data File: U230608A_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SMT

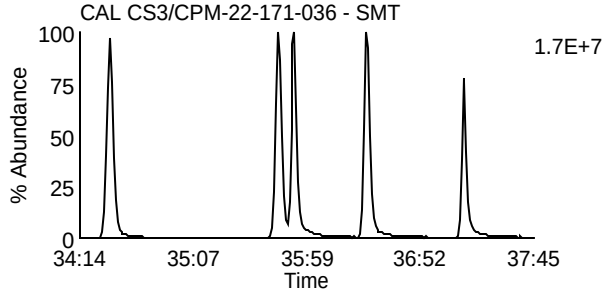


Homologue Group: Hexas

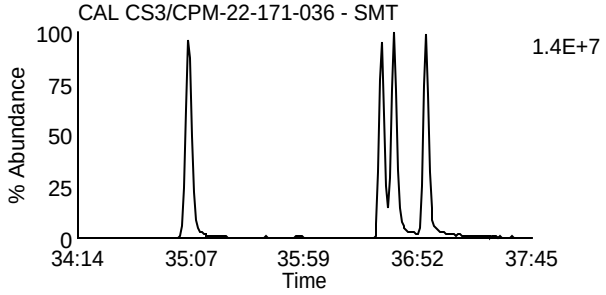
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

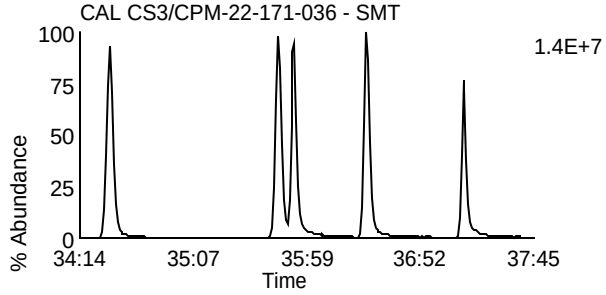
Data File: U230608A_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SMT



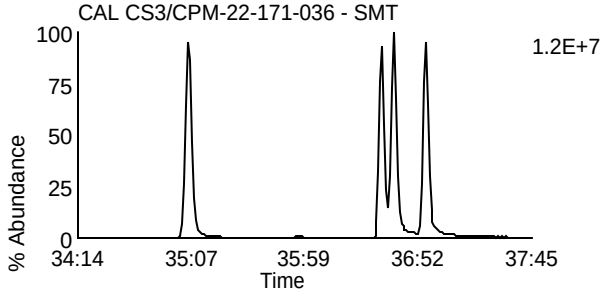
Data File: U230608A_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SMT



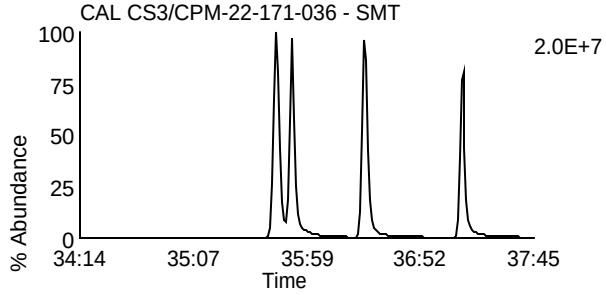
Data File: U230608A_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SMT



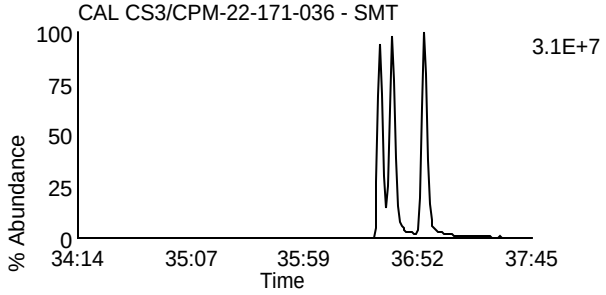
Data File: U230608A_01 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - SMT



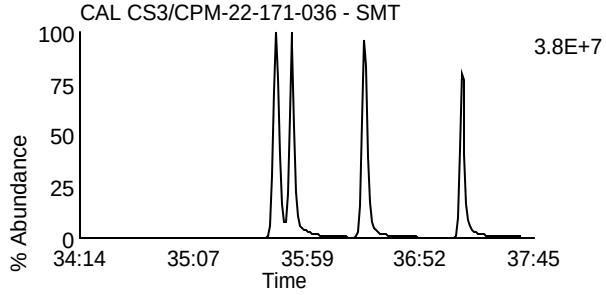
Data File: U230608A_01 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - SMT



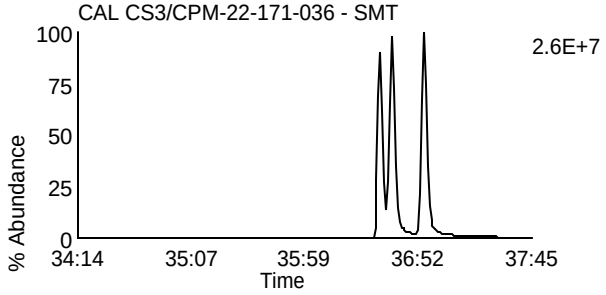
Data File: U230608A_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SMT



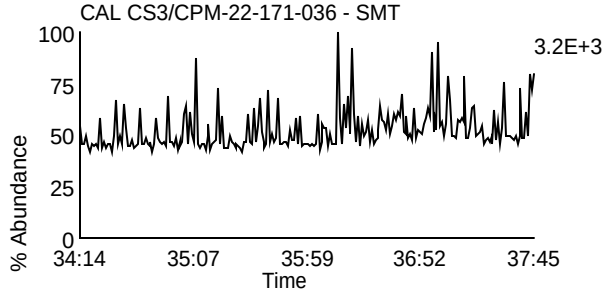
Data File: U230608A_01 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - SMT



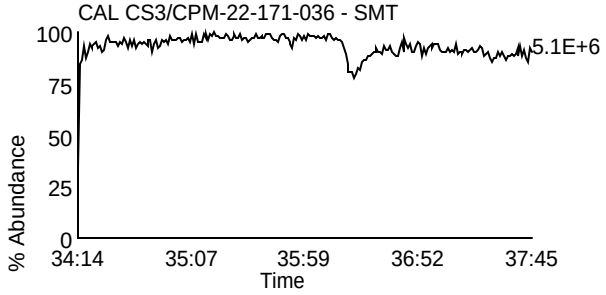
Data File: U230608A_01 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SMT

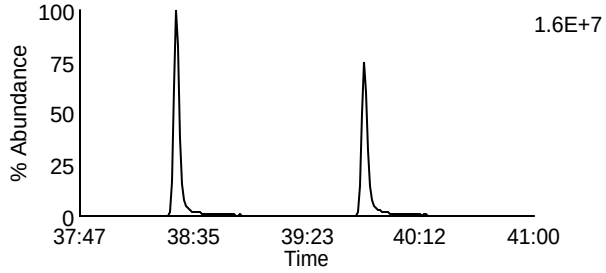


Homologue Group: Heptas

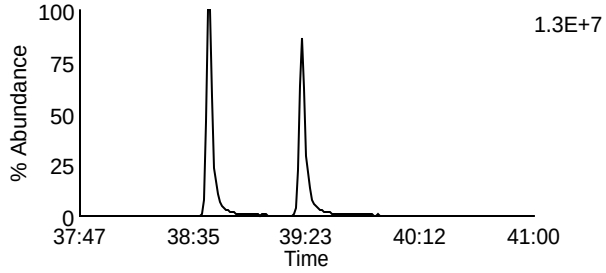
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

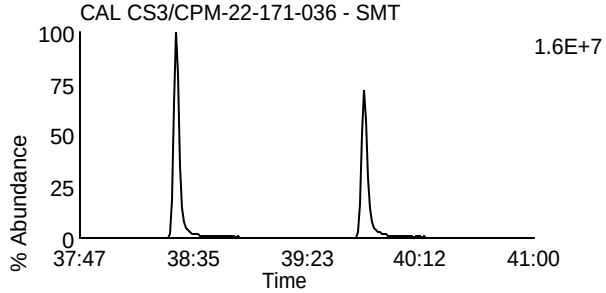
Data File: U230608A_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SMT



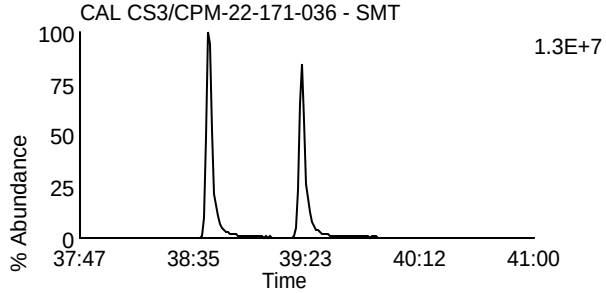
Data File: U230608A_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SMT



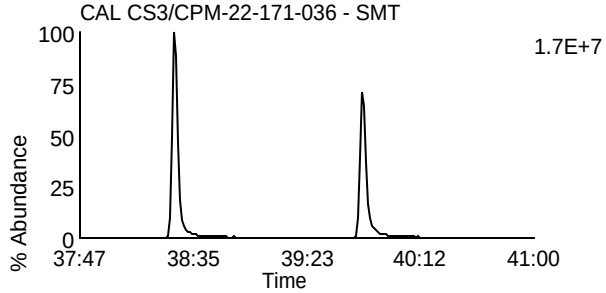
Data File: U230608A_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SMT



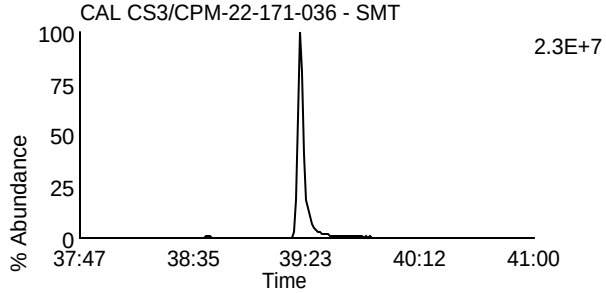
Data File: U230608A_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SMT



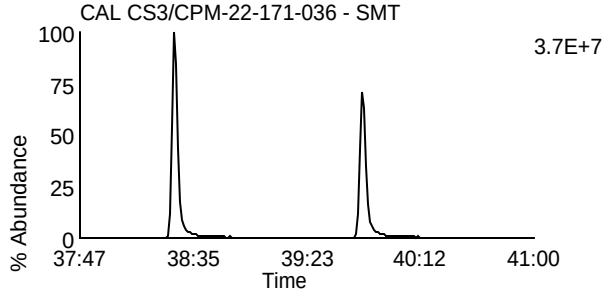
Data File: U230608A_01 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - SMT



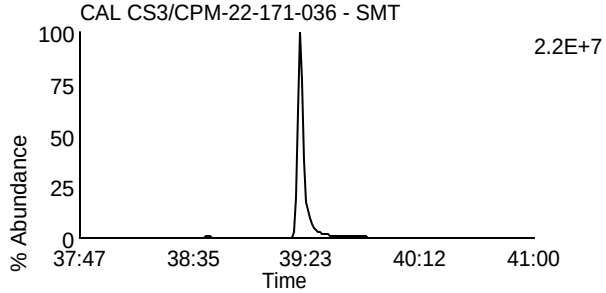
Data File: U230608A_01 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - SMT



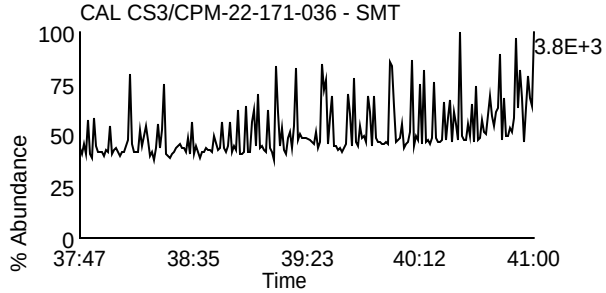
Data File: U230608A_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SMT



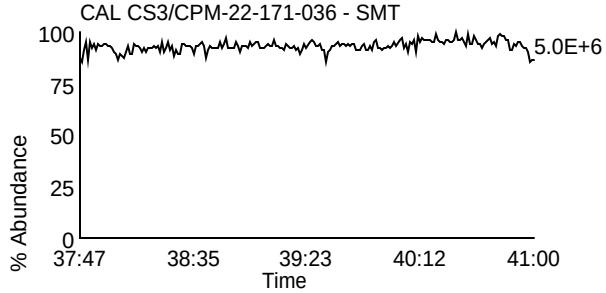
Data File: U230608A_01 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SMT

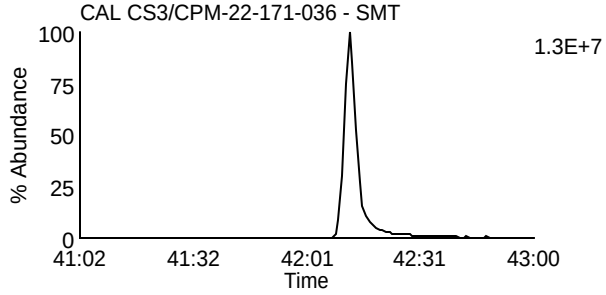


Homologue Group: Octas

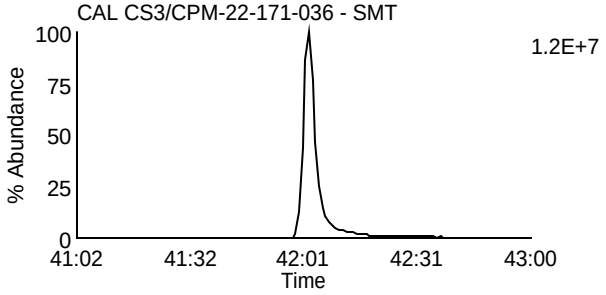
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

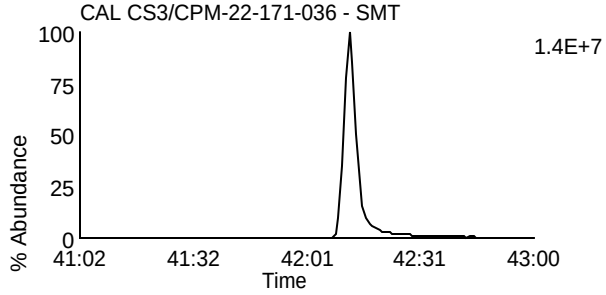
Data File: U230608A_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SMT



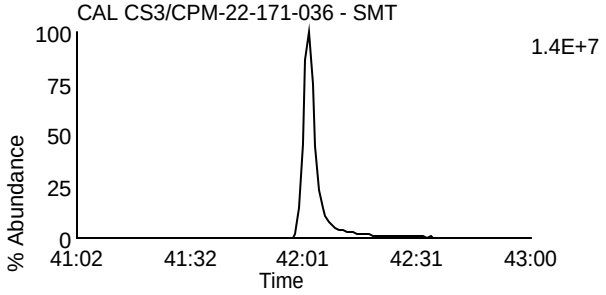
Data File: U230608A_01 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - SMT



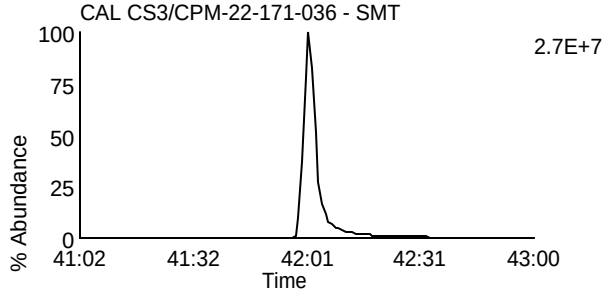
Data File: U230608A_01 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - SMT



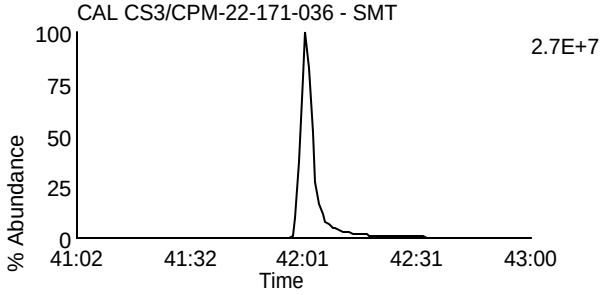
Data File: U230608A_01 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - SMT



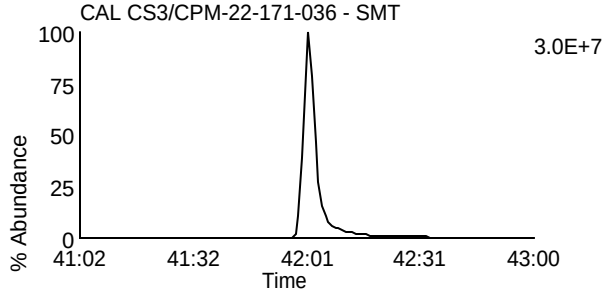
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



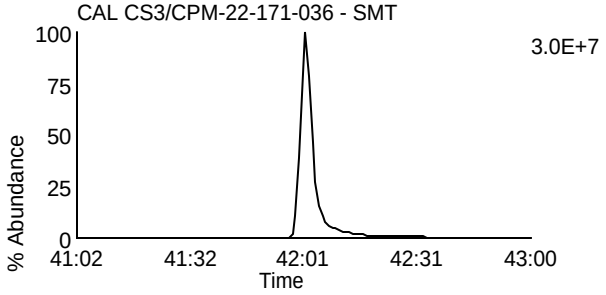
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



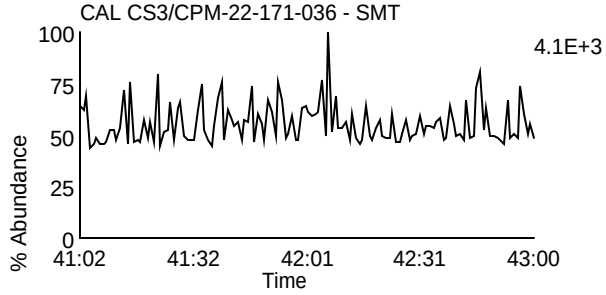
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



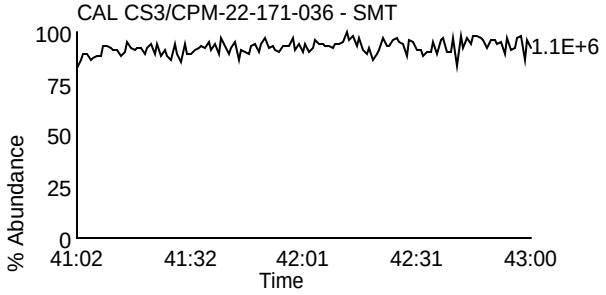
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - SMT

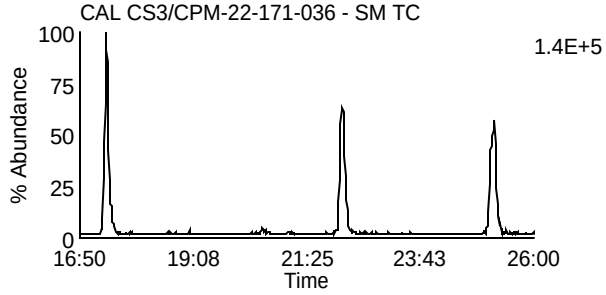


Homologue Group: Tetras

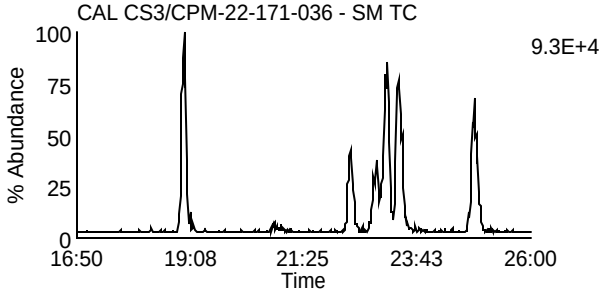
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

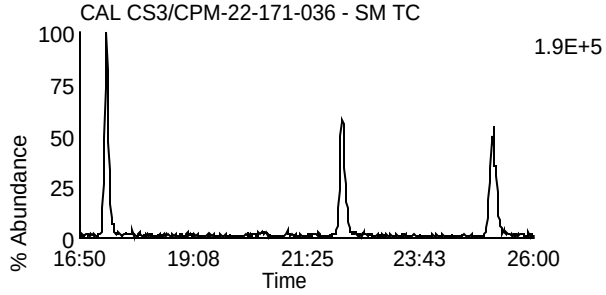
Data File: U230608B_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SM TC



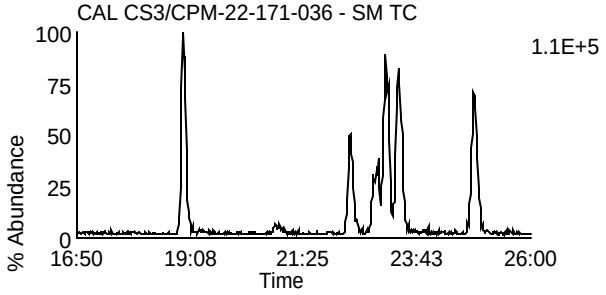
Data File: U230608B_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SM TC



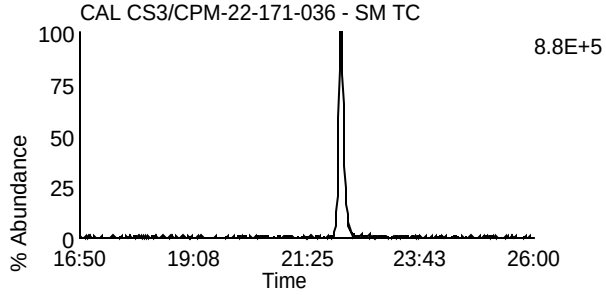
Data File: U230608B_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SM TC



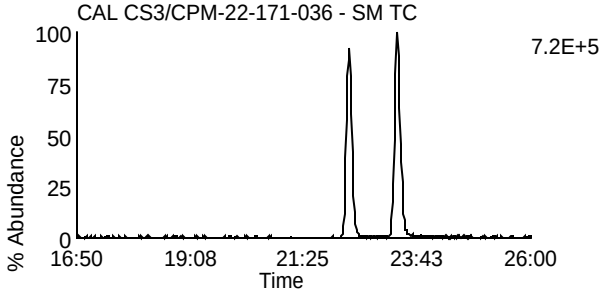
Data File: U230608B_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SM TC



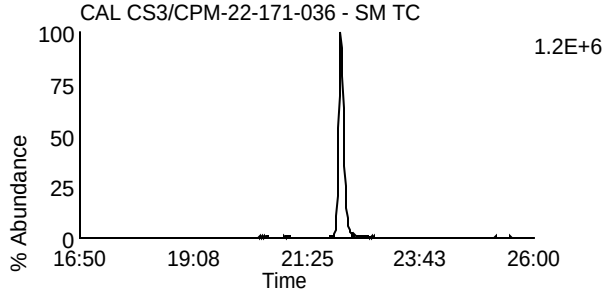
Data File: U230608B_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SM TC



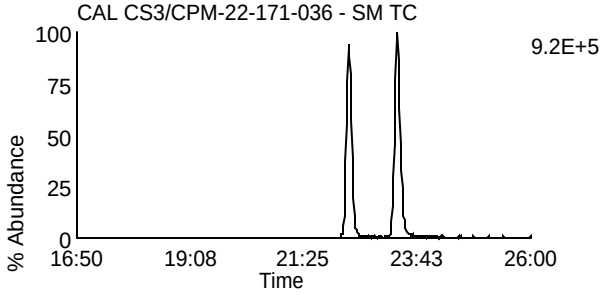
Data File: U230608B_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SM TC



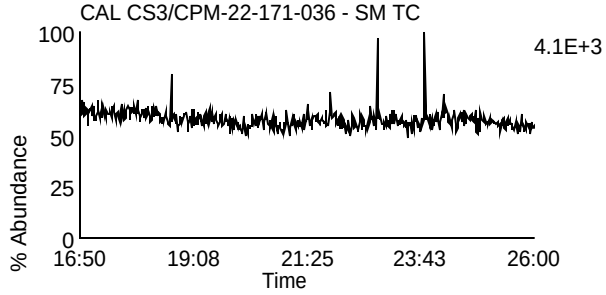
Data File: U230608B_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SM TC



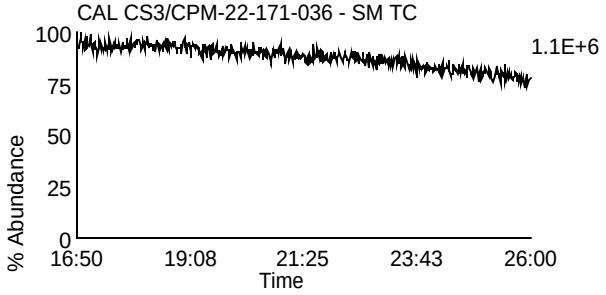
Data File: U230608B_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SM TC



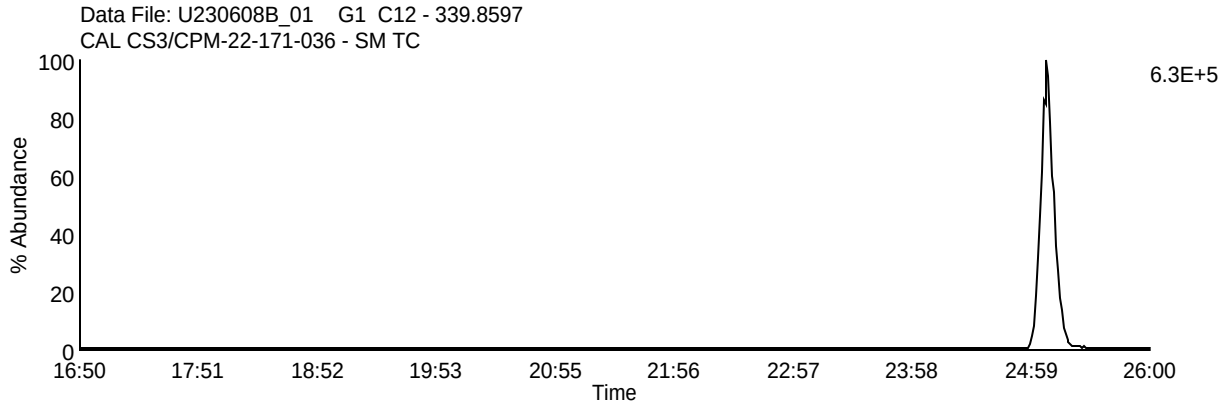
Data File: U230608B_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SM TC

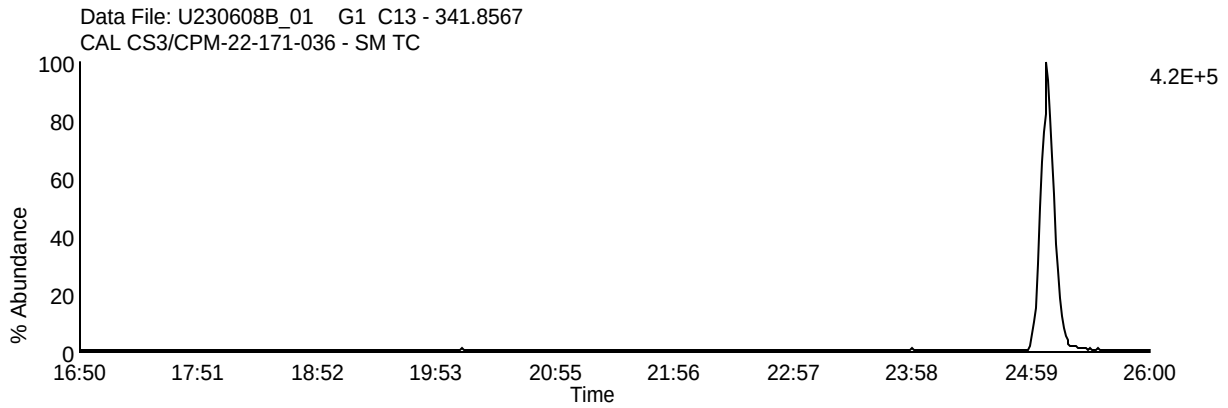


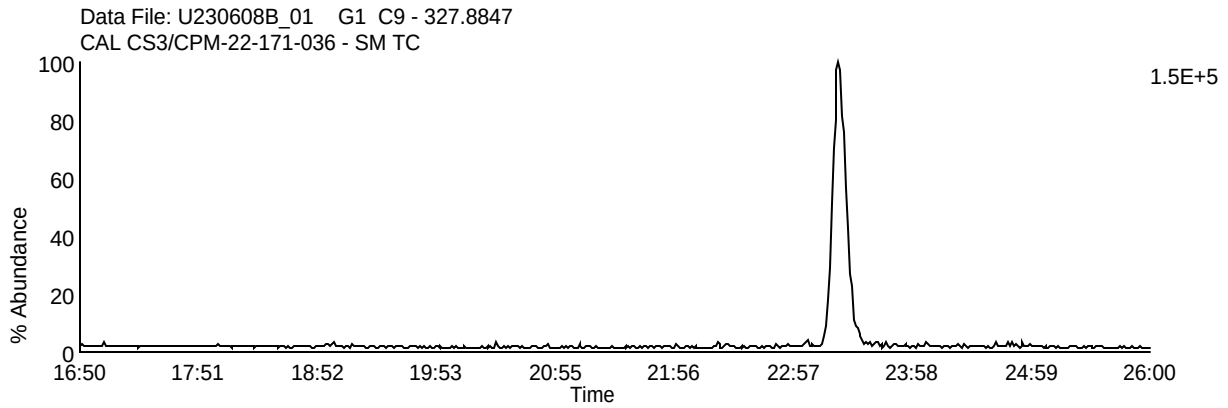
Homologue Group: Penta & Cleanup

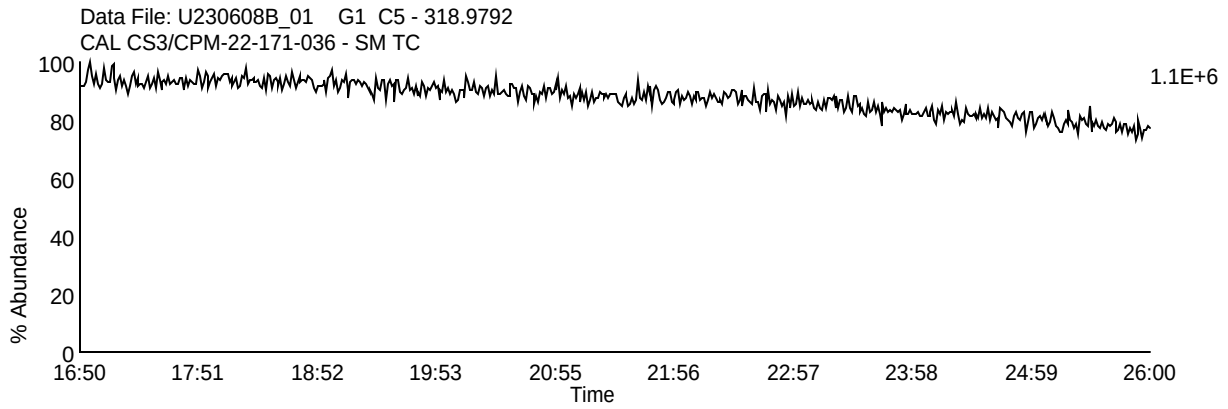
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)







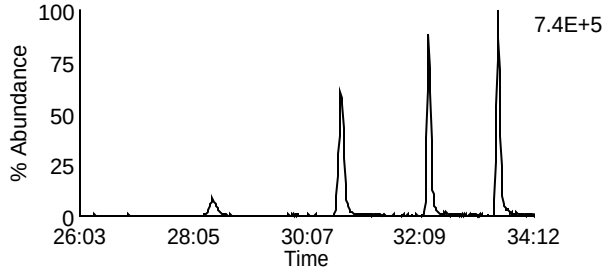


Homologue Group: Pentas

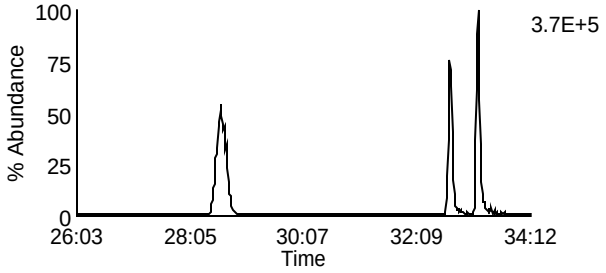
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

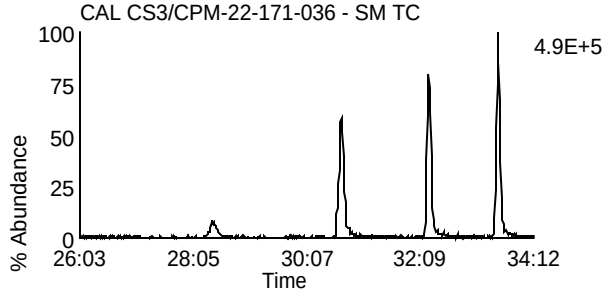
Data File: U230608B_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SM TC



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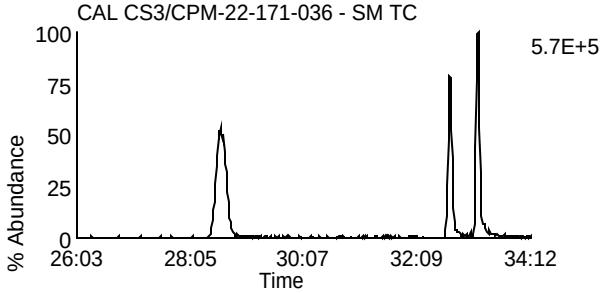
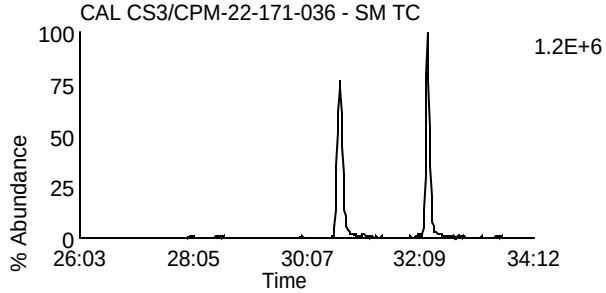
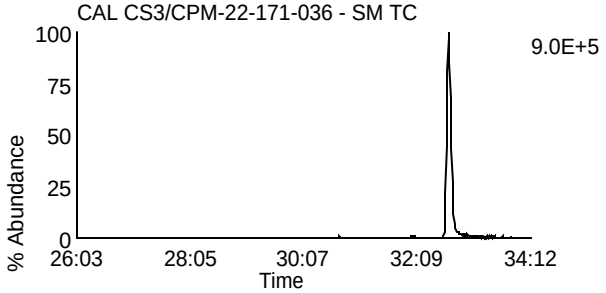
CAL CS3/CPM-22-171-036 - SM TC



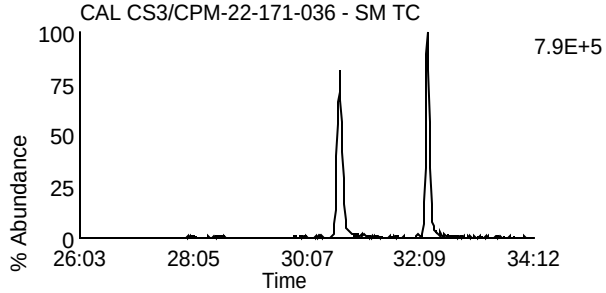
Data File: U230608B_01 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - SM TC



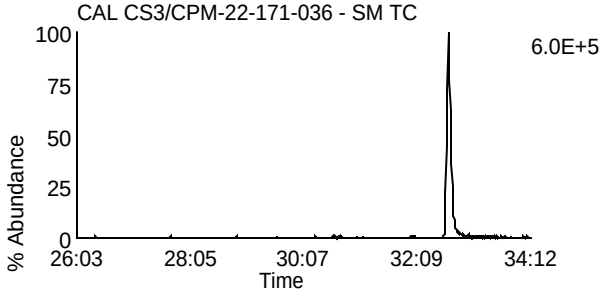
Data File: U230608B_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SM TC



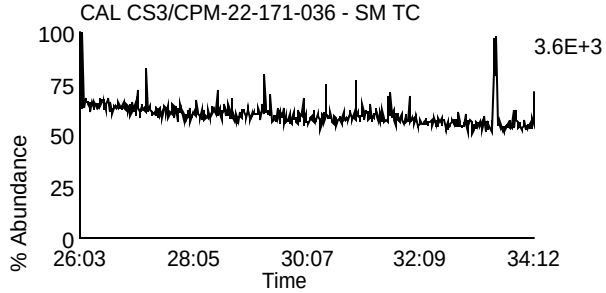
Data File: U230608B_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SM TC



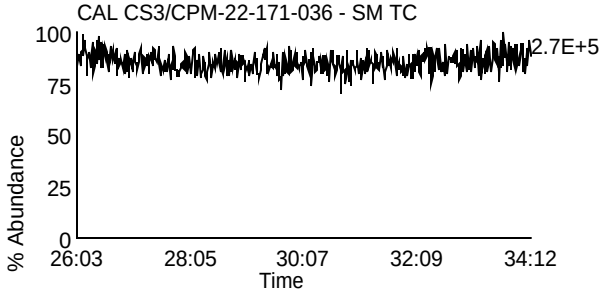
Data File: U230608B_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SM TC

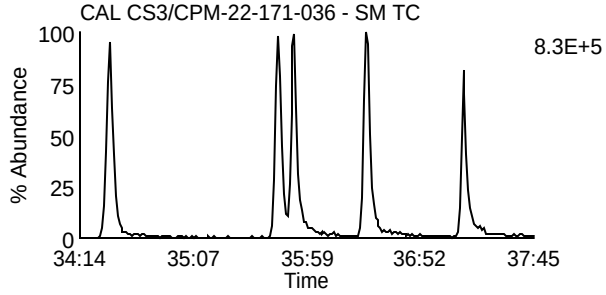


Homologue Group: Hexas

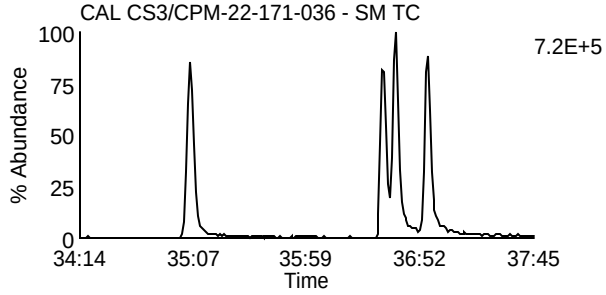
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

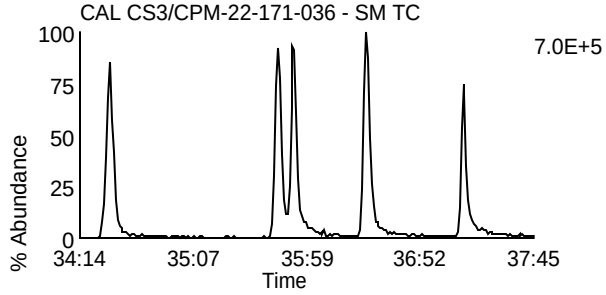
Data File: U230608B_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SM TC



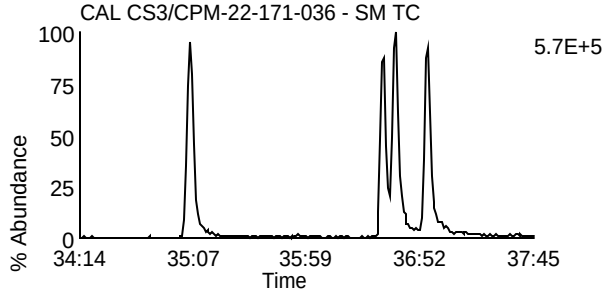
Data File: U230608B_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SM TC



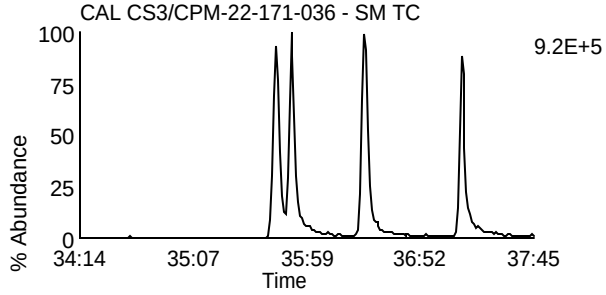
Data File: U230608B_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SM TC



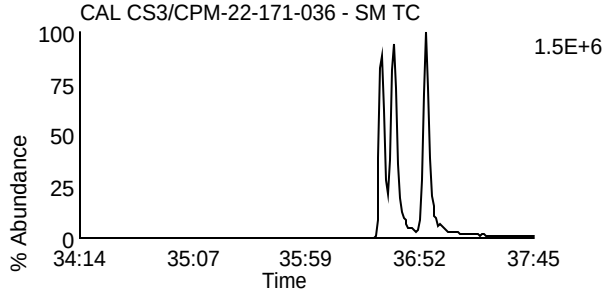
Data File: U230608B_01 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - SM TC



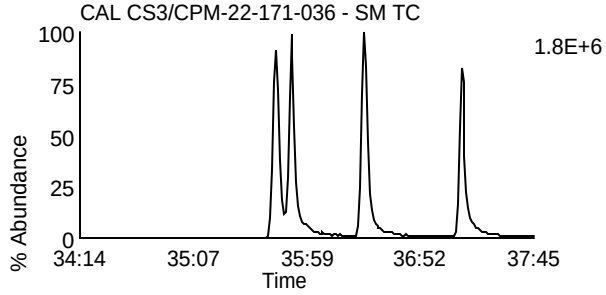
Data File: U230608B_01 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - SM TC



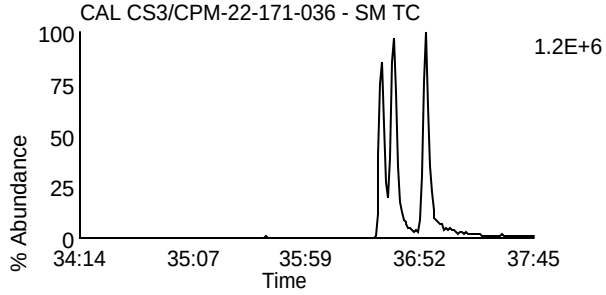
Data File: U230608B_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SM TC



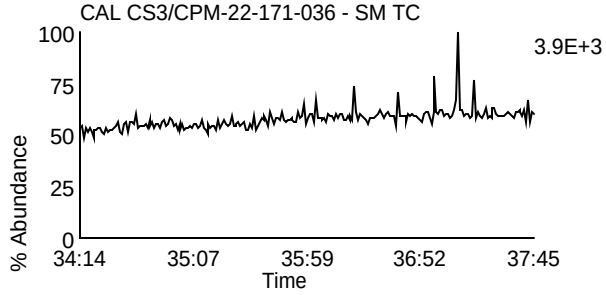
Data File: U230608B_01 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - SM TC



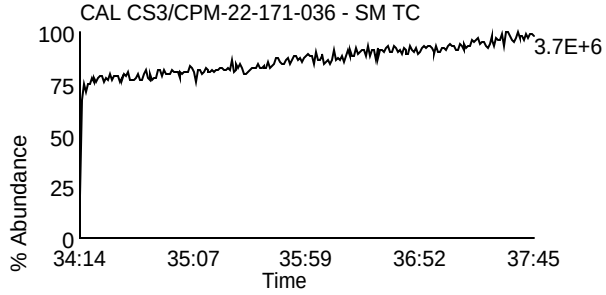
Data File: U230608B_01 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

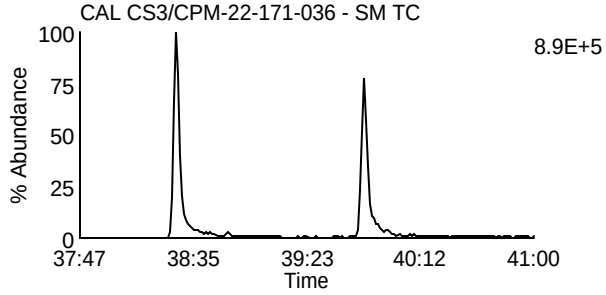


Homologue Group: Heptas

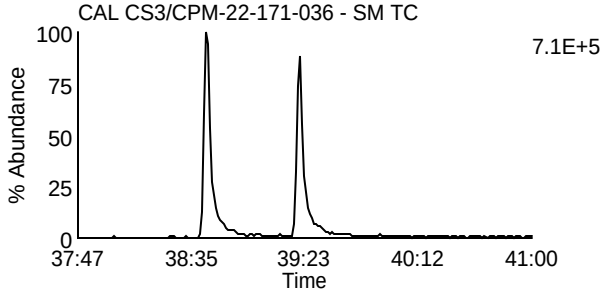
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

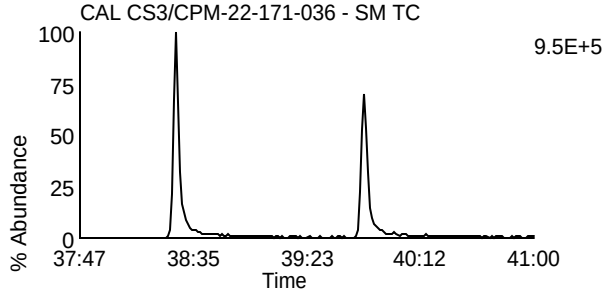
Data File: U230608B_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SM TC



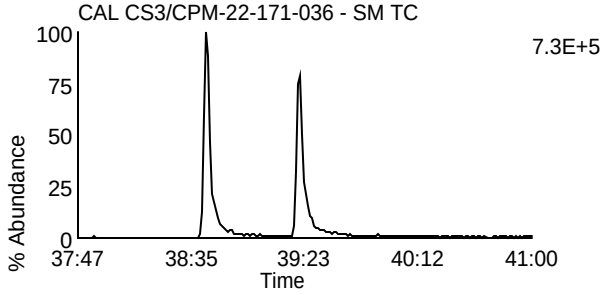
Data File: U230608B_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SM TC



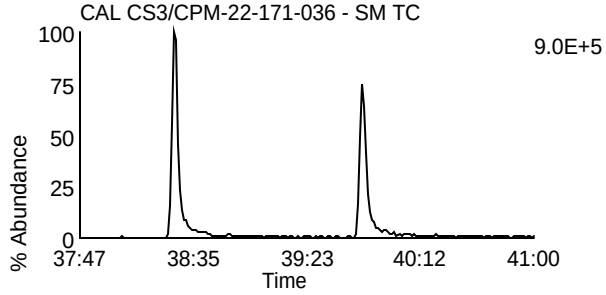
Data File: U230608B_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SM TC



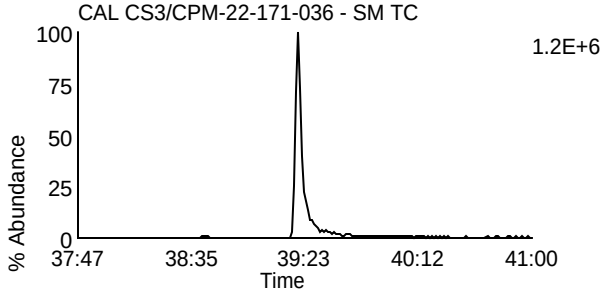
Data File: U230608B_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SM TC



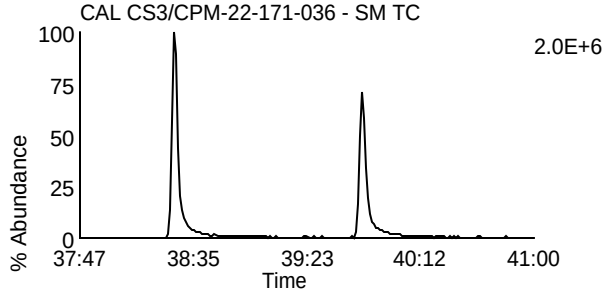
Data File: U230608B_01 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - SM TC



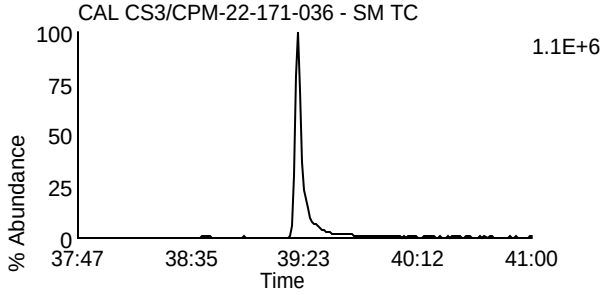
Data File: U230608B_01 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - SM TC



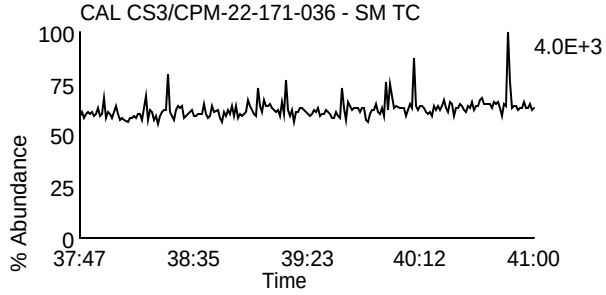
Data File: U230608B_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SM TC



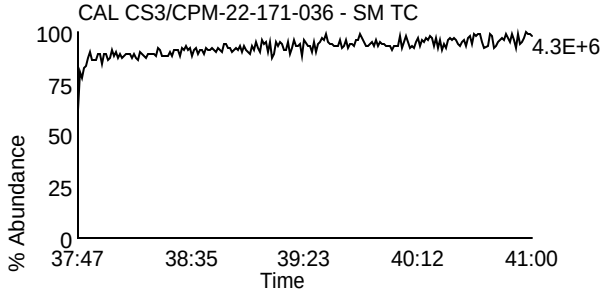
Data File: U230608B_01 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

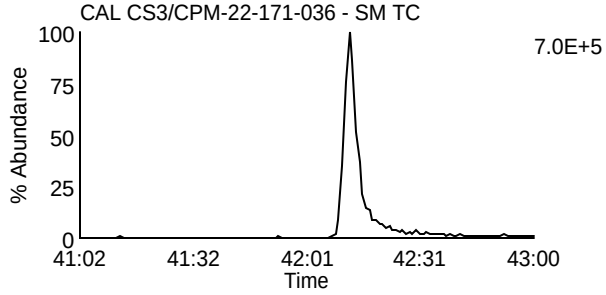


Homologue Group: Octas

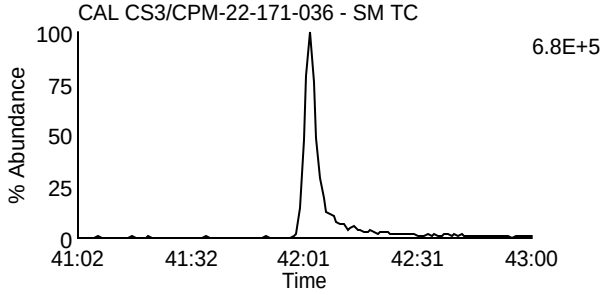
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID:
Instrument: 10MSHR06 (U)

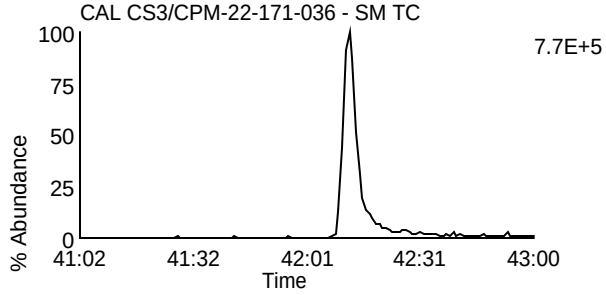
Data File: U230608B_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SM TC



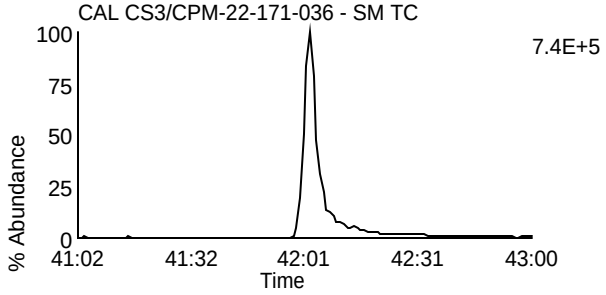
Data File: U230608B_01 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - SM TC



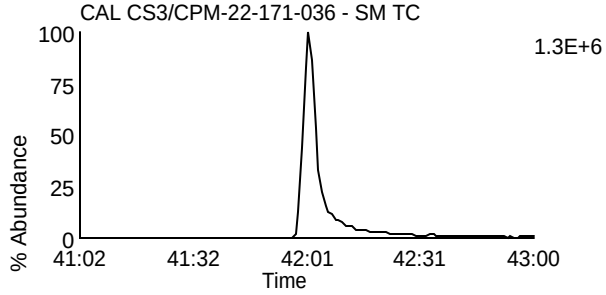
Data File: U230608B_01 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - SM TC



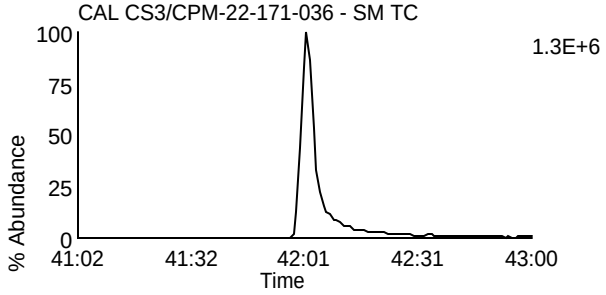
Data File: U230608B_01 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - SM TC



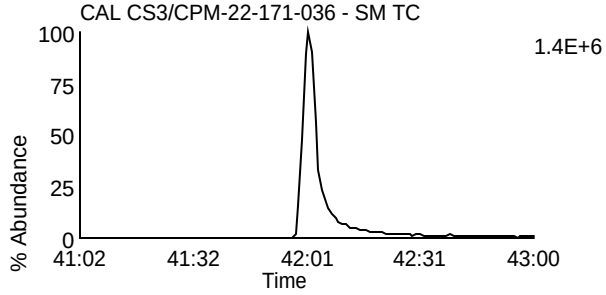
Data File: U230608B_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SM TC



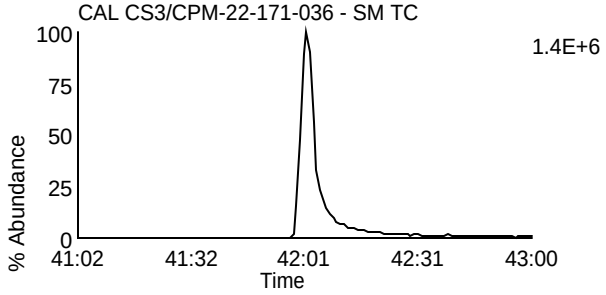
Data File: U230608B_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SM TC



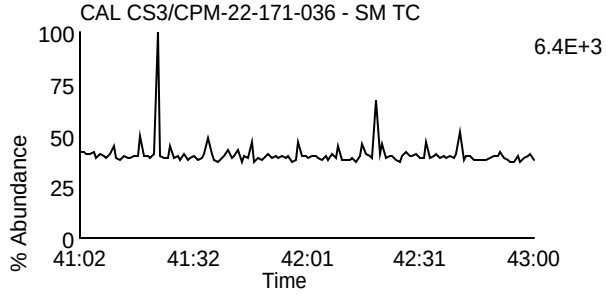
Data File: U230608B_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SM TC



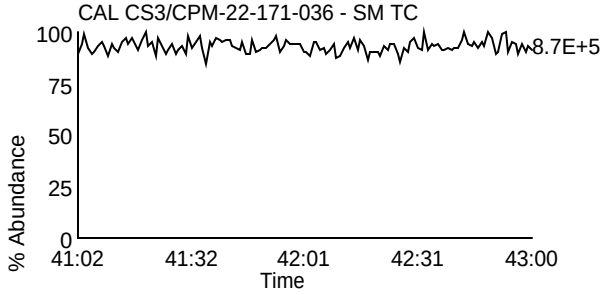
Data File: U230608B_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - SM TC



Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS1-22-171-033	Instrument ID	10MSHR15 (L)
Filename	L230610A_02	GC Column ID	US3225411H
Analyzed	06/10/2023 11:31	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:49	3.61e7	5.19e7	5.19e6	7.57e6	-----	-----	0.70	
2,3,7,8-TCDF	23:50	9.80e4	1.24e5	1.66e4	1.94e4	-----	-----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:07	4.98e7	6.01e7	6.86e6	8.53e6	-----	-----	0.83	
2,3,7,8-TCDD-13C	25:07	5.54e7	6.91e7	7.56e6	9.45e6	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	25:09	4.33e5		6.32e4		-----	-----		
2,3,7,8-TCDD	25:08	1.64e5	2.35e5	2.19e4	3.33e4	-----	-----	0.70	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:12	3.06e7	2.13e7	8.42e6	6.06e6	-----	-----	1.44	
2,3,4,7,8-PeCDF-13C	31:14	2.98e7	2.10e7	8.98e6	6.45e6	-----	-----	1.42	
1,2,3,7,8-PeCDF	30:12	4.06e5	3.03e5	1.08e5	9.07e4	-----	-----	1.34	
2,3,4,7,8-PeCDF	31:15	4.22e5	3.19e5	1.44e5	1.02e5	-----	-----	1.32	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	3.79e7	2.51e7	1.19e7	7.73e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	31:33	3.27e5	5.75e5	1.06e5	1.83e5	-----	-----	0.57	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:55	9.58e6	2.01e7	3.81e6	7.91e6	-----	-----	0.48	
1,2,3,6,7,8-HxCDF-13C	34:00	1.04e7	2.13e7	3.94e6	8.31e6	-----	-----	0.49	
2,3,4,6,7,8-HxCDF-13C	34:29	1.00e7	2.04e7	4.12e6	8.35e6	-----	-----	0.49	
1,2,3,7,8,9-HxCDF-13C	35:09	7.76e6	1.61e7	3.17e6	6.41e6	-----	-----	0.48	
1,2,3,4,7,8-HxCDF	33:55	2.67e5	2.37e5	1.25e5	9.03e4	-----	-----	1.13	
1,2,3,6,7,8-HxCDF	34:01	2.94e5	2.65e5	1.04e5	1.05e5	-----	-----	1.11	
2,3,4,6,7,8-HxCDF	34:30	2.90e5	2.44e5	1.15e5	1.06e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDF	35:10	2.14e5	1.90e5	8.27e4	7.35e4	-----	-----	1.13	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS1-22-171-033	Instrument ID	10MSHR15 (L)
Filename	L230610A_02	GC Column ID	US3225411H
Analyzed	06/10/2023 11:31	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:36	(M)2.63e7	2.21e7	1.17e7	9.51e6	-----	-----	1.19	
1,2,3,6,7,8-HxCDD-13C	34:41	(M)2.78e7	(M)2.37e7	1.13e7	9.49e6	-----	-----	1.17	
1,2,3,7,8,9-HxCDD-13C	34:53	2.83e7	2.46e7	1.23e7	1.07e7	-----	-----	1.15	
1,2,3,4,7,8-HxCDD	34:37	3.82e5	3.39e5	1.58e5	1.39e5	-----	-----	1.13	
1,2,3,6,7,8-HxCDD	34:41	3.94e5	3.70e5	1.64e5	1.46e5	-----	-----	1.07	
1,2,3,7,8,9-HxCDD	34:54	4.00e5	3.35e5	1.81e5	1.38e5	-----	-----	1.19	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:20	2.28e7	5.13e7	8.73e6	1.91e7	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	37:42	1.63e7	3.64e7	5.99e6	1.37e7	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	36:20	8.83e5	8.85e5	3.21e5	3.56e5	-----	-----	1.00	
1,2,3,4,7,8,9-HpCDF	37:42	6.27e5	6.72e5	2.16e5	2.26e5	-----	-----	0.93	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:13	3.67e7	3.48e7	1.32e7	1.30e7	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	37:14	7.56e5	7.59e5	2.77e5	2.88e5	-----	-----	1.00	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:07	3.91e5	4.74e5	1.25e5	1.45e5	-----	-----	0.83	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:55	4.26e7	5.24e7	1.33e7	1.63e7	-----	-----	0.81	
OCDD	39:56	6.76e5	8.40e5	1.99e5	2.68e5	-----	-----	0.80	

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PCDD/PCDF Detected Peak List

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ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS2-22-171-006	Instrument ID	10MSHR15 (L)
Filename	L230610A_03	GC Column ID	US3225411H
Analyzed	06/10/2023 12:14	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:47	3.34e7	4.77e7	4.47e6	6.44e6	-----	-----	0.70	
2,3,7,8-TCDF	23:50	3.64e5	4.89e5	4.49e4	6.96e4	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:05	4.64e7	5.71e7	5.95e6	7.33e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	25:05	4.88e7	6.08e7	6.33e6	7.79e6	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	25:08	1.60e6		1.97e5		-----	-----		
2,3,7,8-TCDD	25:07	6.12e5	7.95e5	8.70e4	9.83e4	-----	-----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:11	2.66e7	1.87e7	7.06e6	4.96e6	-----	-----	1.42	
2,3,4,7,8-PeCDF-13C	31:13	2.57e7	1.78e7	8.07e6	5.55e6	-----	-----	1.44	
1,2,3,7,8-PeCDF	30:12	1.44e6	1.01e6	3.98e5	2.51e5	-----	-----	1.43	
2,3,4,7,8-PeCDF	31:14	1.45e6	1.05e6	4.76e5	3.09e5	-----	-----	1.37	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	3.32e7	2.13e7	1.04e7	6.75e6	-----	-----	1.56	
1,2,3,7,8-PeCDD	31:32	1.12e6	1.93e6	3.39e5	6.32e5	-----	-----	0.58	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:54	8.05e6	1.70e7	3.11e6	6.40e6	-----	-----	0.47	
1,2,3,6,7,8-HxCDF-13C	33:59	8.58e6	1.79e7	3.32e6	6.92e6	-----	-----	0.48	
2,3,4,6,7,8-HxCDF-13C	34:28	7.45e6	1.57e7	3.30e6	6.73e6	-----	-----	0.47	
1,2,3,7,8,9-HxCDF-13C	35:09	5.23e6	1.11e7	2.21e6	4.61e6	-----	-----	0.47	
1,2,3,4,7,8-HxCDF	33:55	9.20e5	8.16e5	3.54e5	3.06e5	-----	-----	1.13	
1,2,3,6,7,8-HxCDF	34:00	9.87e5	8.44e5	3.89e5	3.37e5	-----	-----	1.17	
2,3,4,6,7,8-HxCDF	34:29	8.73e5	7.31e5	3.75e5	3.05e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDF	35:09	5.83e5	4.94e5	2.33e5	1.94e5	-----	-----	1.18	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS2-22-171-006	Instrument ID	10MSHR15 (L)
Filename	L230610A_03	GC Column ID	US3225411H
Analyzed	06/10/2023 12:14	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:35	2.00e7	1.66e7	8.49e6	6.87e6	-----	-----	1.20	
1,2,3,6,7,8-HxCDD-13C	34:40	2.07e7	1.76e7	8.27e6	6.89e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD-13C	34:52	1.99e7	1.69e7	8.26e6	7.18e6	-----	-----	1.17	
1,2,3,4,7,8-HxCDD	34:36	1.21e6	1.02e6	4.62e5	4.20e5	-----	-----	1.18	
1,2,3,6,7,8-HxCDD	34:40	1.25e6	1.13e6	5.18e5	4.68e5	-----	-----	1.11	
1,2,3,7,8,9-HxCDD	34:53	1.14e6	9.94e5	4.86e5	4.30e5	-----	-----	1.15	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:19	1.62e7	3.72e7	6.25e6	1.41e7	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	37:41	1.04e7	2.37e7	3.82e6	8.47e6	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	36:19	2.71e6	2.69e6	1.05e6	1.08e6	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	37:42	1.74e6	1.74e6	6.33e5	5.76e5	-----	-----	1.00	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:12	2.47e7	2.34e7	8.36e6	8.26e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	37:13	2.23e6	(M)2.09e6	7.84e5	7.54e5	-----	-----	1.07	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:07	9.94e5	1.20e6	3.02e5	3.57e5	-----	-----	0.83	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:54	2.77e7	3.29e7	8.90e6	1.04e7	-----	-----	0.84	
OCDD	39:55	1.75e6	2.14e6	5.92e5	6.58e5	-----	-----	0.82	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR15 (L)
Filename	L230610A_06	GC Column ID	US3225411H
Analyzed	06/10/2023 14:39	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:47	2.98e7	4.16e7	4.19e6	5.81e6	-----	-----	0.72	
2,3,7,8-TCDF	23:50	1.60e6	2.32e6	2.25e5	3.49e5	-----	-----	0.69	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:05	4.06e7	4.93e7	5.75e6	6.91e6	-----	-----	0.82	
2,3,7,8-TCDD-13C	25:05	4.47e7	5.47e7	6.04e6	7.49e6	-----	-----	0.82	
2,3,7,8-TCDD-37Cl4	25:07	7.75e6		1.08e6		-----	-----		
2,3,7,8-TCDD	25:07	2.78e6	3.84e6	3.68e5	5.21e5	-----	-----	0.72	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:11	2.54e7	1.75e7	6.73e6	4.66e6	-----	-----	1.45	
2,3,4,7,8-PeCDF-13C	31:13	2.42e7	1.67e7	7.82e6	5.30e6	-----	-----	1.44	
1,2,3,7,8-PeCDF	30:12	7.04e6	5.09e6	1.96e6	1.41e6	-----	-----	1.38	
2,3,4,7,8-PeCDF	31:14	7.17e6	5.27e6	2.35e6	1.72e6	-----	-----	1.36	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:31	2.98e7	2.00e7	9.12e6	6.06e6	-----	-----	1.49	
1,2,3,7,8-PeCDD	31:32	5.38e6	9.50e6	1.80e6	3.18e6	-----	-----	0.57	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:53	7.23e6	1.52e7	2.88e6	6.20e6	-----	-----	0.47	
1,2,3,6,7,8-HxCDF-13C	33:59	8.18e6	1.68e7	3.15e6	6.52e6	-----	-----	0.49	
2,3,4,6,7,8-HxCDF-13C	34:28	7.26e6	1.51e7	2.92e6	6.05e6	-----	-----	0.48	
1,2,3,7,8,9-HxCDF-13C	35:09	5.61e6	1.18e7	2.17e6	4.54e6	-----	-----	0.47	
1,2,3,4,7,8-HxCDF	33:54	4.36e6	3.75e6	1.74e6	1.52e6	-----	-----	1.16	
1,2,3,6,7,8-HxCDF	34:00	4.77e6	4.15e6	1.89e6	1.64e6	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	34:29	4.49e6	3.84e6	1.89e6	1.63e6	-----	-----	1.17	
1,2,3,7,8,9-HxCDF	35:09	3.24e6	2.64e6	1.25e6	1.03e6	-----	-----	1.23	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR15 (L)
Filename	L230610A_06	GC Column ID	US3225411H
Analyzed	06/10/2023 14:39	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:34	1.90e7	1.59e7	7.66e6	6.61e6	-----	-----	1.20	
1,2,3,6,7,8-HxCDD-13C	34:39	2.04e7	1.74e7	8.07e6	7.25e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD-13C	34:52	1.99e7	1.66e7	8.49e6	6.94e6	-----	-----	1.20	
1,2,3,4,7,8-HxCDD	34:35	(M)5.74e6	(M)4.96e6	2.55e6	2.19e6	-----	-----	1.16	
1,2,3,6,7,8-HxCDD	34:40	(M)6.25e6	(M)5.47e6	2.64e6	2.35e6	-----	-----	1.14	
1,2,3,7,8,9-HxCDD	34:53	5.94e6	5.34e6	2.45e6	2.13e6	-----	-----	1.11	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:18	1.55e7	3.57e7	5.67e6	1.34e7	-----	-----	0.43	
1,2,3,4,7,8,9-HpCDF-13C	37:41	1.04e7	2.40e7	3.61e6	8.22e6	-----	-----	0.43	
1,2,3,4,6,7,8-HpCDF	36:19	1.27e7	1.28e7	5.11e6	5.15e6	-----	-----	0.99	
1,2,3,4,7,8,9-HpCDF	37:41	9.01e6	8.91e6	3.03e6	3.02e6	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:12	2.37e7	2.26e7	8.63e6	8.31e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	37:13	1.07e7	1.05e7	4.14e6	3.95e6	-----	-----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:06	5.60e6	6.67e6	1.63e6	2.02e6	-----	-----	0.84	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:54	2.47e7	3.06e7	7.62e6	9.32e6	-----	-----	0.81	
OCDD	39:55	8.84e6	1.06e7	2.65e6	3.14e6	-----	-----	0.84	

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PCDD/PCDF Detected Peak List

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS4-22-171-007	Instrument ID	10MSHR15 (L)
Filename	L230610A_05	GC Column ID	US3225411H
Analyzed	06/10/2023 13:53	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:46	1.99e7	2.82e7	2.70e6	3.77e6	-----	-----	0.71	
2,3,7,8-TCDF	23:48	4.40e6	5.96e6	5.80e5	8.19e5	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:04	2.63e7	3.27e7	3.33e6	4.15e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	25:04	2.89e7	3.57e7	3.72e6	4.65e6	-----	-----	0.81	
2,3,7,8-TCDD-37Cl4	25:06	2.05e7		2.61e6		-----	-----		
2,3,7,8-TCDD	25:06	7.33e6	1.00e7	9.46e5	1.32e6	-----	-----	0.73	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:10	1.64e7	1.12e7	4.24e6	2.95e6	-----	-----	1.46	
2,3,4,7,8-PeCDF-13C	31:13	1.58e7	1.09e7	4.62e6	3.21e6	-----	-----	1.45	
1,2,3,7,8-PeCDF	30:11	1.85e7	1.34e7	4.77e6	3.42e6	-----	-----	1.38	
2,3,4,7,8-PeCDF	31:14	1.96e7	1.41e7	5.96e6	4.29e6	-----	-----	1.39	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:30	2.00e7	1.33e7	5.92e6	4.04e6	-----	-----	1.50	
1,2,3,7,8-PeCDD	31:32	1.45e7	2.55e7	4.68e6	7.85e6	-----	-----	0.57	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:53	4.81e6	9.95e6	1.92e6	4.10e6	-----	-----	0.48	
1,2,3,6,7,8-HxCDF-13C	33:59	5.16e6	1.08e7	2.01e6	4.30e6	-----	-----	0.48	
2,3,4,6,7,8-HxCDF-13C	34:28	4.60e6	9.63e6	1.85e6	3.78e6	-----	-----	0.48	
1,2,3,7,8,9-HxCDF-13C	35:08	3.42e6	7.20e6	1.30e6	2.86e6	-----	-----	0.47	
1,2,3,4,7,8-HxCDF	33:54	1.19e7	1.04e7	4.74e6	4.26e6	-----	-----	1.14	
1,2,3,6,7,8-HxCDF	34:00	1.28e7	1.12e7	5.07e6	4.41e6	-----	-----	1.14	
2,3,4,6,7,8-HxCDF	34:29	1.17e7	1.05e7	4.73e6	4.08e6	-----	-----	1.12	
1,2,3,7,8,9-HxCDF	35:09	8.28e6	7.08e6	3.18e6	2.80e6	-----	-----	1.17	

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Tel: 612-607-1700
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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS4-22-171-007	Instrument ID	10MSHR15 (L)
Filename	L230610A_05	GC Column ID	US3225411H
Analyzed	06/10/2023 13:53	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:34	1.23e7	1.01e7	5.28e6	4.34e6	-----	-----	1.22	
1,2,3,6,7,8-HxCDD-13C	34:39	1.32e7	1.12e7	5.71e6	4.83e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD-13C	34:52	(M)1.31e7	(M)1.14e7	5.24e6	4.42e6	-----	-----	1.15	
1,2,3,4,7,8-HxCDD	34:35	1.57e7	1.37e7	6.82e6	6.06e6	-----	-----	1.15	
1,2,3,6,7,8-HxCDD	34:40	1.71e7	1.49e7	7.34e6	6.43e6	-----	-----	1.14	
1,2,3,7,8,9-HxCDD	34:52	1.54e7	1.36e7	5.95e6	5.40e6	-----	-----	1.13	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:18	1.03e7	2.30e7	4.04e6	9.21e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	37:40	6.58e6	1.49e7	2.18e6	4.83e6	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	36:19	3.55e7	3.52e7	1.43e7	1.42e7	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	37:41	2.25e7	2.26e7	8.02e6	8.15e6	-----	-----	1.00	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:12	1.50e7	1.42e7	5.68e6	5.37e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	37:13	(M)2.81e7	2.73e7	1.05e7	9.83e6	-----	-----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:06	1.46e7	1.79e7	4.58e6	5.59e6	-----	-----	0.82	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:53	1.53e7	1.89e7	4.59e6	5.74e6	-----	-----	0.81	
OCDD	39:54	2.25e7	2.67e7	6.92e6	8.16e6	-----	-----	0.84	

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Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS5-22-171-008	Instrument ID	10MSHR15 (L)
Filename	L230610A_04	GC Column ID	US3225411H
Analyzed	06/10/2023 13:10	ICAL ID	L230610

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	23:49	3.31e7	4.68e7	4.66e6	6.46e6	-----	-----	0.71	
2,3,7,8-TCDF	23:51	3.83e7	5.15e7	5.52e6	7.51e6	-----	-----	0.74	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	24:07	4.00e7	4.94e7	5.71e6	7.08e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	25:07	4.88e7	6.06e7	6.87e6	8.41e6	-----	-----	0.81	
2,3,7,8-TCDD-37Cl4	25:09	1.77e8		2.40e7		-----	-----		
2,3,7,8-TCDD	25:09	6.36e7	8.80e7	8.62e6	1.18e7	-----	-----	0.72	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:12	3.07e7	2.10e7	8.30e6	5.83e6	-----	-----	1.46	
2,3,4,7,8-PeCDF-13C	31:15	2.99e7	2.07e7	9.57e6	6.38e6	-----	-----	1.44	
1,2,3,7,8-PeCDF	30:13	1.80e8	1.27e8	4.91e7	3.44e7	-----	-----	1.42	
2,3,4,7,8-PeCDF	31:15	1.96e8	1.38e8	6.28e7	4.35e7	-----	-----	1.42	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	31:32	3.82e7	2.51e7	1.25e7	8.28e6	-----	-----	1.52	
1,2,3,7,8-PeCDD	31:33	1.40e8	2.48e8	4.68e7	8.20e7	-----	-----	0.56	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	33:55	1.02e7	2.15e7	4.31e6	9.00e6	-----	-----	0.47	
1,2,3,6,7,8-HxCDF-13C	34:01	1.14e7	2.34e7	4.49e6	9.04e6	-----	-----	0.49	
2,3,4,6,7,8-HxCDF-13C	34:29	1.06e7	2.18e7	4.32e6	9.25e6	-----	-----	0.48	
1,2,3,7,8,9-HxCDF-13C	35:09	8.46e6	1.76e7	3.69e6	7.58e6	-----	-----	0.48	
1,2,3,4,7,8-HxCDF	33:55	1.30e8	1.13e8	5.68e7	4.91e7	-----	-----	1.14	
1,2,3,6,7,8-HxCDF	34:02	1.38e8	1.20e8	5.52e7	4.71e7	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	34:30	1.33e8	1.16e8	5.69e7	5.01e7	-----	-----	1.15	
1,2,3,7,8,9-HxCDF	35:10	1.01e8	8.84e7	4.43e7	3.92e7	-----	-----	1.14	

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Client Name	Pace Analytical National		
Client ID		Injected By	CVS
Lab ID	CS5-22-171-008	Instrument ID	10MSHR15 (L)
Filename	L230610A_04	GC Column ID	US3225411H
Analyzed	06/10/2023 13:10	ICAL ID	L230610

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	34:36	2.75e7	2.24e7	1.23e7	9.96e6	-----	-----	1.23	
1,2,3,6,7,8-HxCDD-13C	34:41	2.89e7	2.47e7	1.24e7	1.06e7	-----	-----	1.17	
1,2,3,7,8,9-HxCDD-13C	34:53	2.99e7	2.50e7	1.20e7	1.03e7	-----	-----	1.20	
1,2,3,4,7,8-HxCDD	34:37	1.79e8	1.58e8	7.94e7	6.89e7	-----	-----	1.13	
1,2,3,6,7,8-HxCDD	34:42	1.86e8	1.64e8	7.79e7	6.71e7	-----	-----	1.13	
1,2,3,7,8,9-HxCDD	34:54	1.80e8	1.58e8	7.94e7	7.07e7	-----	-----	1.14	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	36:20	2.31e7	5.28e7	9.47e6	2.13e7	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	37:42	1.62e7	3.69e7	5.76e6	1.32e7	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	36:21	4.05e8	4.04e8	1.56e8	1.52e8	-----	-----	1.00	
1,2,3,4,7,8,9-HpCDF	37:42	2.82e8	2.78e8	1.09e8	1.06e8	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	37:14	3.60e7	3.38e7	1.35e7	1.23e7	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	37:14	3.33e8	3.30e8	1.26e8	1.29e8	-----	-----	1.01	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	40:08	2.13e8	2.57e8	7.03e7	8.57e7	-----	-----	0.83	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	39:56	4.40e7	5.32e7	1.31e7	1.56e7	-----	-----	0.83	
OCDD	39:56	3.17e8	3.72e8	9.64e7	1.15e8	-----	-----	0.85	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS1-22-171-033	Instrument ID	10MSHR06 (U)
Filename	U230524B_04	GC Column ID	US1246423H
Analyzed	05/24/2023 12:45	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:16	2.01e7	2.58e7	2.91e6	3.59e6	-----	-----	0.78	
2,3,7,8-TCDF	22:19	(M)1.08e5	(M)1.21e5	1.75e4	2.30e4	-----	-----	0.89	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:31	1.63e7	2.11e7	2.29e6	2.98e6	-----	-----	0.77	
2,3,7,8-TCDD-13C	23:29	1.74e7	2.22e7	2.30e6	3.00e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	23:31	2.22e5		3.21e4		-----	-----		
2,3,7,8-TCDD	23:31	(M)9.57e4	(M)1.17e5	1.68e4	2.32e4	-----	-----	0.82	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.88e7	1.20e7	3.14e6	2.04e6	-----	-----	1.56	
2,3,4,7,8-PeCDF-13C	32:25	1.82e7	1.23e7	4.19e6	2.64e6	-----	-----	1.47	
1,2,3,7,8-PeCDF	30:53	4.27e5	2.89e5	6.83e4	5.04e4	-----	-----	1.48	
2,3,4,7,8-PeCDF	32:25	4.63e5	2.95e5	1.08e5	6.98e4	-----	-----	1.57	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	1.38e7	9.15e6	3.26e6	2.09e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	32:51	2.28e5	3.29e5	5.49e4	7.39e4	-----	-----	0.69	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:50	8.23e6	1.59e7	2.88e6	5.47e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:57	9.65e6	1.85e7	2.91e6	5.69e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:31	8.64e6	1.70e7	2.86e6	5.66e6	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:16	7.56e6	(M)1.44e7	2.60e6	5.02e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:51	3.63e5	2.94e5	1.28e5	1.02e5	-----	-----	1.24	
1,2,3,6,7,8-HxCDF	35:58	3.99e5	3.13e5	1.19e5	1.12e5	-----	-----	1.27	
2,3,4,6,7,8-HxCDF	36:31	(M)4.25e5	(M)3.35e5	1.51e5	1.20e5	-----	-----	1.27	
1,2,3,7,8,9-HxCDF	37:16	(M)3.07e5	(M)2.76e5	1.08e5	9.90e4	-----	-----	1.11	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS1-22-171-033	Instrument ID	10MSHR06 (U)
Filename	U230524B_04	GC Column ID	US1246423H
Analyzed	05/24/2023 12:45	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:39	(M)1.22e7	9.65e6	4.28e6	3.28e6	-----	-----	1.26	
1,2,3,6,7,8-HxCDD-13C	36:44	(M)1.38e7	1.13e7	4.57e6	3.60e6	-----	-----	1.22	
1,2,3,7,8,9-HxCDD-13C	36:59	(M)1.45e7	(M)1.19e7	4.70e6	3.69e6	-----	-----	1.22	
1,2,3,4,7,8-HxCDD	36:39	3.23e5	2.45e5	1.20e5	8.74e4	-----	-----	1.32	
1,2,3,6,7,8-HxCDD	36:45	3.34e5	2.86e5	1.03e5	9.88e4	-----	-----	1.17	
1,2,3,7,8,9-HxCDD	36:59	2.83e5	2.64e5	1.10e5	8.29e4	-----	-----	1.07	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:32	(M)9.15e6	(M)2.02e7	3.07e6	6.87e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:52	7.34e6	1.67e7	2.36e6	5.04e6	-----	-----	0.44	
1,2,3,4,6,7,8-HpCDF	38:32	4.74e5	4.60e5	1.65e5	1.67e5	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:53	(M)3.63e5	3.50e5	1.05e5	1.07e5	-----	-----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	(M)1.27e7	1.23e7	4.17e6	3.95e6	-----	-----	1.03	
1,2,3,4,6,7,8-HpCDD	39:26	3.48e5	(M)3.35e5	1.04e5	1.05e5	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:19	4.56e5	5.33e5	1.17e5	1.39e5	-----	-----	0.86	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:07	(M)1.95e7	(M)2.22e7	5.02e6	5.68e6	-----	-----	0.88	
OCDD	42:07	4.61e5	5.60e5	1.13e5	1.50e5	-----	-----	0.82	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS2-22-171-006	Instrument ID	10MSHR06 (U)
Filename	U230524B_03	GC Column ID	US1246423H
Analyzed	05/24/2023 12:00	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:17	2.21e7	2.89e7	3.17e6	4.14e6	-----	-----	0.76	
2,3,7,8-TCDF	22:19	4.11e5	5.22e5	5.89e4	7.05e4	-----	-----	0.79	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:32	1.74e7	2.21e7	2.45e6	3.17e6	-----	-----	0.79	
2,3,7,8-TCDD-13C	23:30	1.87e7	2.40e7	2.54e6	3.25e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	23:33	8.59e5		1.12e5		-----	-----		
2,3,7,8-TCDD	23:33	3.60e5	4.82e5	4.95e4	7.55e4	-----	-----	0.75	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.96e7	1.30e7	3.25e6	2.10e6	-----	-----	1.51	
2,3,4,7,8-PeCDF-13C	32:25	(M)2.00e7	(M)1.32e7	4.42e6	2.84e6	-----	-----	1.52	
1,2,3,7,8-PeCDF	30:54	1.81e6	1.16e6	3.00e5	1.97e5	-----	-----	1.57	
2,3,4,7,8-PeCDF	32:26	1.93e6	1.24e6	4.48e5	3.00e5	-----	-----	1.55	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	(M)1.56e7	(M)1.01e7	3.53e6	2.26e6	-----	-----	1.54	
1,2,3,7,8-PeCDD	32:52	8.88e5	1.48e6	1.86e5	3.38e5	-----	-----	0.60	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:50	9.00e6	1.76e7	2.99e6	5.98e6	-----	-----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:58	1.00e7	1.92e7	2.94e6	5.67e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:31	(M)9.55e6	(M)1.84e7	3.02e6	6.03e6	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:16	(M)8.02e6	(M)1.49e7	2.46e6	4.97e6	-----	-----	0.54	
1,2,3,4,7,8-HxCDF	35:51	1.67e6	1.31e6	5.43e5	4.49e5	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:59	1.74e6	1.51e6	5.03e5	4.36e5	-----	-----	1.15	
2,3,4,6,7,8-HxCDF	36:31	1.66e6	1.36e6	5.18e5	4.39e5	-----	-----	1.22	
1,2,3,7,8,9-HxCDF	37:16	1.31e6	1.08e6	4.01e5	3.49e5	-----	-----	1.21	

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS2-22-171-006	Instrument ID	10MSHR06 (U)
Filename	U230524B_03	GC Column ID	US1246423H
Analyzed	05/24/2023 12:00	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:39	1.29e7	1.05e7	4.83e6	3.86e6	-----	-----	1.23	
1,2,3,6,7,8-HxCDD-13C	36:44	1.54e7	1.25e7	5.03e6	4.13e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDD-13C	36:59	(M)1.52e7	1.23e7	4.97e6	4.00e6	-----	-----	1.24	
1,2,3,4,7,8-HxCDD	36:40	1.24e6	(M)1.02e6	4.62e5	3.67e5	-----	-----	1.21	
1,2,3,6,7,8-HxCDD	36:45	1.46e6	(M)1.15e6	5.00e5	4.07e5	-----	-----	1.27	
1,2,3,7,8,9-HxCDD	37:00	(M)1.33e6	(M)1.03e6	4.45e5	3.64e5	-----	-----	1.30	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:32	(M)9.79e6	(M)2.19e7	3.43e6	7.73e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:52	7.53e6	(M)1.65e7	2.27e6	5.30e6	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	38:33	2.03e6	(M)1.96e6	7.24e5	6.81e5	-----	-----	1.04	
1,2,3,4,7,8,9-HpCDF	39:53	1.55e6	(M)1.55e6	4.74e5	4.75e5	-----	-----	0.99	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	(M)1.35e7	1.26e7	4.14e6	3.97e6	-----	-----	1.07	
1,2,3,4,6,7,8-HpCDD	39:26	1.51e6	1.47e6	4.80e5	4.69e5	-----	-----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:19	(M)1.83e6	(M)2.04e6	4.38e5	5.02e5	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:07	(M)1.96e7	(M)2.17e7	4.68e6	5.35e6	-----	-----	0.90	
OCDD	42:08	(M)1.85e6	(M)2.12e6	4.62e5	5.20e5	-----	-----	0.87	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS3/CPM-22-171-034	Instrument ID	10MSHR06 (U)
Filename	U230524B_02	GC Column ID	US1246423H
Analyzed	05/24/2023 11:09	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:18	1.58e7	2.08e7	2.22e6	2.84e6	-----	-----	0.76	
2,3,7,8-TCDF	22:19	1.50e6	1.80e6	2.12e5	2.55e5	-----	-----	0.83	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:33	1.33e7	1.63e7	1.90e6	2.37e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	23:30	1.43e7	1.85e7	1.92e6	2.53e6	-----	-----	0.78	
2,3,7,8-TCDD-37Cl4	23:32	3.10e6		4.20e5		-----	-----		
2,3,7,8-TCDD	23:33	1.43e6	1.90e6	2.18e5	2.75e5	-----	-----	0.75	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:53	1.72e7	(M)1.18e7	2.93e6	1.93e6	-----	-----	1.46	
2,3,4,7,8-PeCDF-13C	32:26	1.68e7	1.09e7	3.68e6	2.41e6	-----	-----	1.55	
1,2,3,7,8-PeCDF	30:55	7.44e6	4.94e6	1.19e6	7.85e5	-----	-----	1.51	
2,3,4,7,8-PeCDF	32:27	7.53e6	5.18e6	1.60e6	1.08e6	-----	-----	1.45	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:51	1.31e7	8.63e6	2.92e6	1.92e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	32:52	3.67e6	6.06e6	8.47e5	1.40e6	-----	-----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:51	8.36e6	1.59e7	2.60e6	5.26e6	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:58	9.34e6	1.87e7	2.79e6	5.45e6	-----	-----	0.50	
2,3,4,6,7,8-HxCDF-13C	36:31	8.79e6	1.69e7	2.94e6	5.72e6	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:16	(M)7.52e6	(M)1.47e7	2.48e6	4.94e6	-----	-----	0.51	
1,2,3,4,7,8-HxCDF	35:52	7.09e6	5.72e6	2.22e6	1.91e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDF	35:59	7.83e6	6.14e6	2.35e6	1.80e6	-----	-----	1.28	
2,3,4,6,7,8-HxCDF	36:32	7.64e6	6.23e6	2.52e6	2.05e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDF	37:17	6.05e6	4.70e6	2.00e6	1.56e6	-----	-----	1.29	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS3/CPM-22-171-034	Instrument ID	10MSHR06 (U)
Filename	U230524B_02	GC Column ID	US1246423H
Analyzed	05/24/2023 11:09	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:40	(M)1.27e7	1.00e7	4.61e6	3.68e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDD-13C	36:45	(M)1.49e7	1.18e7	4.83e6	3.91e6	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	37:00	(M)1.56e7	(M)1.25e7	4.70e6	3.80e6	-----	-----	1.25	
1,2,3,4,7,8-HxCDD	36:41	5.79e6	4.72e6	1.95e6	1.55e6	-----	-----	1.23	
1,2,3,6,7,8-HxCDD	36:46	6.79e6	5.44e6	2.10e6	1.69e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD	37:01	6.73e6	5.51e6	1.97e6	1.60e6	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:33	9.66e6	2.11e7	3.28e6	7.12e6	-----	-----	0.46	
1,2,3,4,7,8,9-HpCDF-13C	39:53	7.67e6	1.62e7	2.25e6	4.92e6	-----	-----	0.47	
1,2,3,4,6,7,8-HpCDF	38:34	9.20e6	9.06e6	2.87e6	2.95e6	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	39:54	6.89e6	6.84e6	2.01e6	1.97e6	-----	-----	1.01	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	(M)1.33e7	1.27e7	4.15e6	3.90e6	-----	-----	1.04	
1,2,3,4,6,7,8-HpCDD	39:27	6.59e6	6.26e6	2.08e6	1.97e6	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:20	8.25e6	9.09e6	1.95e6	2.14e6	-----	-----	0.91	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:08	1.88e7	2.02e7	4.52e6	5.18e6	-----	-----	0.93	
OCDD	42:09	8.43e6	9.54e6	2.10e6	2.32e6	-----	-----	0.88	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS4-22-171-007	Instrument ID	10MSHR06 (U)
Filename	U230524B_06	GC Column ID	US1246423H
Analyzed	05/24/2023 14:27	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:16	1.45e7	1.90e7	2.02e6	2.78e6	-----	-----	0.77	
2,3,7,8-TCDF	22:18	5.13e6	6.70e6	7.17e5	9.17e5	-----	-----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:31	1.13e7	1.41e7	1.67e6	2.06e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	23:29	1.22e7	1.58e7	1.66e6	2.13e6	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	23:31	1.05e7		1.40e6		-----	-----		
2,3,7,8-TCDD	23:30	4.65e6	5.95e6	6.07e5	8.16e5	-----	-----	0.78	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:51	1.40e7	9.32e6	2.33e6	1.61e6	-----	-----	1.50	
2,3,4,7,8-PeCDF-13C	32:25	1.38e7	9.25e6	2.83e6	1.95e6	-----	-----	1.49	
1,2,3,7,8-PeCDF	30:52	2.37e7	1.53e7	3.88e6	2.55e6	-----	-----	1.55	
2,3,4,7,8-PeCDF	32:26	2.52e7	1.66e7	5.59e6	3.55e6	-----	-----	1.52	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	1.06e7	6.77e6	2.56e6	1.71e6	-----	-----	1.57	
1,2,3,7,8-PeCDD	32:51	1.18e7	1.91e7	2.78e6	4.37e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:50	6.07e6	1.15e7	2.09e6	3.86e6	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:57	6.90e6	1.34e7	2.21e6	4.43e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:31	6.40e6	1.21e7	2.10e6	4.08e6	-----	-----	0.53	
1,2,3,7,8,9-HxCDF-13C	37:16	5.52e6	1.06e7	1.75e6	3.39e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:51	2.09e7	1.69e7	7.13e6	5.79e6	-----	-----	1.24	
1,2,3,6,7,8-HxCDF	35:58	2.25e7	1.85e7	6.90e6	5.68e6	-----	-----	1.21	
2,3,4,6,7,8-HxCDF	36:31	2.15e7	1.73e7	7.66e6	6.14e6	-----	-----	1.24	
1,2,3,7,8,9-HxCDF	37:16	1.74e7	1.38e7	5.67e6	4.50e6	-----	-----	1.26	

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Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS4-22-171-007	Instrument ID	10MSHR06 (U)
Filename	U230524B_06	GC Column ID	US1246423H
Analyzed	05/24/2023 14:27	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:39	8.83e6	7.06e6	3.30e6	2.50e6	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:44	9.87e6	8.09e6	3.38e6	2.75e6	-----	-----	1.22	
1,2,3,7,8,9-HxCDD-13C	36:59	9.47e6	7.99e6	3.30e6	2.66e6	-----	-----	1.19	
1,2,3,4,7,8-HxCDD	36:39	1.61e7	1.33e7	5.48e6	4.57e6	-----	-----	1.21	
1,2,3,6,7,8-HxCDD	36:45	1.79e7	1.47e7	5.92e6	4.89e6	-----	-----	1.21	
1,2,3,7,8,9-HxCDD	37:00	1.64e7	1.38e7	5.25e6	4.37e6	-----	-----	1.19	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:32	6.36e6	1.43e7	2.44e6	5.17e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:52	5.21e6	1.11e7	1.60e6	3.66e6	-----	-----	0.47	
1,2,3,4,6,7,8-HpCDF	38:33	2.60e7	2.56e7	8.83e6	8.79e6	-----	-----	1.02	
1,2,3,4,7,8,9-HpCDF	39:53	2.03e7	1.90e7	6.25e6	5.91e6	-----	-----	1.07	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	8.46e6	8.27e6	2.79e6	2.72e6	-----	-----	1.02	
1,2,3,4,6,7,8-HpCDD	39:26	1.80e7	(M)1.72e7	6.22e6	6.00e6	-----	-----	1.04	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:18	2.58e7	3.04e7	6.64e6	7.71e6	-----	-----	0.85	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:07	1.41e7	1.60e7	3.61e6	4.04e6	-----	-----	0.88	
OCDD	42:08	(M)2.56e7	(M)2.88e7	6.68e6	7.60e6	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS5-22-171-008	Instrument ID	10MSHR06 (U)
Filename	U230524B_05	GC Column ID	US1246423H
Analyzed	05/24/2023 13:43	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:18	1.66e7	2.16e7	2.36e6	3.03e6	-----	-----	0.77	
2,3,7,8-TCDF	22:19	2.73e7	3.75e7	3.94e6	5.17e6	-----	-----	0.73	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:33	1.26e7	1.59e7	1.74e6	2.25e6	-----	-----	0.79	
2,3,7,8-TCDD-13C	23:30	1.44e7	1.87e7	2.00e6	2.57e6	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	23:32	5.91e7		7.99e6		-----	-----		
2,3,7,8-TCDD	23:33	2.61e7	3.44e7	3.51e6	4.54e6	-----	-----	0.76	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:52	1.89e7	1.24e7	3.10e6	1.97e6	-----	-----	1.52	
2,3,4,7,8-PeCDF-13C	32:26	1.71e7	1.11e7	3.99e6	2.55e6	-----	-----	1.53	
1,2,3,7,8-PeCDF	30:54	1.63e8	1.08e8	2.81e7	1.85e7	-----	-----	1.51	
2,3,4,7,8-PeCDF	32:26	1.60e8	1.07e8	3.93e7	2.60e7	-----	-----	1.50	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:50	1.29e7	8.42e6	3.02e6	1.97e6	-----	-----	1.53	
1,2,3,7,8-PeCDD	32:52	7.17e7	1.15e8	1.78e7	2.96e7	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:51	7.90e6	1.53e7	2.88e6	5.68e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:58	8.66e6	1.74e7	2.71e6	5.34e6	-----	-----	0.50	
2,3,4,6,7,8-HxCDF-13C	36:31	(M)7.97e6	1.54e7	2.63e6	5.40e6	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:16	7.02e6	1.35e7	2.35e6	4.56e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:52	1.35e8	(M)1.06e8	4.56e7	3.72e7	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:59	1.45e8	1.15e8	4.63e7	3.71e7	-----	-----	1.26	
2,3,4,6,7,8-HxCDF	36:32	(M)1.35e8	(M)1.12e8	4.92e7	3.99e7	-----	-----	1.20	
1,2,3,7,8,9-HxCDF	37:17	1.09e8	8.66e7	3.88e7	3.11e7	-----	-----	1.26	

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Fax: 612- 607-6444

Client Name	Pace Analytical National		
Client ID		Injected By	AH5
Lab ID	CS5-22-171-008	Instrument ID	10MSHR06 (U)
Filename	U230524B_05	GC Column ID	US1246423H
Analyzed	05/24/2023 13:43	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:40	1.13e7	9.09e6	4.33e6	3.38e6	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:45	1.25e7	1.02e7	4.29e6	3.45e6	-----	-----	1.23	
1,2,3,7,8,9-HxCDD-13C	37:00	1.24e7	1.01e7	4.22e6	3.34e6	-----	-----	1.22	
1,2,3,4,7,8-HxCDD	36:41	1.02e8	8.39e7	3.70e7	2.96e7	-----	-----	1.22	
1,2,3,6,7,8-HxCDD	36:46	1.16e8	9.53e7	3.89e7	3.17e7	-----	-----	1.22	
1,2,3,7,8,9-HxCDD	37:01	1.09e8	9.02e7	3.52e7	2.84e7	-----	-----	1.21	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:33	8.12e6	(M)1.79e7	2.94e6	6.50e6	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:53	(M)6.56e6	1.47e7	2.07e6	4.50e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	38:33	1.66e8	1.62e8	5.56e7	5.56e7	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:54	1.30e8	1.23e8	3.80e7	3.65e7	-----	-----	1.05	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:26	1.12e7	1.06e7	3.61e6	3.47e6	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	39:27	(M)1.15e8	(M)1.09e8	3.84e7	3.69e7	-----	-----	1.05	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:20	1.83e8	2.04e8	4.84e7	5.46e7	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:08	(M)1.78e7	2.12e7	4.87e6	5.59e6	-----	-----	0.84	
OCDD	42:09	1.75e8	1.92e8	4.76e7	5.25e7	-----	-----	0.91	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID		Injected By	SMT
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608A_01	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:06	1.01e8	1.33e8	1.40e7	1.84e7	-----	-----	0.76	
2,3,7,8-TCDF	22:08	9.59e6	1.23e7	1.32e6	1.71e6	-----	-----	0.78	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:20	7.95e7	1.02e8	1.17e7	1.49e7	-----	-----	0.78	
2,3,7,8-TCDD-13C	23:18	8.59e7	1.13e8	1.22e7	1.56e7	-----	-----	0.76	
2,3,7,8-TCDD-37Cl4	23:20	1.85e7		2.47e6		-----	-----		
2,3,7,8-TCDD	23:20	8.77e6	1.11e7	1.15e6	1.45e6	-----	-----	0.79	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:43	1.08e8	6.88e7	1.74e7	1.11e7	-----	-----	1.57	
2,3,4,7,8-PeCDF-13C	32:17	1.16e8	7.46e7	2.54e7	1.65e7	-----	-----	1.55	
1,2,3,7,8-PeCDF	30:44	4.84e7	3.09e7	7.72e6	4.98e6	-----	-----	1.56	
2,3,4,7,8-PeCDF	32:19	5.51e7	3.68e7	1.19e7	7.71e6	-----	-----	1.50	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	8.87e7	5.68e7	2.10e7	1.35e7	-----	-----	1.56	
1,2,3,7,8-PeCDD	32:45	2.49e7	4.07e7	5.85e6	9.98e6	-----	-----	0.61	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	5.88e7	1.10e8	1.95e7	3.73e7	-----	-----	0.54	
1,2,3,6,7,8-HxCDF-13C	35:53	6.68e7	1.26e8	1.89e7	3.71e7	-----	-----	0.53	
2,3,4,6,7,8-HxCDF-13C	36:26	5.65e7	1.09e8	1.88e7	3.59e7	-----	-----	0.52	
1,2,3,7,8,9-HxCDF-13C	37:12	4.89e7	9.58e7	1.56e7	2.97e7	-----	-----	0.51	
1,2,3,4,7,8-HxCDF	35:46	(M)5.19e7	4.23e7	1.66e7	1.35e7	-----	-----	1.23	
1,2,3,6,7,8-HxCDF	35:54	5.49e7	4.55e7	1.66e7	1.30e7	-----	-----	1.21	
2,3,4,6,7,8-HxCDF	36:27	5.10e7	4.22e7	1.67e7	1.38e7	-----	-----	1.21	
1,2,3,7,8,9-HxCDF	37:12	4.08e7	3.35e7	1.30e7	1.05e7	-----	-----	1.22	

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Client ID		Injected By	SMT
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608A_01	GC Column ID	US1246423H
Analyzed	06/08/2023 02:39	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	(M)8.13e7	(M)6.34e7	2.92e7	2.30e7	-----	-----	1.28	
1,2,3,6,7,8-HxCDD-13C	36:40	(M)9.45e7	7.49e7	3.02e7	2.49e7	-----	-----	1.26	
1,2,3,7,8,9-HxCDD-13C	36:54	(M)9.32e7	7.47e7	3.07e7	2.52e7	-----	-----	1.25	
1,2,3,4,7,8-HxCDD	36:35	3.64e7	(M)3.00e7	1.33e7	1.10e7	-----	-----	1.22	
1,2,3,6,7,8-HxCDD	36:41	4.32e7	(M)3.52e7	1.40e7	1.18e7	-----	-----	1.23	
1,2,3,7,8,9-HxCDD	36:55	4.22e7	(M)3.35e7	1.39e7	1.11e7	-----	-----	1.26	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	4.90e7	1.09e8	1.66e7	3.69e7	-----	-----	0.45	
1,2,3,4,7,8,9-HpCDF-13C	39:47	3.90e7	8.45e7	1.19e7	2.61e7	-----	-----	0.46	
1,2,3,4,6,7,8-HpCDF	38:28	4.89e7	4.76e7	1.61e7	1.59e7	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:48	3.83e7	3.61e7	1.20e7	1.13e7	-----	-----	1.06	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	(M)6.97e7	(M)6.60e7	2.29e7	2.19e7	-----	-----	1.06	
1,2,3,4,6,7,8-HpCDD	39:22	3.39e7	3.20e7	1.12e7	1.07e7	-----	-----	1.06	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	4.73e7	5.25e7	1.25e7	1.38e7	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	1.02e8	1.18e8	2.67e7	3.04e7	-----	-----	0.87	
OCDD	42:03	4.83e7	5.26e7	1.21e7	1.39e7	-----	-----	0.92	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID		Injected By	SM
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608B_01	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:06	6.76e6	8.77e6	8.78e5	1.19e6	-----	-----	0.77	
2,3,7,8-TCDF	22:08	6.52e5	7.96e5	8.88e4	1.03e5	-----	-----	0.82	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:21	5.06e6	6.40e6	6.60e5	8.61e5	-----	-----	0.79	
2,3,7,8-TCDD-13C	23:18	5.65e6	7.03e6	7.16e5	9.16e5	-----	-----	0.80	
2,3,7,8-TCDD-37Cl4	23:20	1.22e6		1.44e5		-----	-----		
2,3,7,8-TCDD	23:19	5.75e5	7.46e5	6.78e4	8.88e4	-----	-----	0.77	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:43	6.58e6	4.16e6	9.58e5	6.41e5	-----	-----	1.58	
2,3,4,7,8-PeCDF-13C	32:17	6.12e6	4.19e6	1.24e6	7.88e5	-----	-----	1.46	
1,2,3,7,8-PeCDF	30:44	2.85e6	1.83e6	4.38e5	2.80e5	-----	-----	1.56	
2,3,4,7,8-PeCDF	32:19	3.20e6	2.07e6	6.54e5	3.84e5	-----	-----	1.54	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	(M)4.66e6	2.94e6	8.92e5	5.99e5	-----	-----	1.58	
1,2,3,7,8-PeCDD	32:44	1.37e6	2.19e6	2.79e5	4.49e5	-----	-----	0.63	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	2.83e6	5.32e6	8.54e5	1.64e6	-----	-----	0.53	
1,2,3,6,7,8-HxCDF-13C	35:52	3.54e6	6.77e6	9.11e5	1.76e6	-----	-----	0.52	
2,3,4,6,7,8-HxCDF-13C	36:26	3.22e6	(M)6.30e6	8.94e5	1.78e6	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:11	2.88e6	(M)5.55e6	8.05e5	1.47e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:46	(M)2.57e6	2.09e6	8.07e5	6.43e5	-----	-----	1.23	
1,2,3,6,7,8-HxCDF	35:54	3.09e6	2.62e6	8.11e5	6.47e5	-----	-----	1.18	
2,3,4,6,7,8-HxCDF	36:27	2.89e6	(M)2.50e6	8.27e5	6.99e5	-----	-----	1.16	
1,2,3,7,8,9-HxCDF	37:12	2.44e6	(M)1.90e6	6.78e5	5.22e5	-----	-----	1.29	

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Client ID		Injected By	SM
Lab ID	CS3/CPM-22-171-036	Instrument ID	10MSHR06 (U)
Filename	U230608B_01	GC Column ID	US1246423H
Analyzed	06/08/2023 22:04	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	(M)4.12e6	3.15e6	1.31e6	1.02e6	-----	-----	1.31	
1,2,3,6,7,8-HxCDD-13C	36:40	(M)5.28e6	4.22e6	1.40e6	1.16e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:54	(M)5.45e6	(M)4.23e6	1.48e6	1.19e6	-----	-----	1.29	
1,2,3,4,7,8-HxCDD	36:34	1.88e6	1.52e6	5.76e5	4.96e5	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:40	2.45e6	2.06e6	7.11e5	5.66e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDD	36:55	2.41e6	1.98e6	6.29e5	5.19e5	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	3.00e6	6.79e6	8.93e5	2.02e6	-----	-----	0.44	
1,2,3,4,7,8,9-HpCDF-13C	39:47	(M)2.46e6	5.12e6	6.71e5	1.42e6	-----	-----	0.48	
1,2,3,4,6,7,8-HpCDF	38:28	2.96e6	2.93e6	8.87e5	9.45e5	-----	-----	1.01	
1,2,3,4,7,8,9-HpCDF	39:48	2.36e6	2.33e6	6.83e5	6.59e5	-----	-----	1.02	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	(M)4.27e6	(M)3.95e6	1.23e6	1.09e6	-----	-----	1.08	
1,2,3,4,6,7,8-HpCDD	39:22	2.12e6	2.07e6	6.14e5	5.69e5	-----	-----	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	2.99e6	3.33e6	6.95e5	7.65e5	-----	-----	0.90	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	(M)6.09e6	(M)6.98e6	1.31e6	1.42e6	-----	-----	0.87	
OCDD	42:03	2.83e6	3.26e6	6.75e5	7.31e5	-----	-----	0.87	

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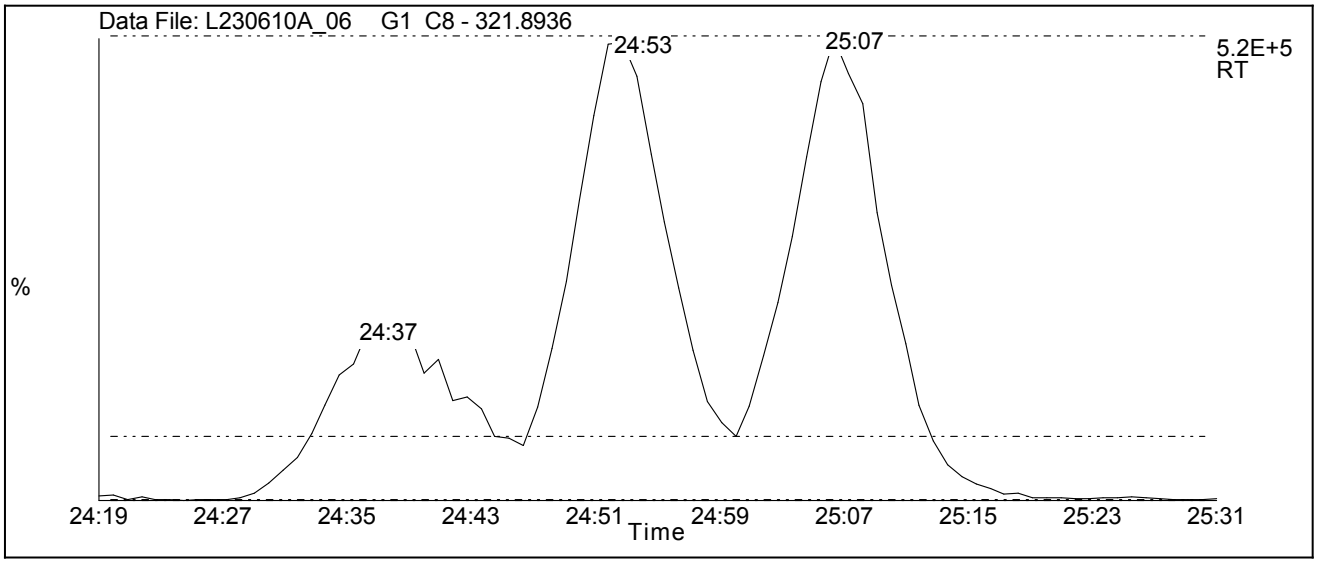
Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-036	Injected By:	CVS
Raw Data File:	L230610A_06	Instrument ID:	10MSHR15 (L)
Date Analyzed:	6/10/2023	GC Column	DB-5MS
Time Analyzed:	14:39	GC Column S/N:	US3225411H

Resolution: 13.6%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	18:41	27:00
PeCDF	341.8567	26:52	32:10
HxCDF	373.8207	32:50	35:09
HpCDF	407.7818	36:19	37:41
OCDF	441.7428	40:06	0:00
TCDD	321.8936	20:27	26:43
PeCDD	357.8517	29:05	31:55
HxCDD	391.8127	33:20	34:53
HpCDD	425.7737	36:33	37:13
OCDD	459.7347	39:54	0:00
1234-TCDD-13	331.9367	24:05	0:00
123789-HxCD	401.8559	34:52	0:00

REPORT OF LABORATORY ANALYSIS

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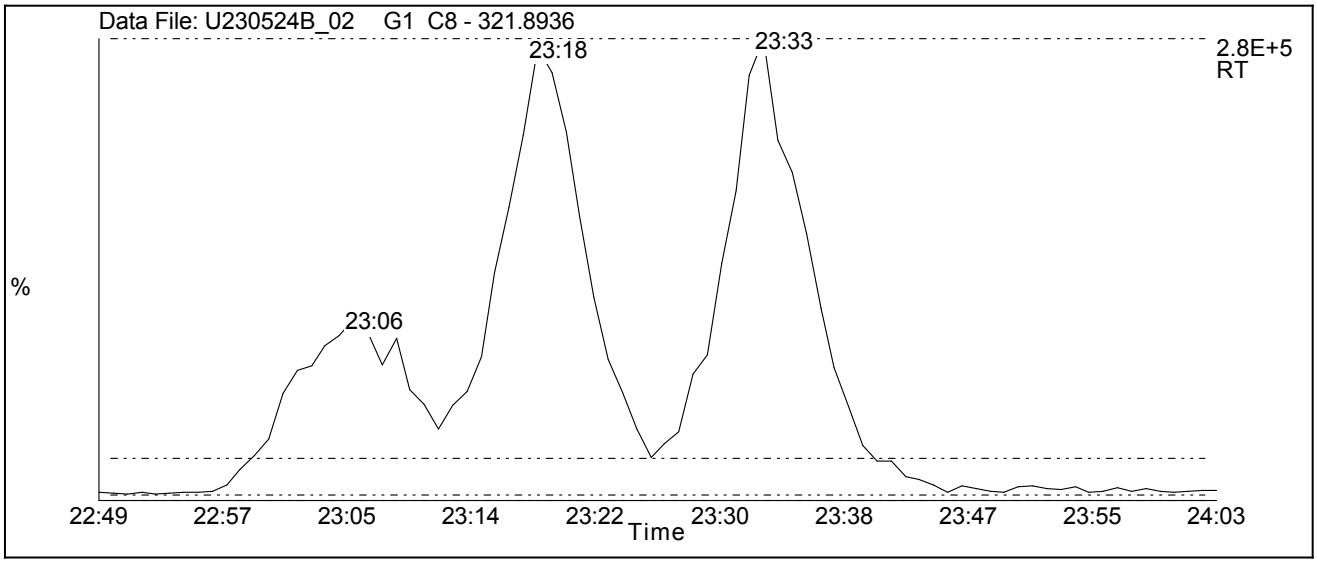
Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-034	Injected By:	CVS
Raw Data File:	U230524B_02	Instrument ID:	10MSHR06 (U)
Date Analyzed:	5/24/2023	GC Column	DB-5MS
Time Analyzed:	11:09	GC Column S/N:	US1246423H

Resolution: 7.9%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	17:31	25:25
PeCDF	341.8567	25:21	33:41
HxCDF	373.8207	34:35	37:17
HpCDF	407.7818	38:34	39:54
OCDF	441.7428	42:20	0:00
TCDD	321.8936	19:10	25:06
PeCDD	357.8517	28:54	33:22
HxCDD	391.8127	35:12	37:00
HpCDD	425.7737	38:47	39:27
OCDD	459.7347	42:09	0:00
1234-TCDD-13	331.9367	22:33	0:00
123789-HxCD	401.8559	37:00	0:00

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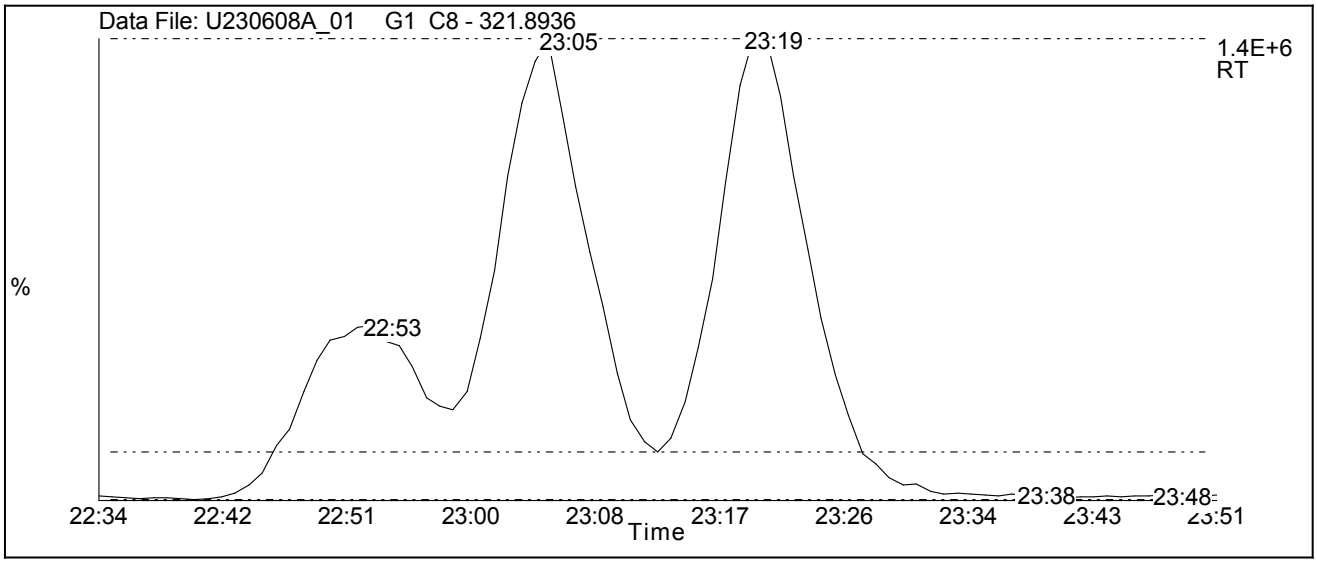
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-036	Injected By:	SMT
Raw Data File:	U230608A_01	Instrument ID:	10MSHR06 (U)
Date Analyzed:	6/8/2023	GC Column	DB-5MS
Time Analyzed:	02:39	GC Column S/N:	US1246423H

Resolution: 10.4%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	17:22	25:10
PeCDF	341.8567	25:07	33:33
HxCDF	373.8207	34:28	37:12
HpCDF	407.7818	38:28	39:48
OCDF	441.7428	42:12	0:00
TCDD	321.8936	19:00	24:51
PeCDD	357.8517	28:37	33:15
HxCDD	391.8127	35:05	36:55
HpCDD	425.7737	38:42	39:22
OCDD	459.7347	42:03	0:00
1234-TCDD-13	331.9367	22:20	0:00
123789-HxCD	401.8559	36:54	0:00

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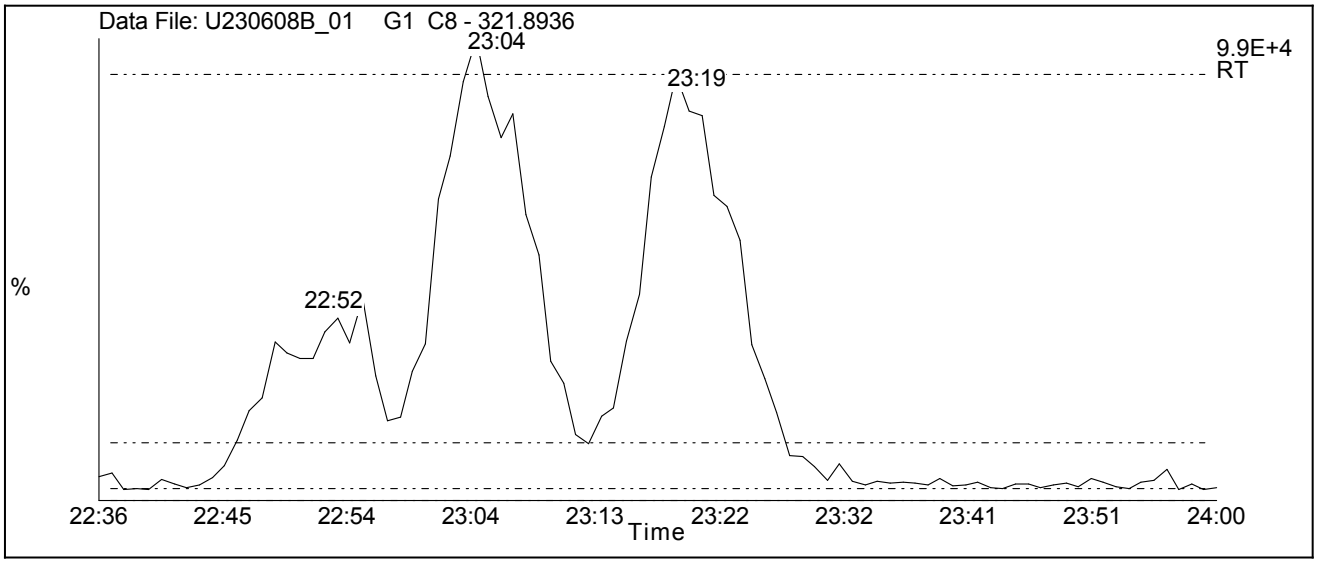
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Column Performance Mix (CPM) / Window Defining Mix (WDM)

Lab Sample ID:	CS3/CPM-22-171-036	Injected By:	SM
Raw Data File:	U230608B_01	Instrument ID:	10MSHR06 (U)
Date Analyzed:	6/8/2023	GC Column	DB-5MS
Time Analyzed:	22:04	GC Column S/N:	US1246423H

Resolution: 11.1%



Group	Msss	First Eluter	Last Eluter
TCDF	305.8987	17:22	25:10
PeCDF	341.8567	25:07	33:33
HxCDF	373.8207	34:28	37:12
HpCDF	407.7818	38:28	39:48
OCDF	441.7428	42:12	0:00
TCDD	321.8936	18:58	24:52
PeCDD	357.8517	28:37	33:15
HxCDD	391.8127	35:05	36:55
HpCDD	425.7737	38:42	39:22
OCDD	459.7347	42:03	0:00
1234-TCDD-13	331.9367	22:20	0:00
123789-HxCD	401.8559	36:54	0:00

REPORT OF LABORATORY ANALYSIS

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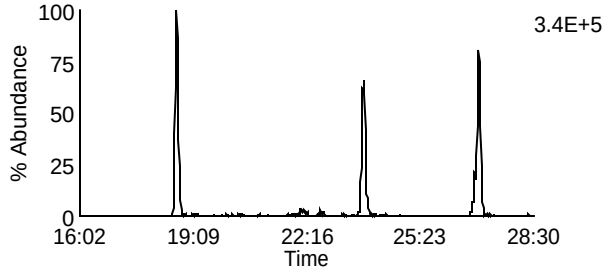
Homologue Group: Tetras

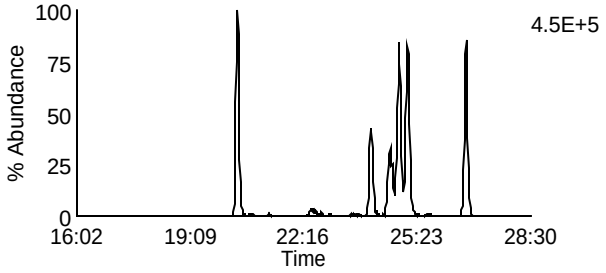
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

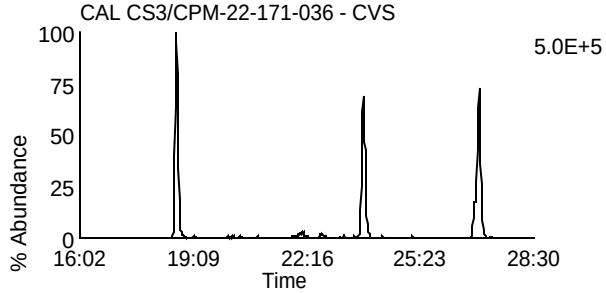
Data File: L230610A_06 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - CVS



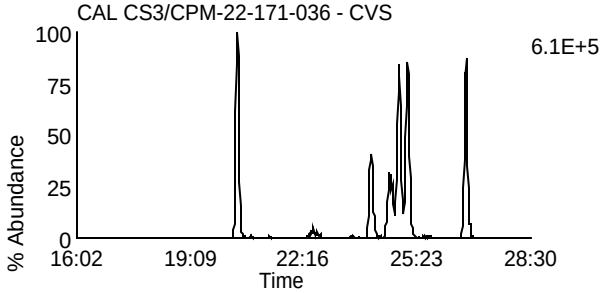
Data File: L230610A_06 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - CVS



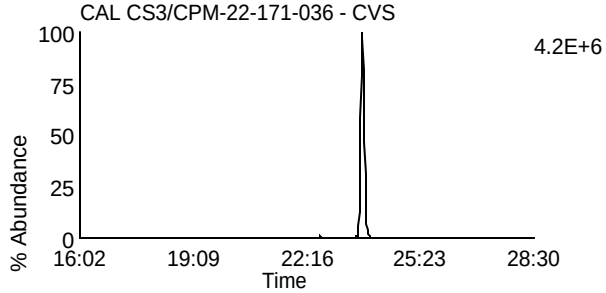
Data File: L230610A_06 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - CVS



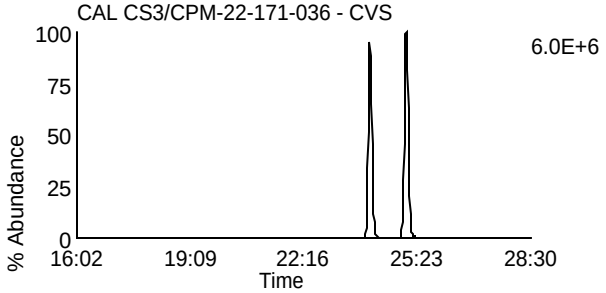
Data File: L230610A_06 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - CVS



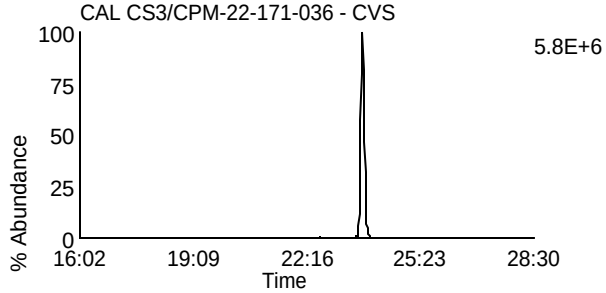
Data File: L230610A_06 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - CVS



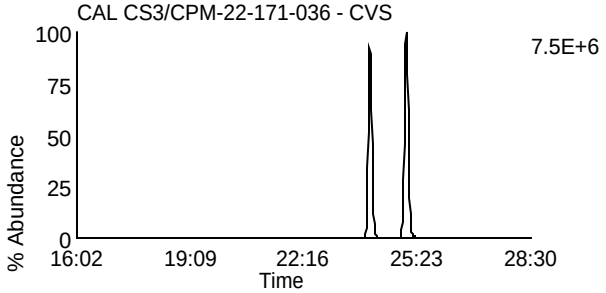
Data File: L230610A_06 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - CVS



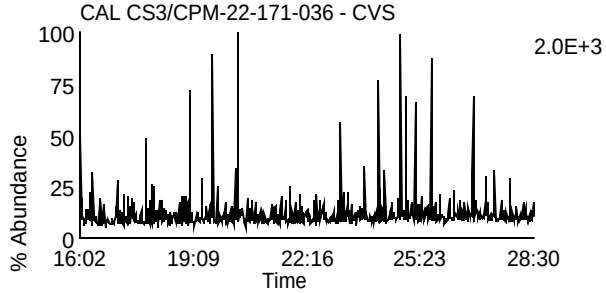
Data File: L230610A_06 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - CVS



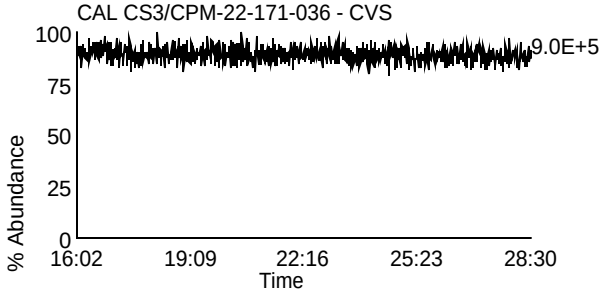
Data File: L230610A_06 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - CVS



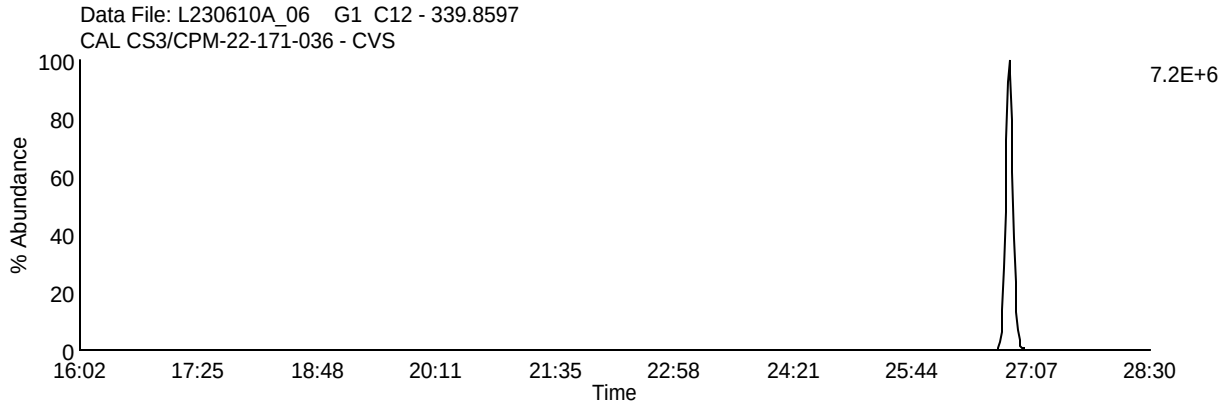
Data File: L230610A_06 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - CVS

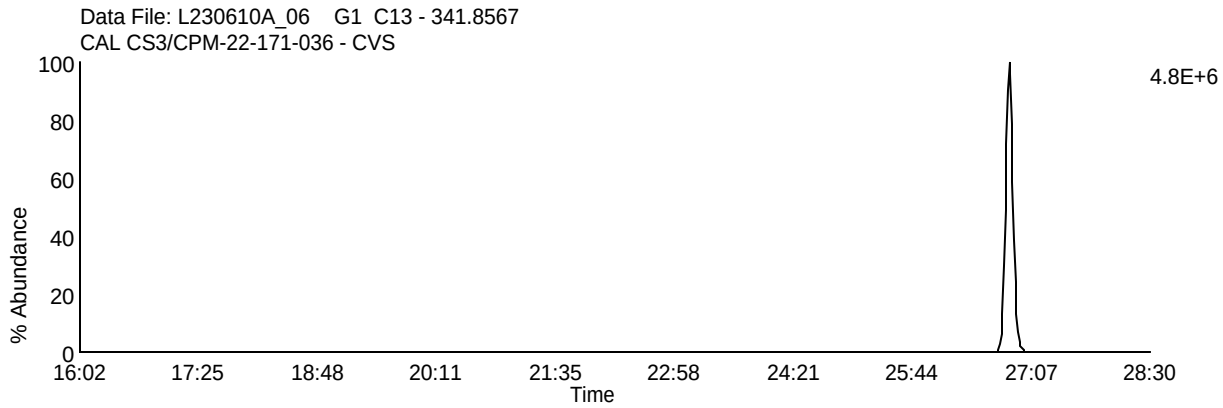


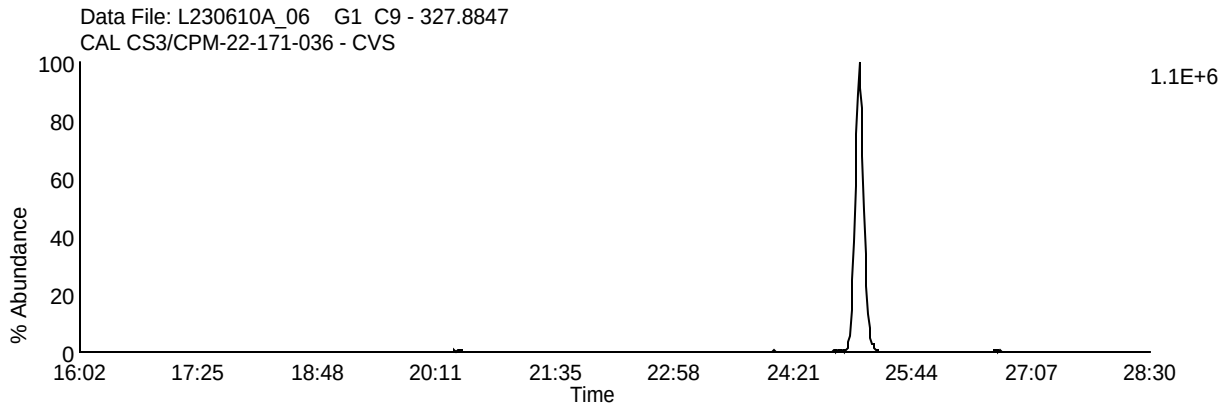
Homologue Group: Penta & Cleanup

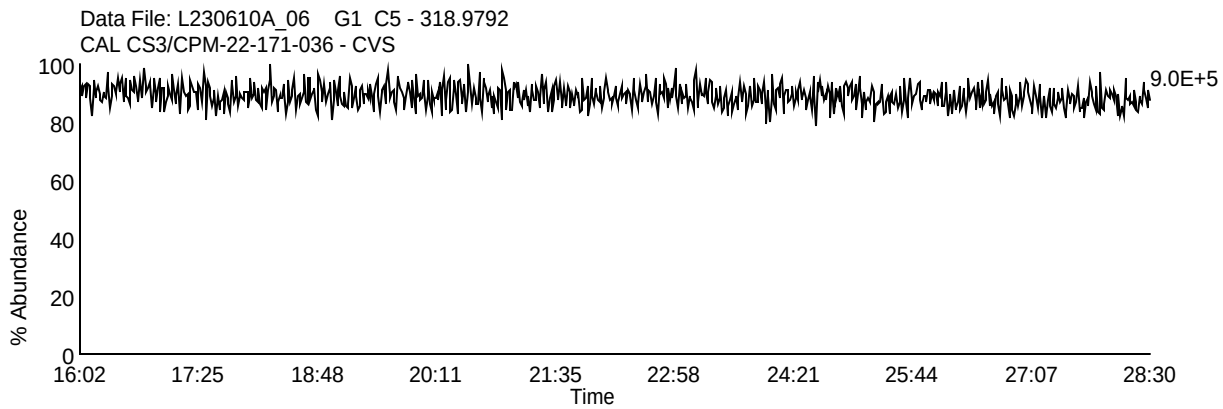
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)







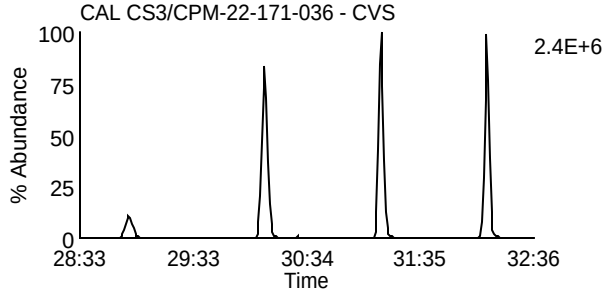


Homologue Group: Pentas

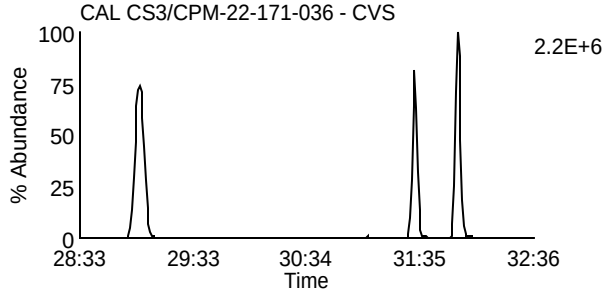
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

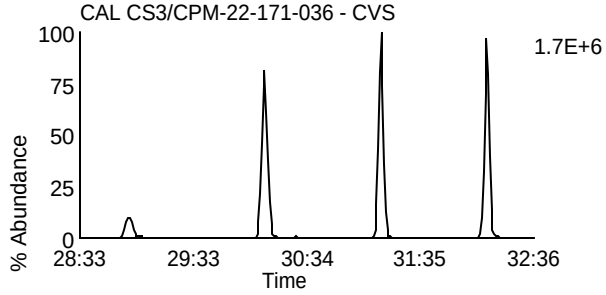
Data File: L230610A_06 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - CVS



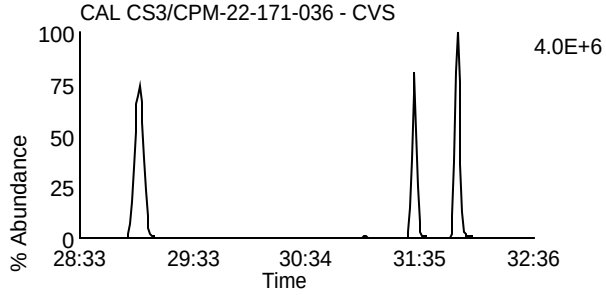
Data File: L230610A_06 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - CVS



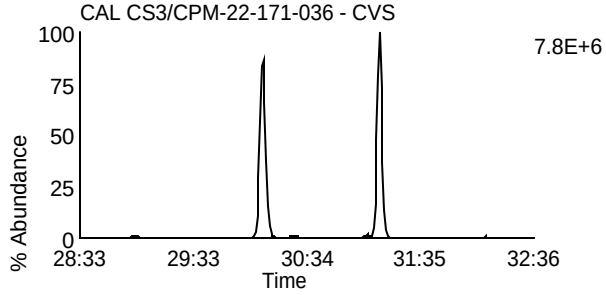
Data File: L230610A_06 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - CVS



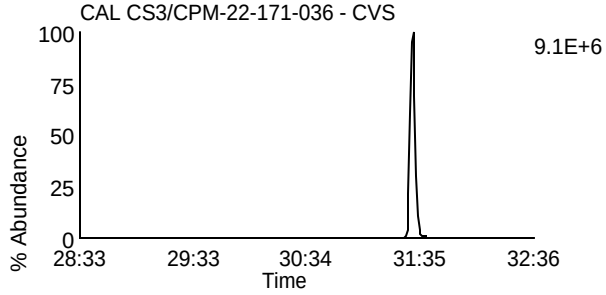
Data File: L230610A_06 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - CVS



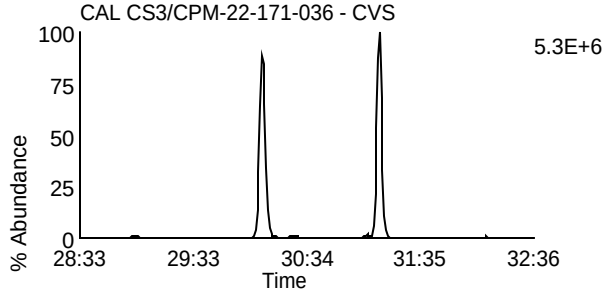
Data File: L230610A_06 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - CVS



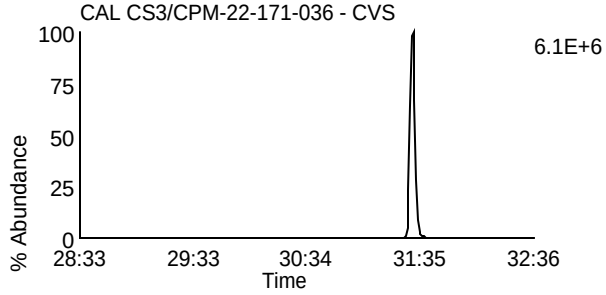
Data File: L230610A_06 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - CVS



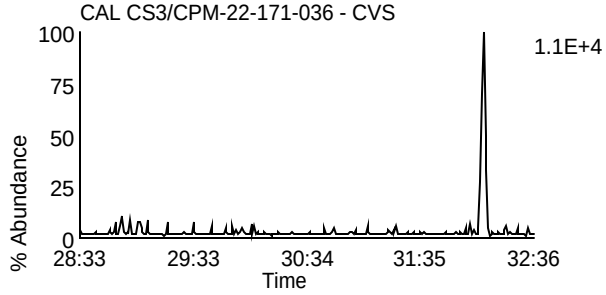
Data File: L230610A_06 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - CVS



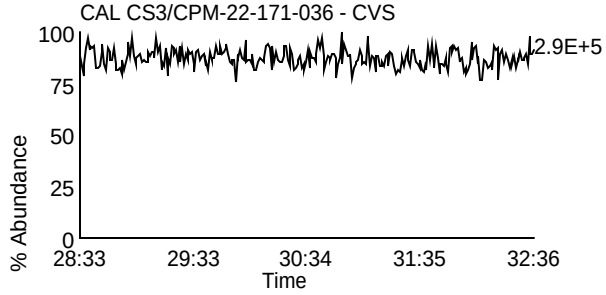
Data File: L230610A_06 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - CVS

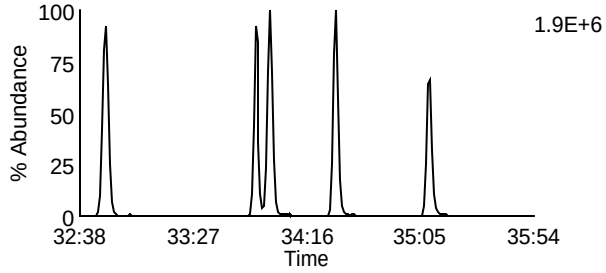


Homologue Group: Hexas

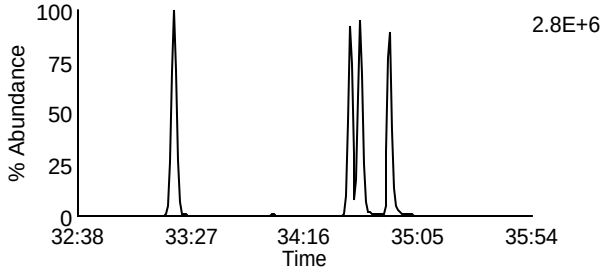
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

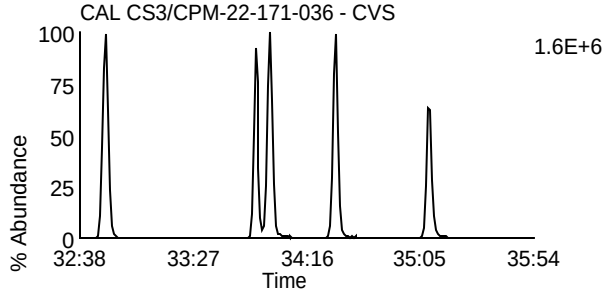
Data File: L230610A_06 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - CVS



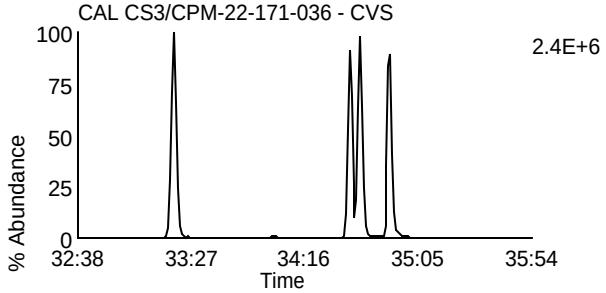
Data File: L230610A_06 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - CVS



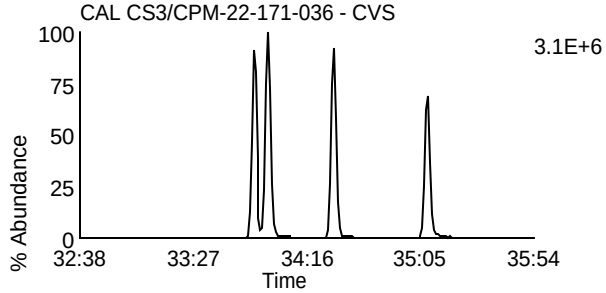
Data File: L230610A_06 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - CVS



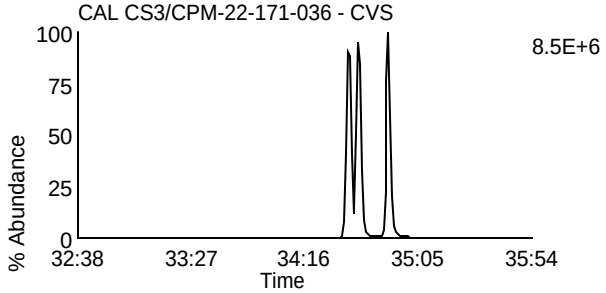
Data File: L230610A_06 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - CVS



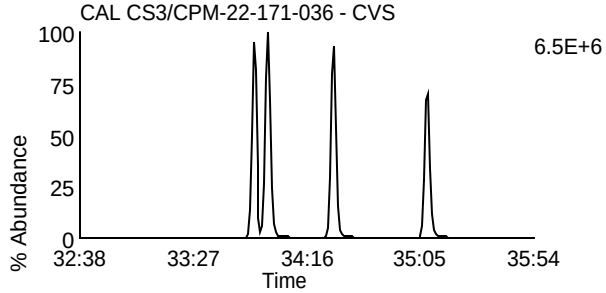
Data File: L230610A_06 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - CVS



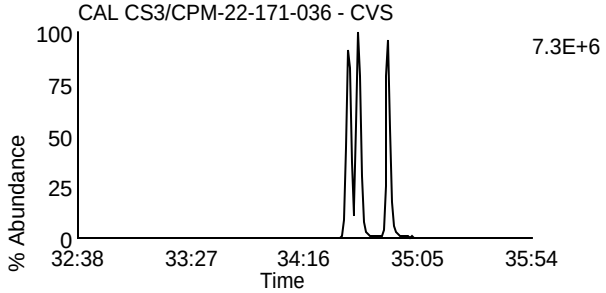
Data File: L230610A_06 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - CVS



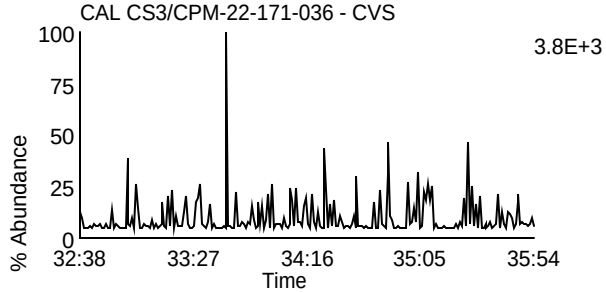
Data File: L230610A_06 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - CVS



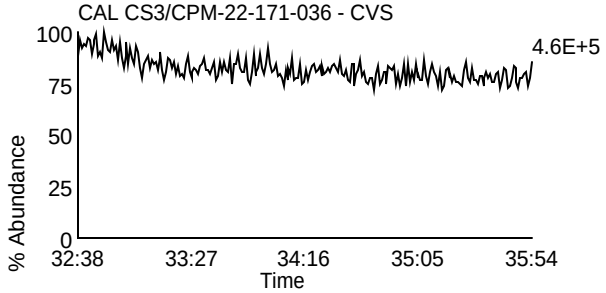
Data File: L230610A_06 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - CVS

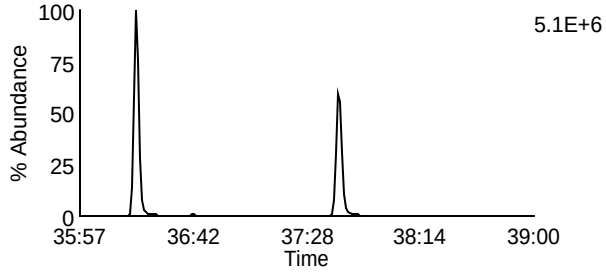


Homologue Group: Heptas

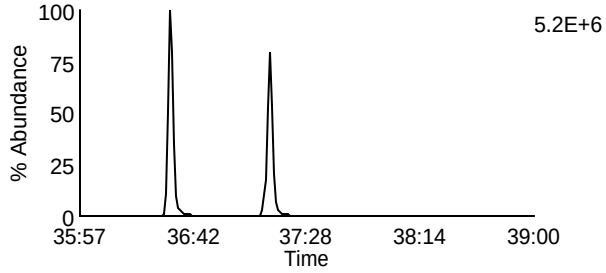
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

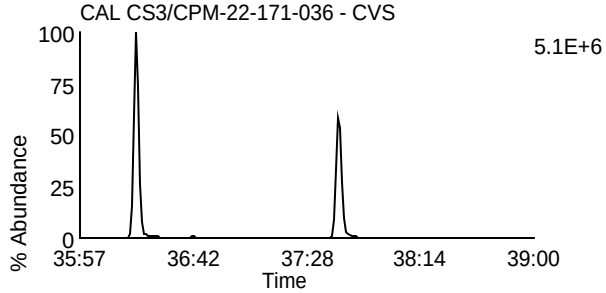
Data File: L230610A_06 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - CVS



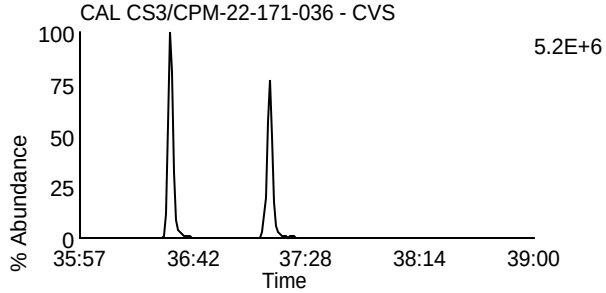
Data File: L230610A_06 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - CVS



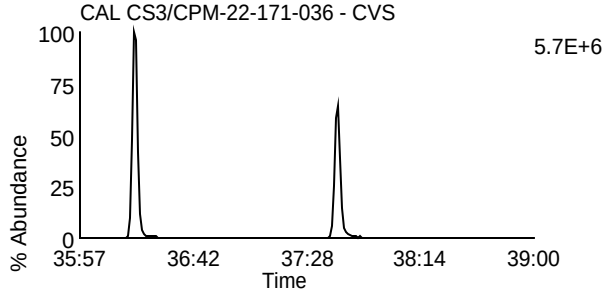
Data File: L230610A_06 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - CVS



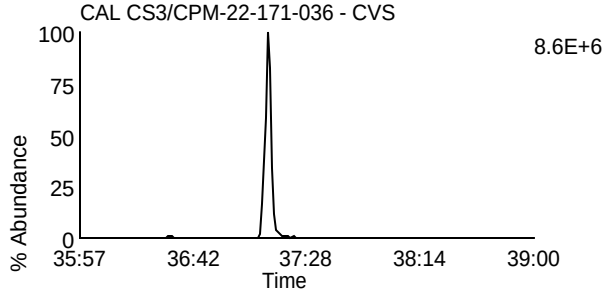
Data File: L230610A_06 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - CVS



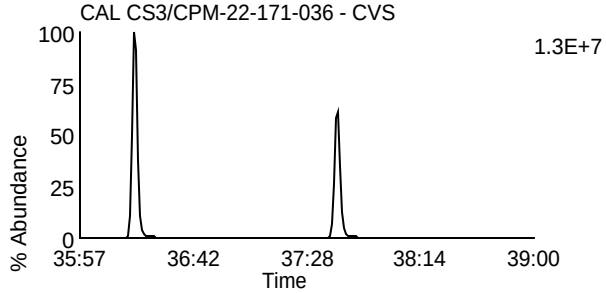
Data File: L230610A_06 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - CVS



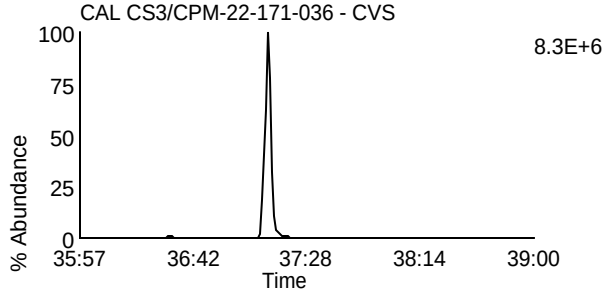
Data File: L230610A_06 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - CVS



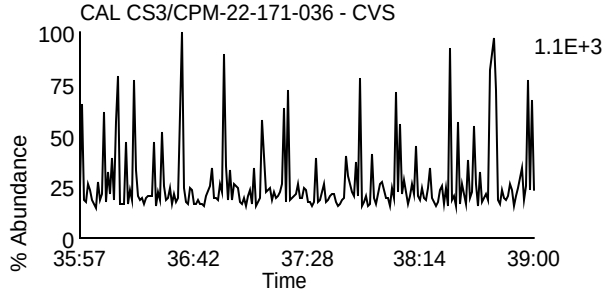
Data File: L230610A_06 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - CVS



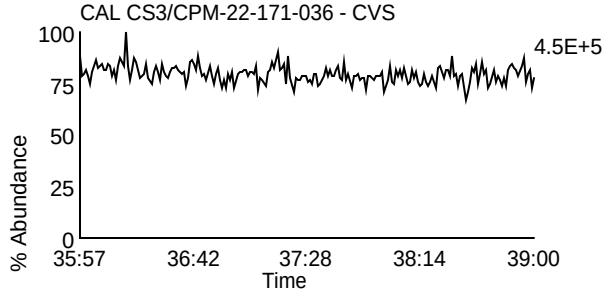
Data File: L230610A_06 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - CVS

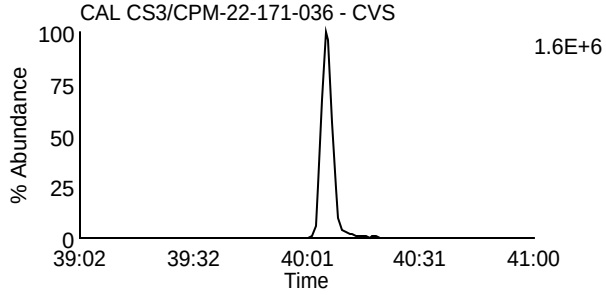


Homologue Group: Octas

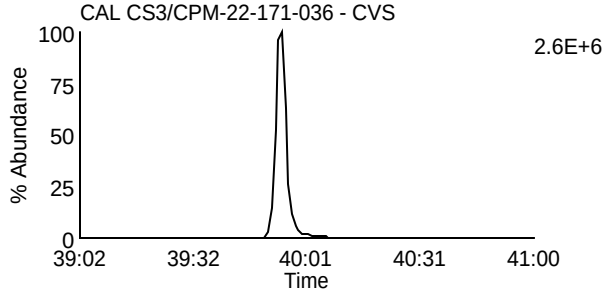
Data File Name: L230610A_06
Date Acquired: 6/10/2023
Sample Description: CAL CS3/CPM-22-171-036 - CVS

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR15 (L)

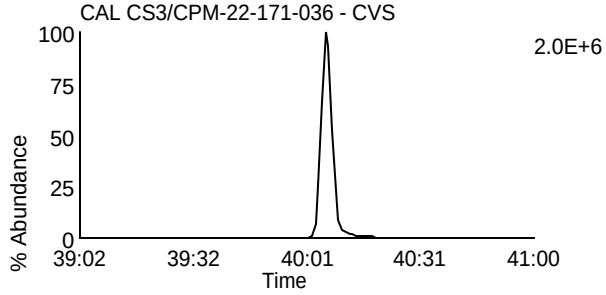
Data File: L230610A_06 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - CVS



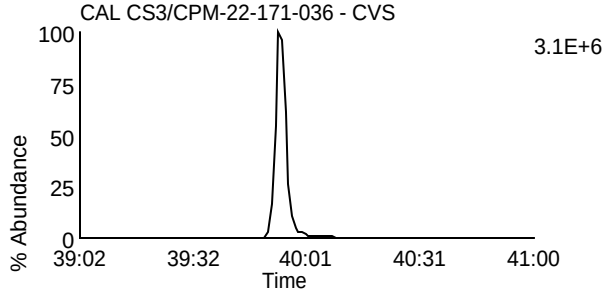
Data File: L230610A_06 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - CVS



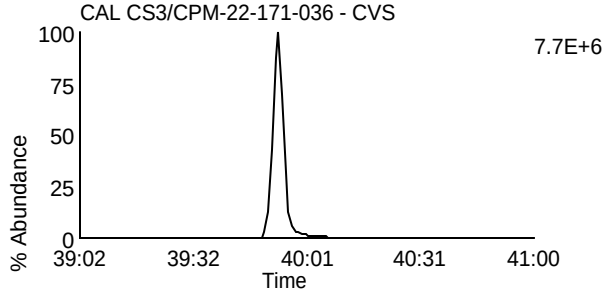
Data File: L230610A_06 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - CVS



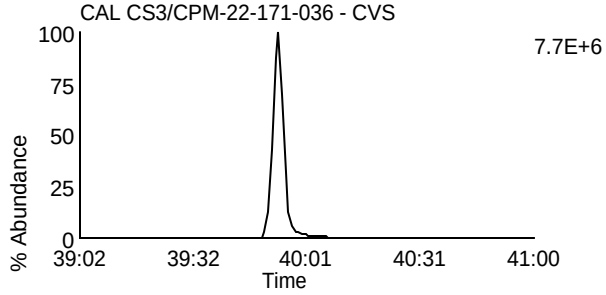
Data File: L230610A_06 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - CVS



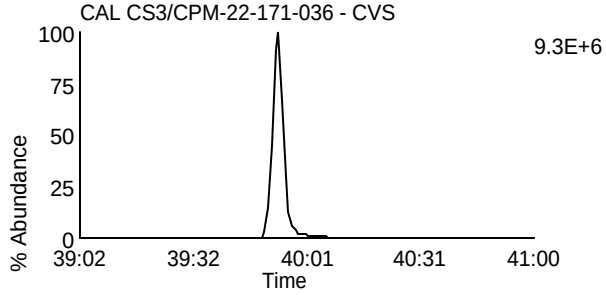
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



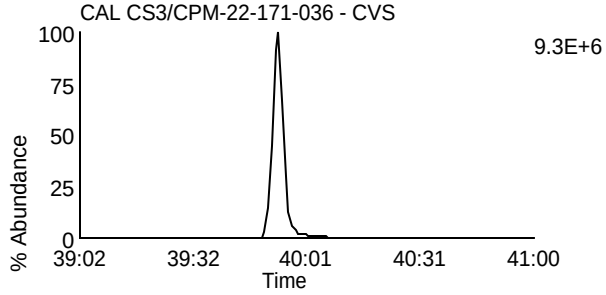
Data File: L230610A_06 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - CVS



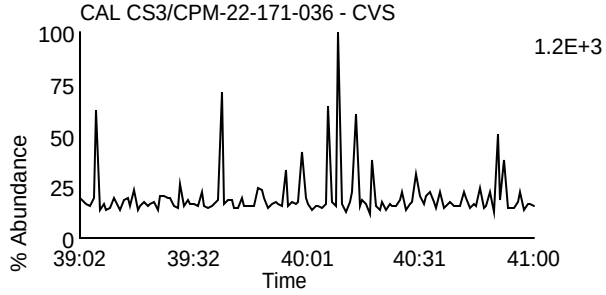
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



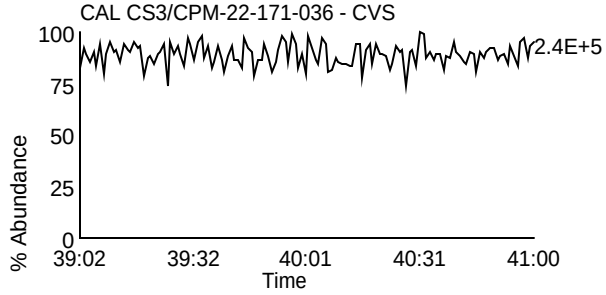
Data File: L230610A_06 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - CVS



Data File: L230610A_06 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - CVS

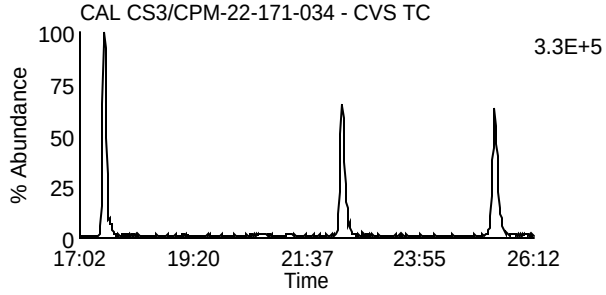


Homologue Group: Tetras

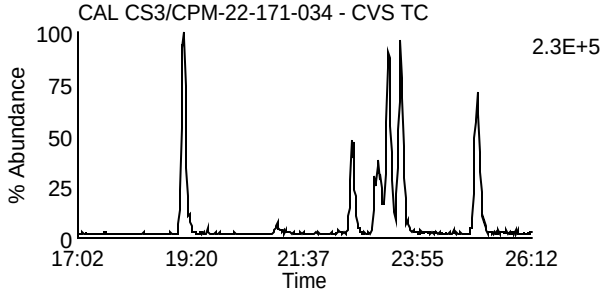
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

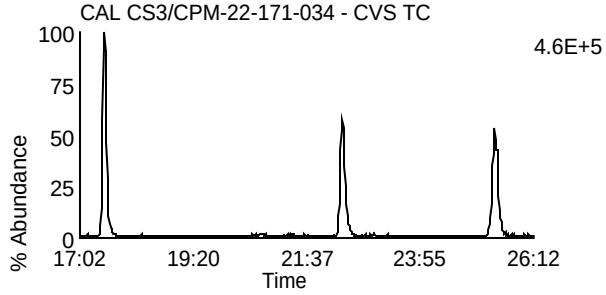
Data File: U230524B_02 G1 C1 - 303.9016
CAL CS3/CPM-22-171-034 - CVS TC



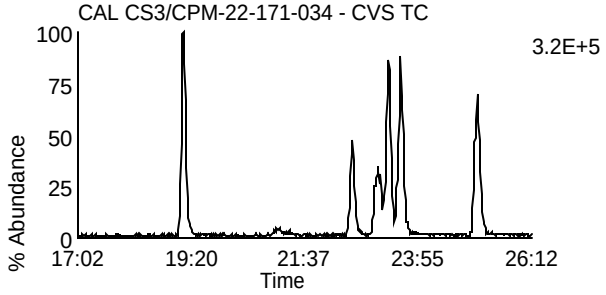
Data File: U230524B_02 G1 C7 - 319.8965
CAL CS3/CPM-22-171-034 - CVS TC



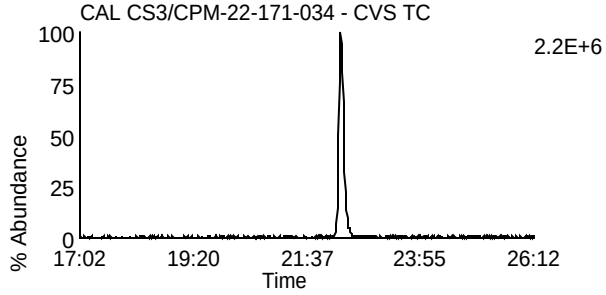
Data File: U230524B_02 G1 C2 - 305.8987
CAL CS3/CPM-22-171-034 - CVS TC



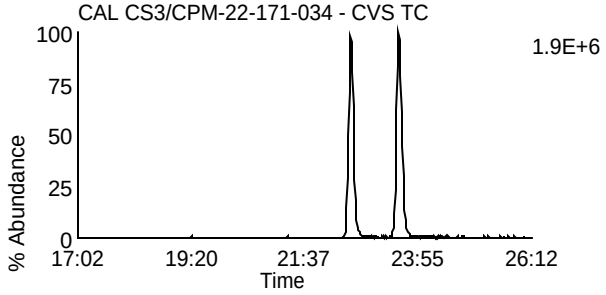
Data File: U230524B_02 G1 C8 - 321.8936
CAL CS3/CPM-22-171-034 - CVS TC



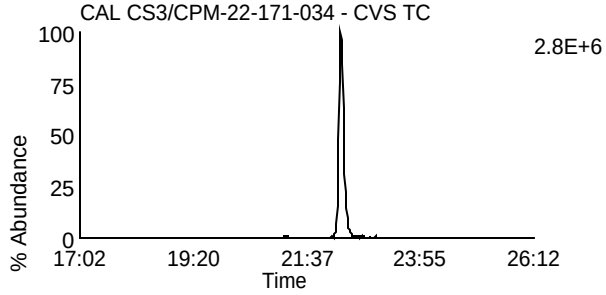
Data File: U230524B_02 G1 C3 - 315.9418
CAL CS3/CPM-22-171-034 - CVS TC



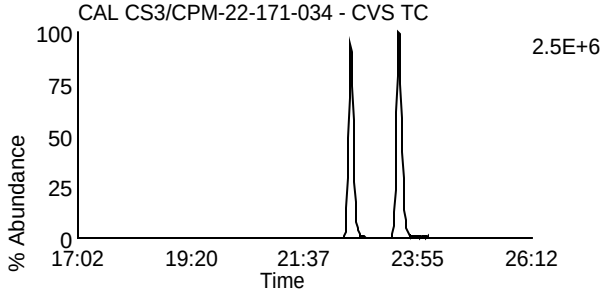
Data File: U230524B_02 G1 C10 - 331.9367
CAL CS3/CPM-22-171-034 - CVS TC



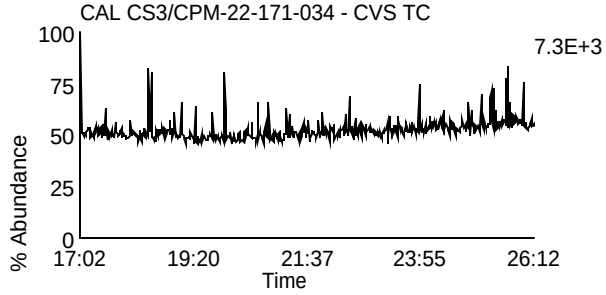
Data File: U230524B_02 G1 C4 - 317.9389
CAL CS3/CPM-22-171-034 - CVS TC



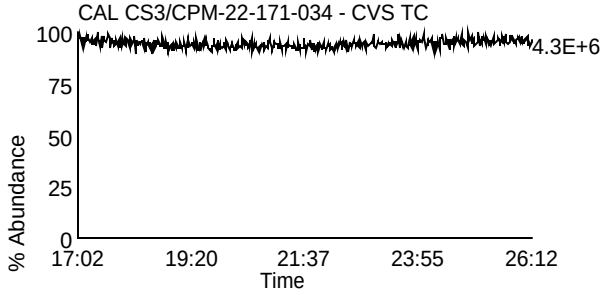
Data File: U230524B_02 G1 C11 - 333.9338
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G1 C14 - 375.8364
CAL CS3/CPM-22-171-034 - CVS TC



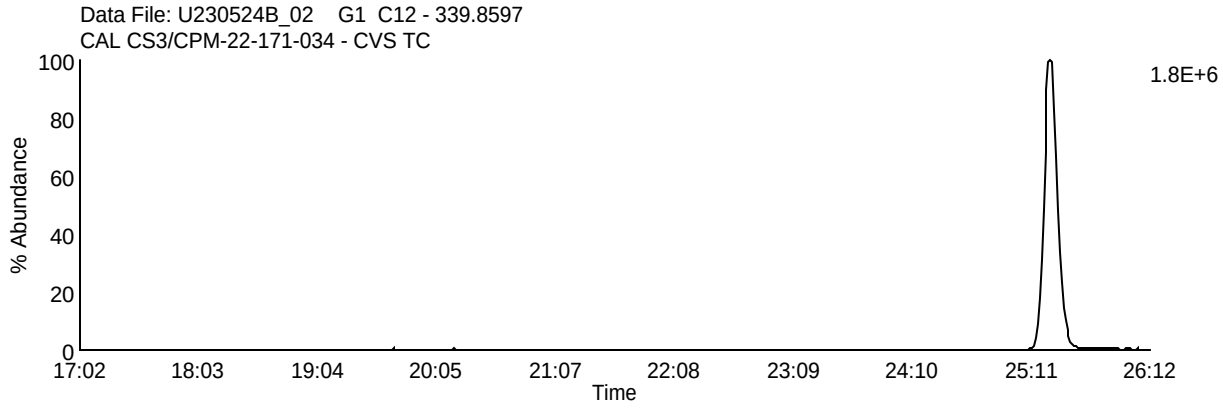
Data File: U230524B_02 G1 C5 - 318.9792
CAL CS3/CPM-22-171-034 - CVS TC

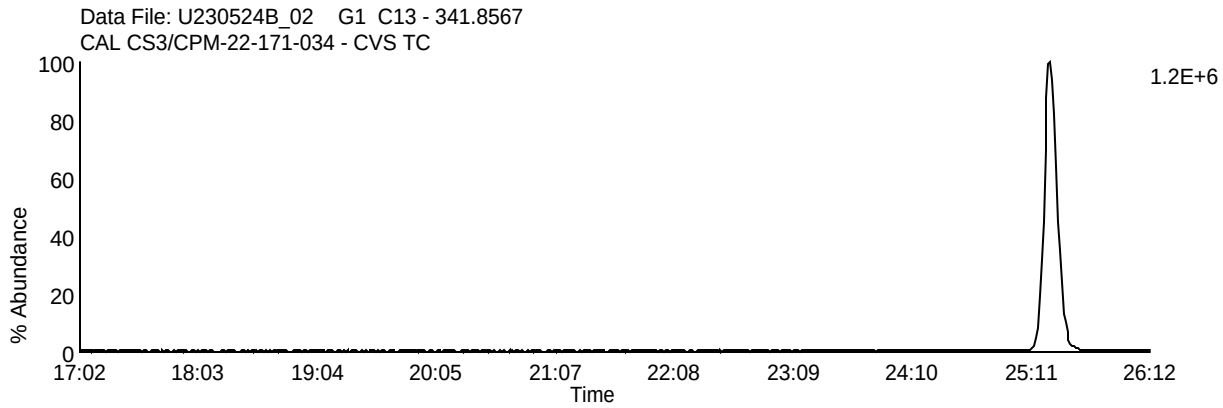


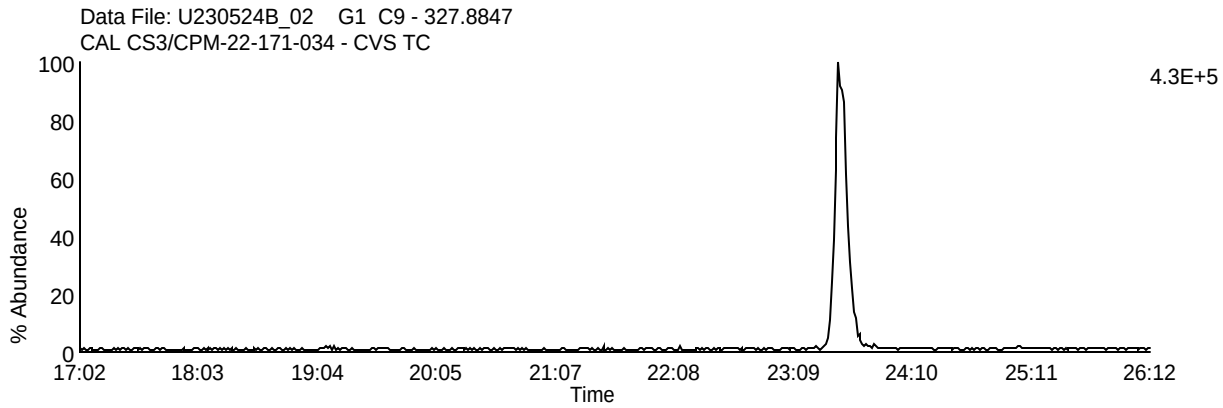
Homologue Group: Penta & Cleanup

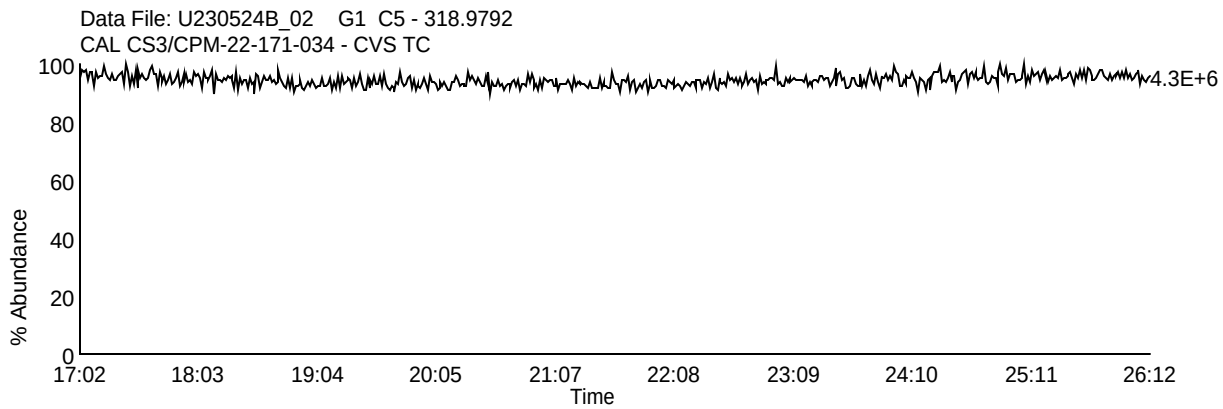
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)







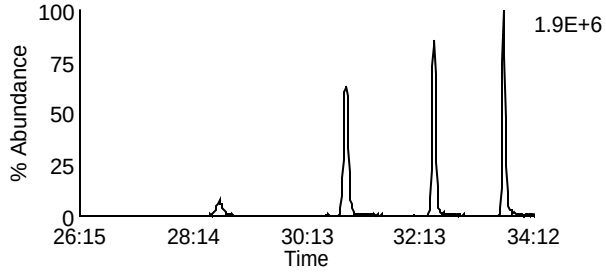


Homologue Group: Pentas

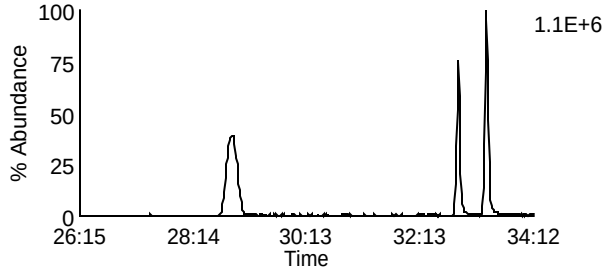
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

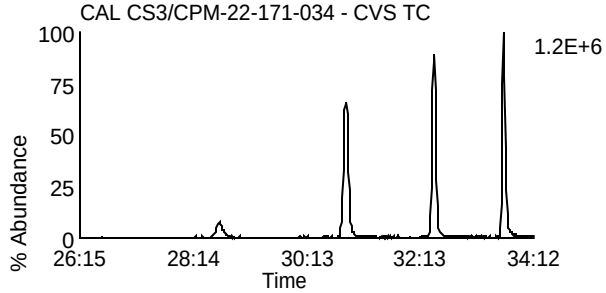
Data File: U230524B_02 G2 C1 - 339.8597
CAL CS3/CPM-22-171-034 - CVS TC



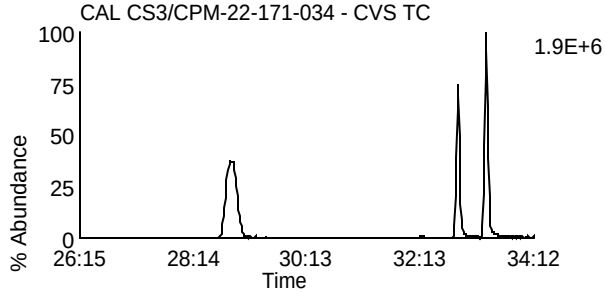
Data File: U230524B_02 G2 C4 - 353.8576
CAL CS3/CPM-22-171-034 - CVS TC



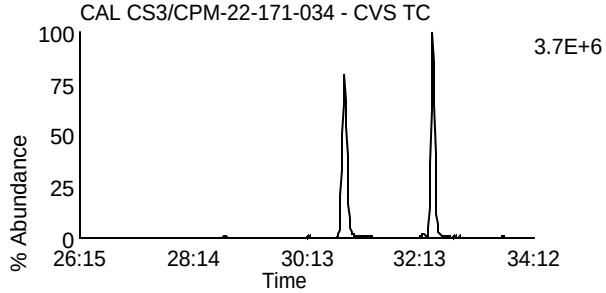
Data File: U230524B_02 G2 C2 - 341.8567
CAL CS3/CPM-22-171-034 - CVS TC



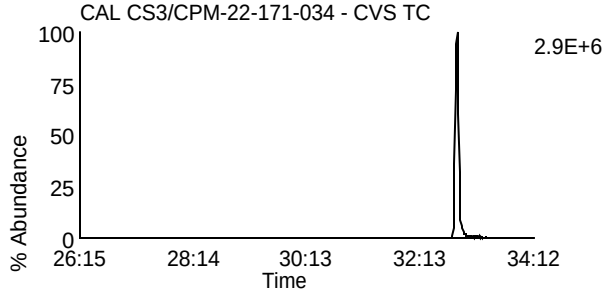
Data File: U230524B_02 G2 C8 - 355.8546
CAL CS3/CPM-22-171-034 - CVS TC



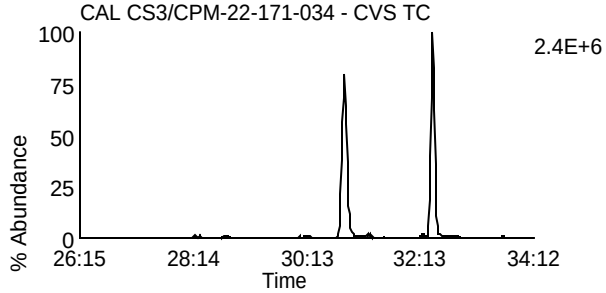
Data File: U230524B_02 G2 C3 - 351.8999
CAL CS3/CPM-22-171-034 - CVS TC



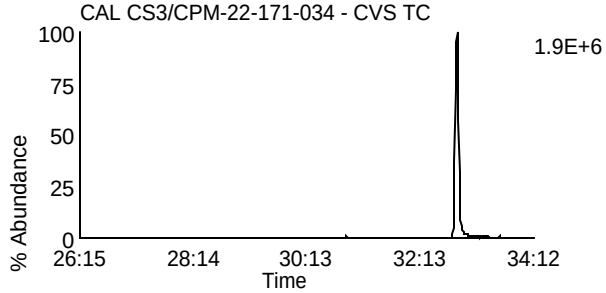
Data File: U230524B_02 G2 C10 - 367.8948
CAL CS3/CPM-22-171-034 - CVS TC



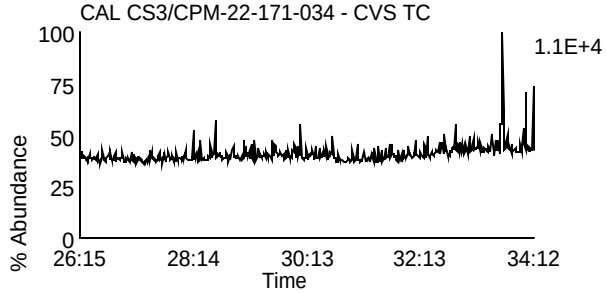
Data File: U230524B_02 G2 C5 - 353.8969
CAL CS3/CPM-22-171-034 - CVS TC



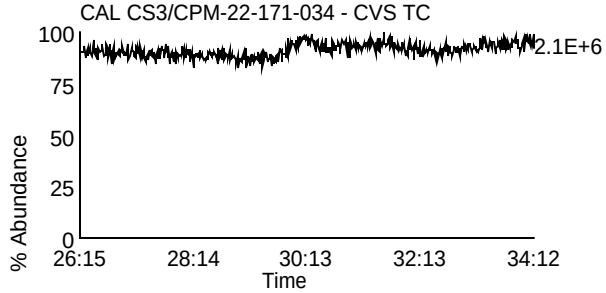
Data File: U230524B_02 G2 C11 - 369.8918
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C12 - 409.7974
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G2 C6 - 354.9792
CAL CS3/CPM-22-171-034 - CVS TC

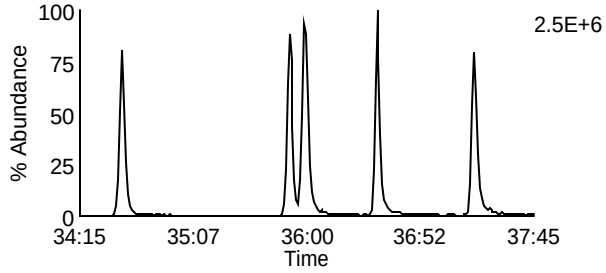


Homologue Group: Hexas

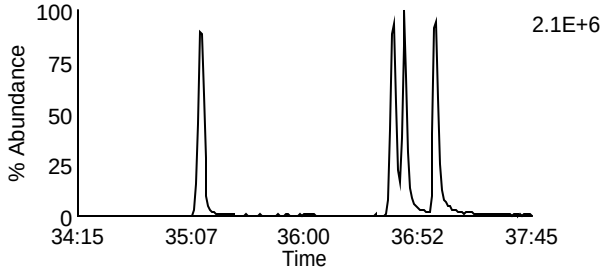
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

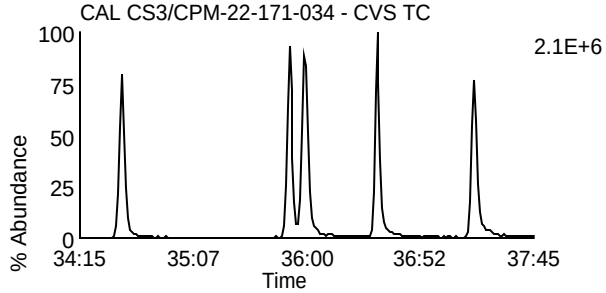
Data File: U230524B_02 G3 C1 - 373.8207
CAL CS3/CPM-22-171-034 - CVS TC



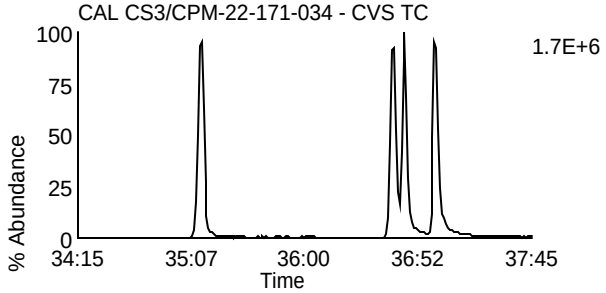
Data File: U230524B_02 G3 C7 - 389.8156
CAL CS3/CPM-22-171-034 - CVS TC



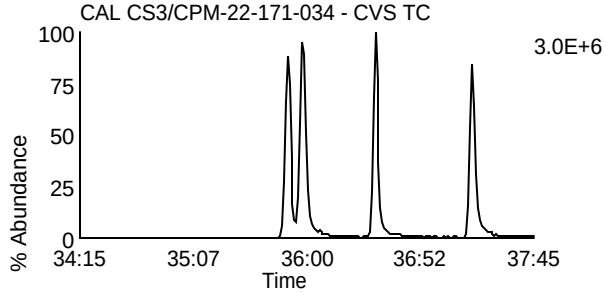
Data File: U230524B_02 G3 C2 - 375.8178
CAL CS3/CPM-22-171-034 - CVS TC



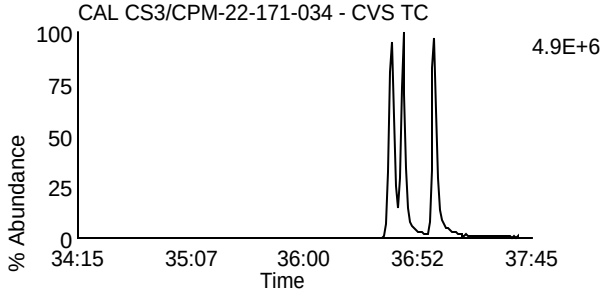
Data File: U230524B_02 G3 C8 - 391.8127
CAL CS3/CPM-22-171-034 - CVS TC



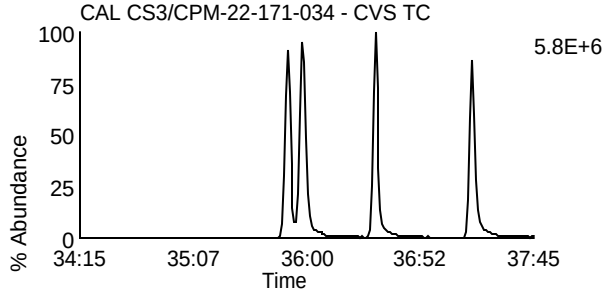
Data File: U230524B_02 G3 C5 - 383.8639
CAL CS3/CPM-22-171-034 - CVS TC



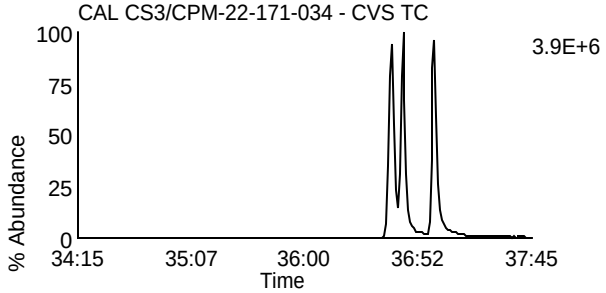
Data File: U230524B_02 G3 C9 - 401.8559
CAL CS3/CPM-22-171-034 - CVS TC



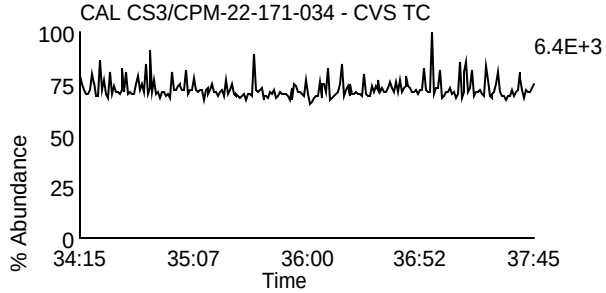
Data File: U230524B_02 G3 C6 - 385.861
CAL CS3/CPM-22-171-034 - CVS TC



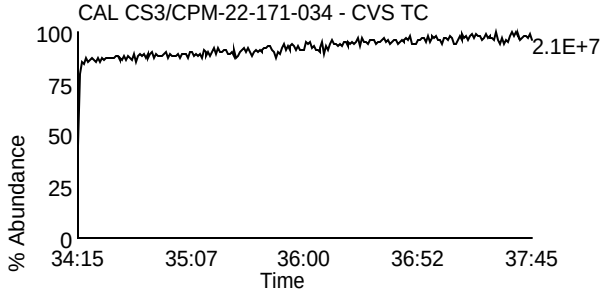
Data File: U230524B_02 G3 C10 - 403.8529
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C11 - 445.7555
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G3 C3 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

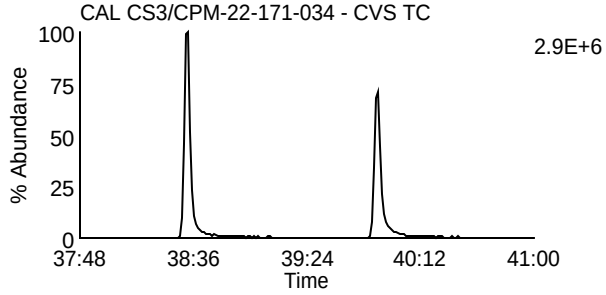


Homologue Group: Heptas

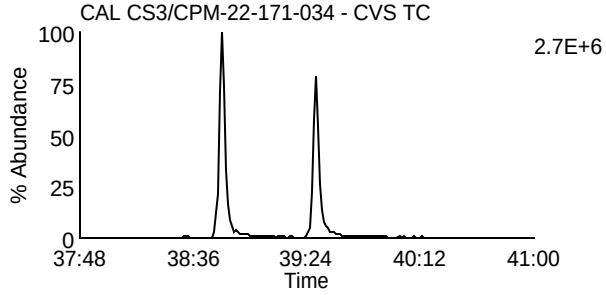
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

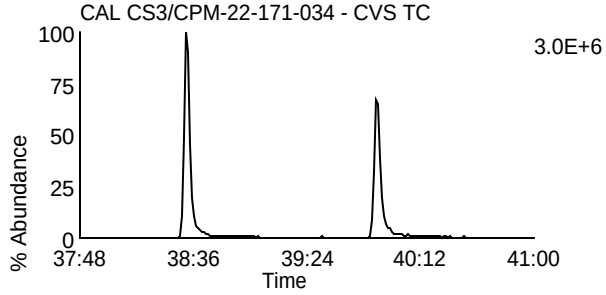
Data File: U230524B_02 G4 C3 - 407.7818
CAL CS3/CPM-22-171-034 - CVS TC



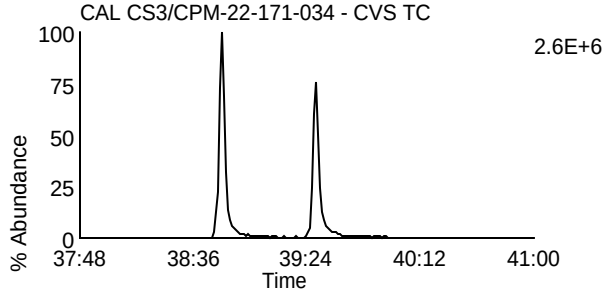
Data File: U230524B_02 G4 C8 - 423.7767
CAL CS3/CPM-22-171-034 - CVS TC



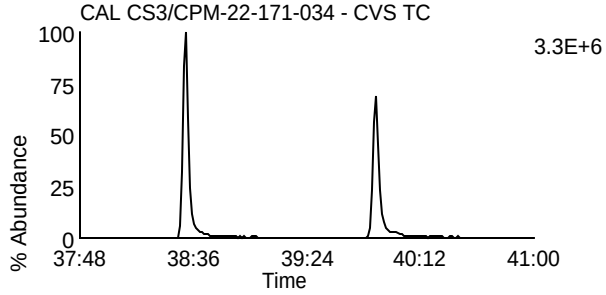
Data File: U230524B_02 G4 C4 - 409.7788
CAL CS3/CPM-22-171-034 - CVS TC



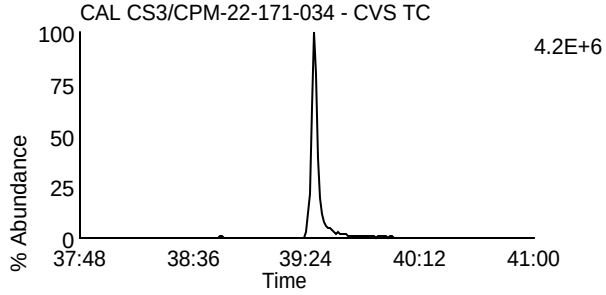
Data File: U230524B_02 G4 C9 - 425.7737
CAL CS3/CPM-22-171-034 - CVS TC



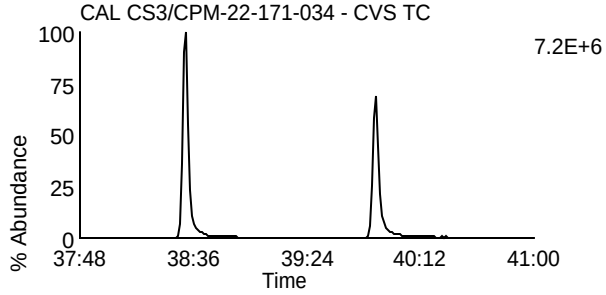
Data File: U230524B_02 G4 C6 - 417.825
CAL CS3/CPM-22-171-034 - CVS TC



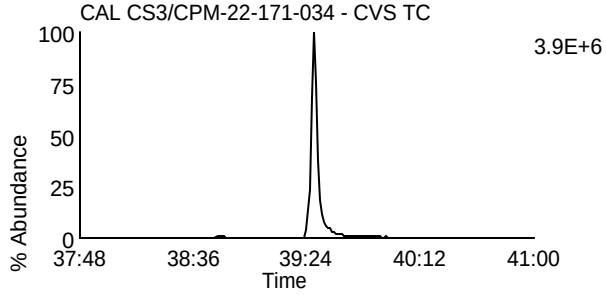
Data File: U230524B_02 G4 C11 - 435.8169
CAL CS3/CPM-22-171-034 - CVS TC



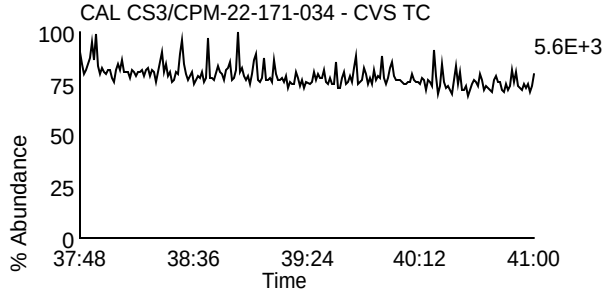
Data File: U230524B_02 G4 C7 - 419.822
CAL CS3/CPM-22-171-034 - CVS TC



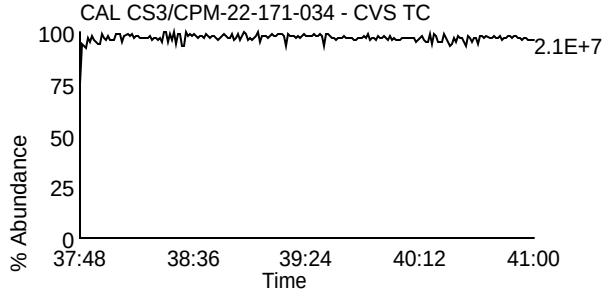
Data File: U230524B_02 G4 C12 - 437.814
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C13 - 479.7165
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G4 C1 - 380.976
CAL CS3/CPM-22-171-034 - CVS TC

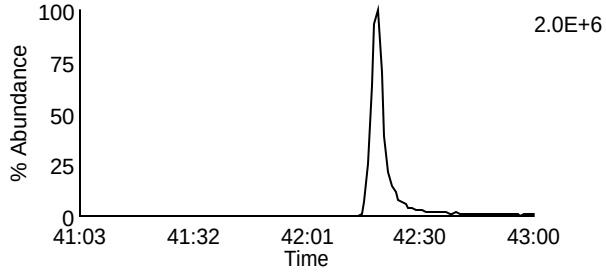


Homologue Group: Octas

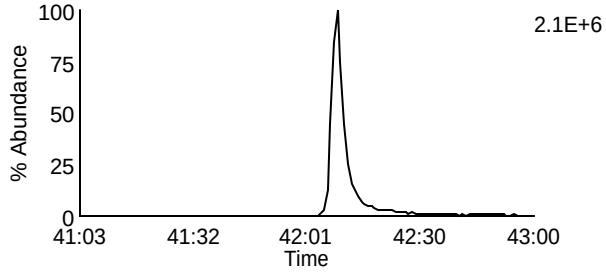
Data File Name: U230524B_02
Date Acquired: 5/24/2023
Sample Description: CAL CS3/CPM-22-171-034 - CVS TC

Lab Sample ID: CS3/CPM-22-171-034
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

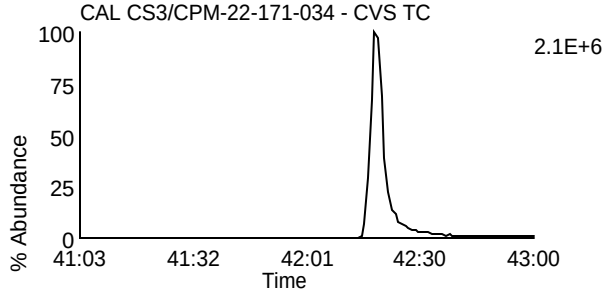
Data File: U230524B_02 G5 C4 - 441.7428
CAL CS3/CPM-22-171-034 - CVS TC



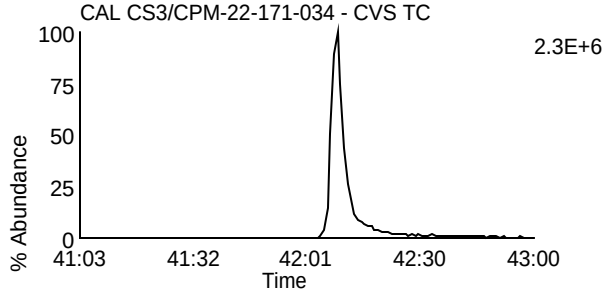
Data File: U230524B_02 G5 C8 - 457.7377
CAL CS3/CPM-22-171-034 - CVS TC



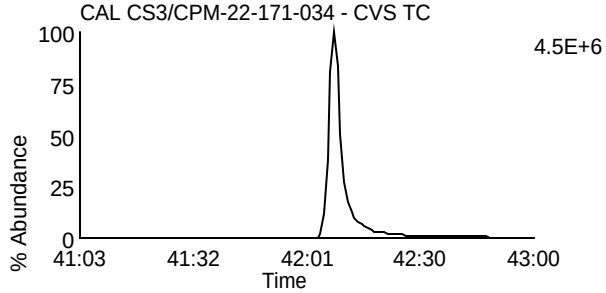
Data File: U230524B_02 G5 C5 - 443.7398
CAL CS3/CPM-22-171-034 - CVS TC



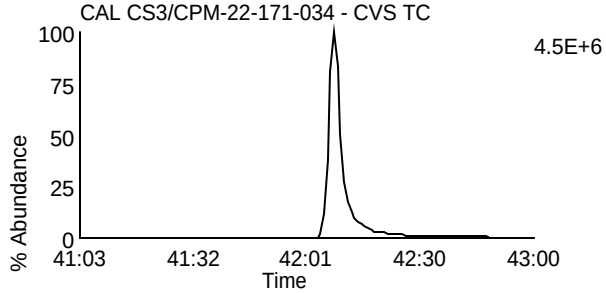
Data File: U230524B_02 G5 C9 - 459.7347
CAL CS3/CPM-22-171-034 - CVS TC



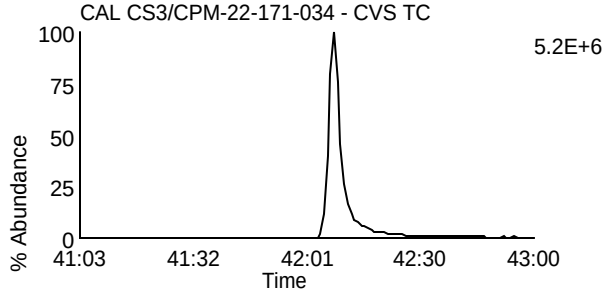
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



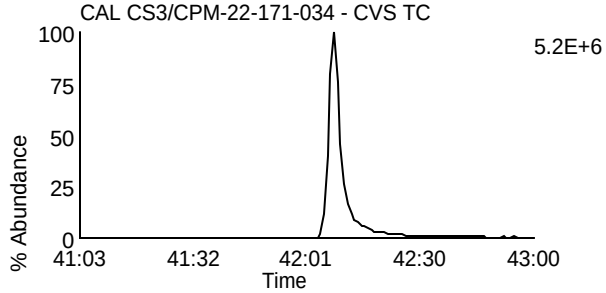
Data File: U230524B_02 G5 C11 - 469.7779
CAL CS3/CPM-22-171-034 - CVS TC



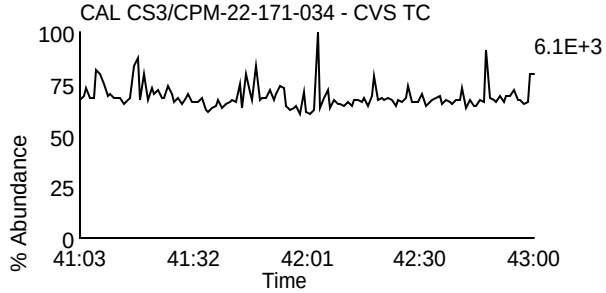
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



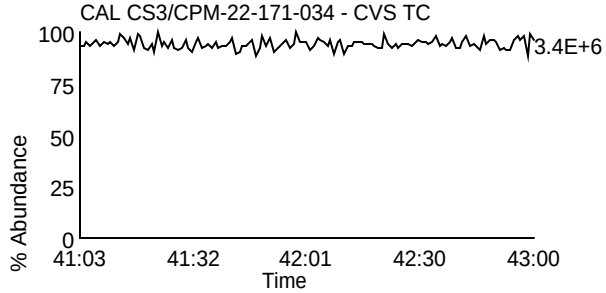
Data File: U230524B_02 G5 C12 - 471.7749
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C13 - 513.6775
CAL CS3/CPM-22-171-034 - CVS TC



Data File: U230524B_02 G5 C2 - 430.9728
CAL CS3/CPM-22-171-034 - CVS TC

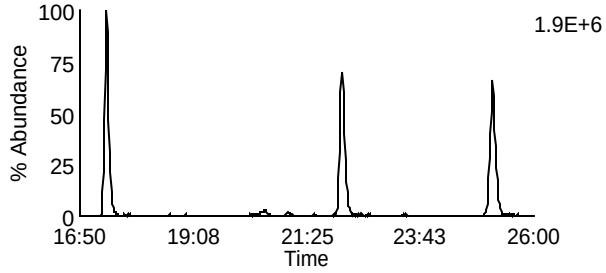


Homologue Group: Tetras

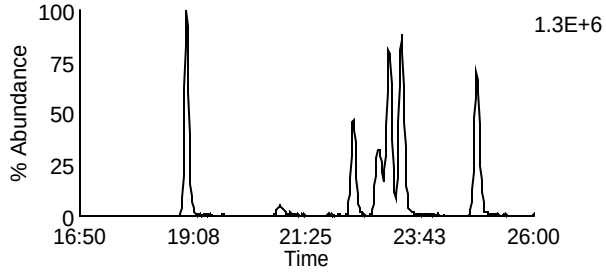
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

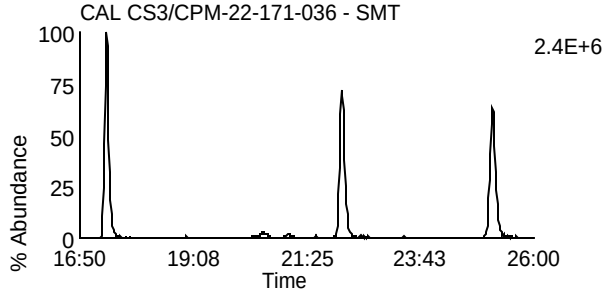
Data File: U230608A_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SMT



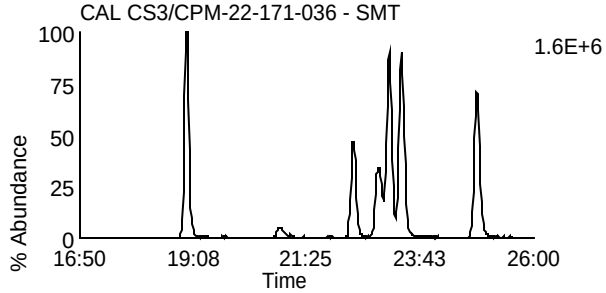
Data File: U230608A_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SMT



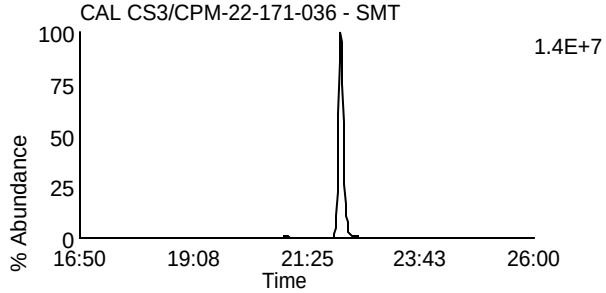
Data File: U230608A_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SMT



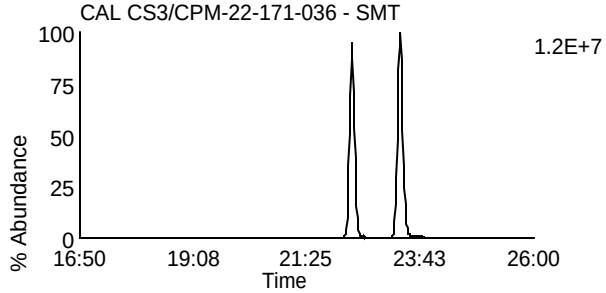
Data File: U230608A_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SMT



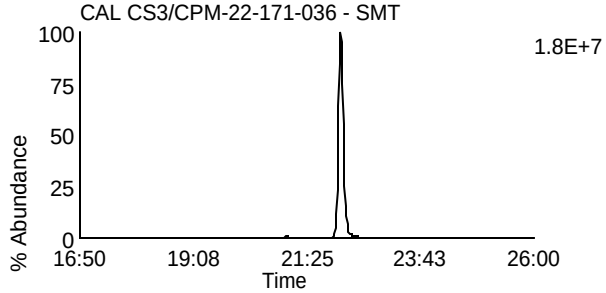
Data File: U230608A_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SMT



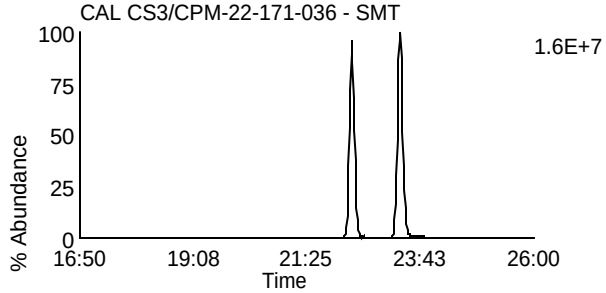
Data File: U230608A_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SMT



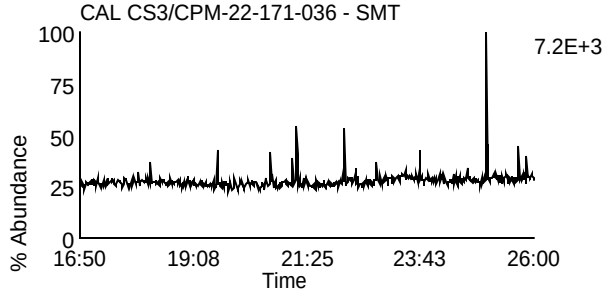
Data File: U230608A_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SMT



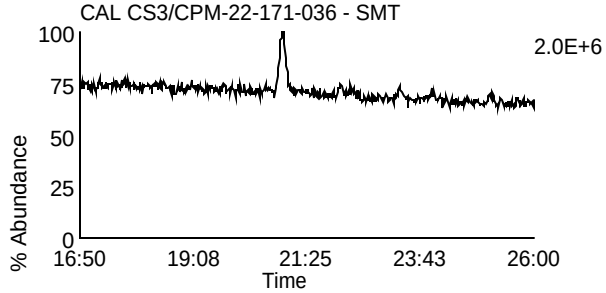
Data File: U230608A_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SMT



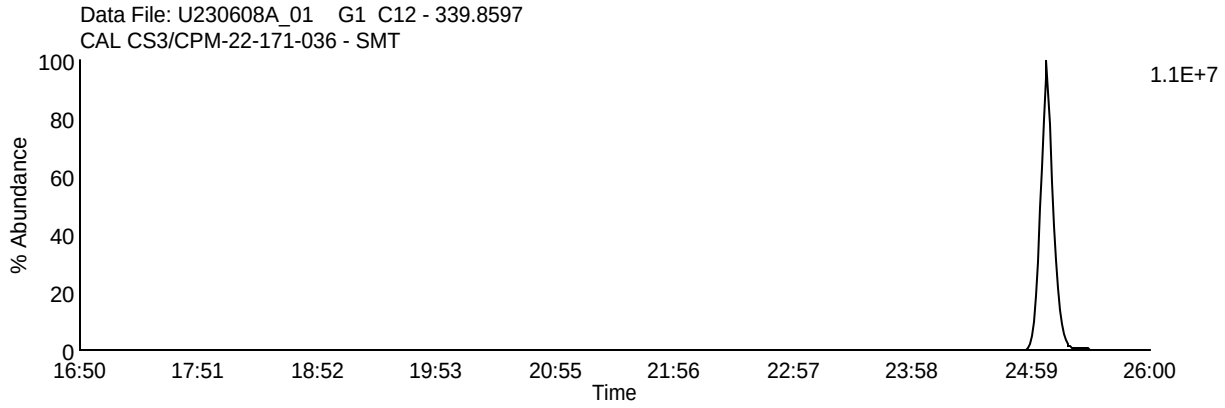
Data File: U230608A_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SMT

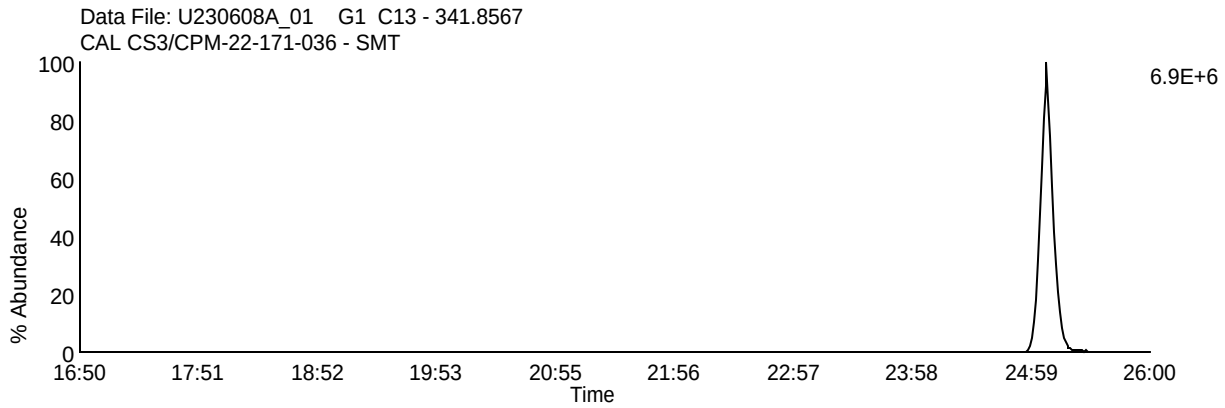


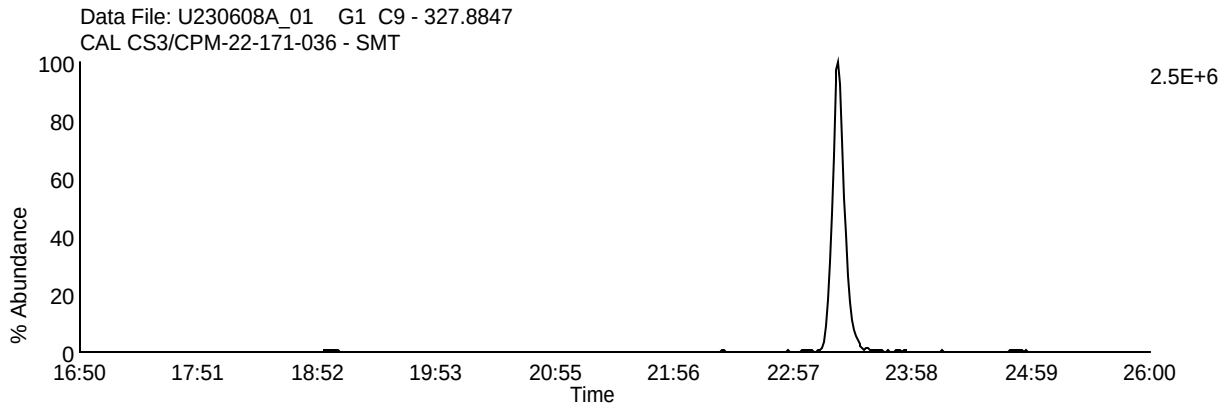
Homologue Group: Penta & Cleanup

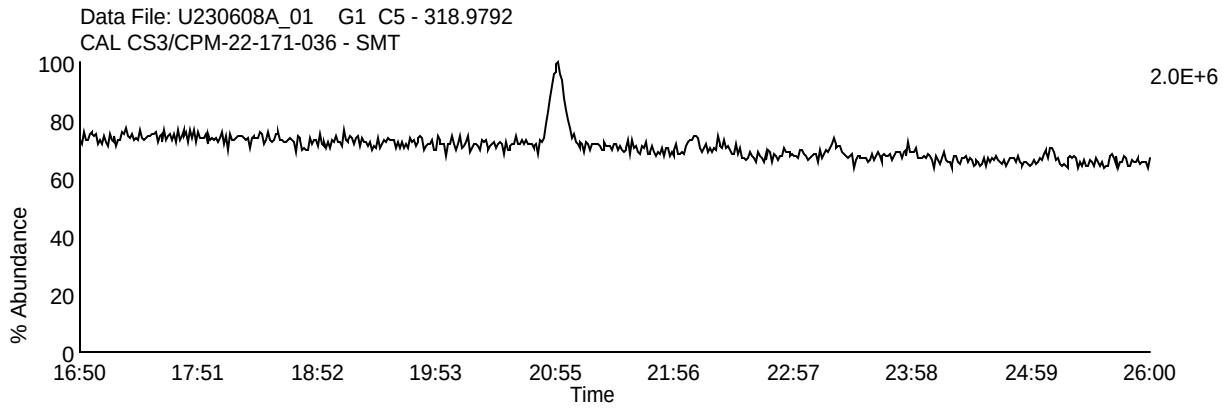
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)







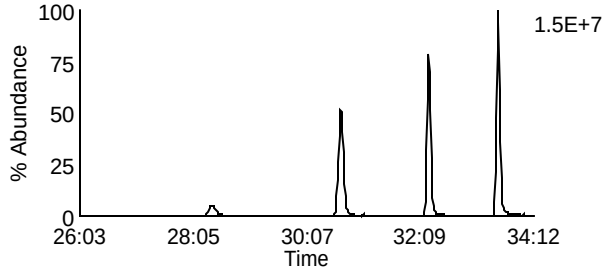


Homologue Group: Pentas

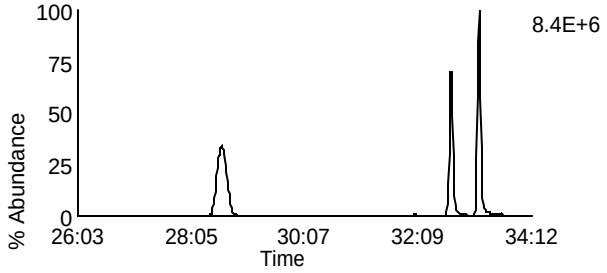
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

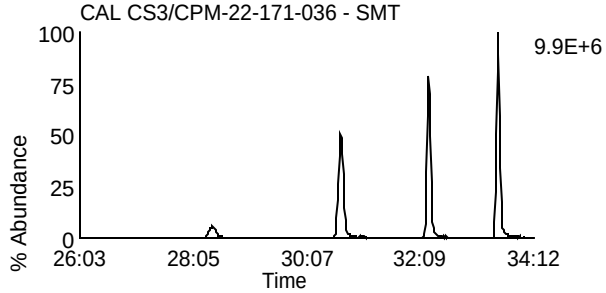
Data File: U230608A_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SMT



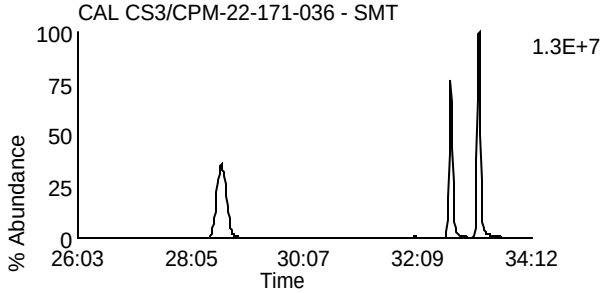
Data File: U230608A_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SMT



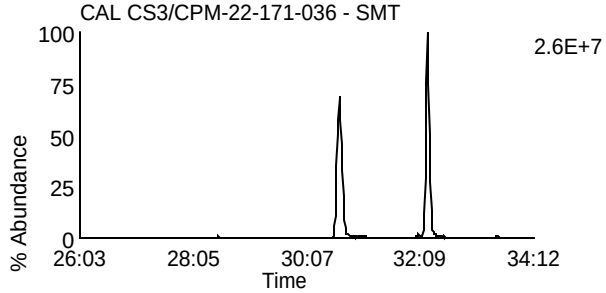
Data File: U230608A_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SMT



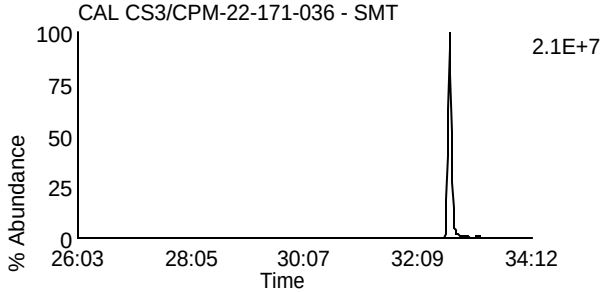
Data File: U230608A_01 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - SMT



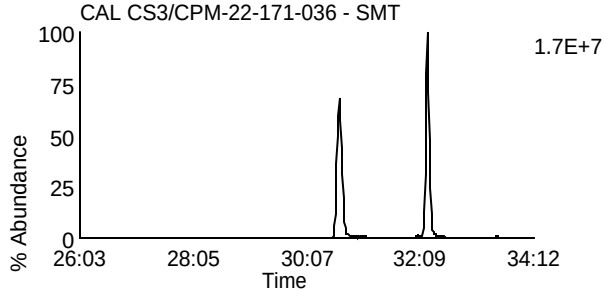
Data File: U230608A_01 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - SMT



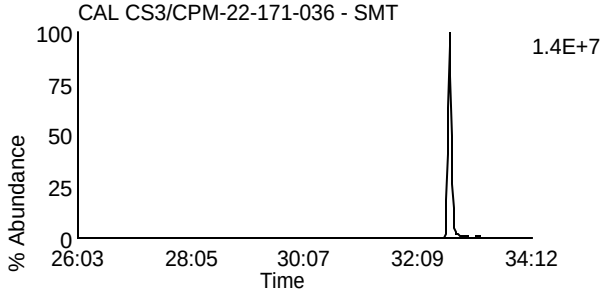
Data File: U230608A_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SMT



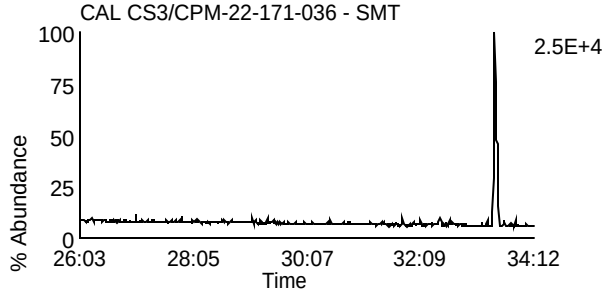
Data File: U230608A_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SMT



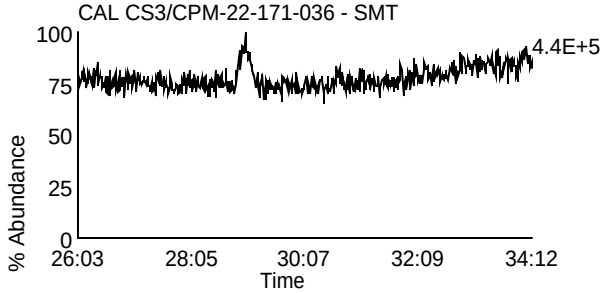
Data File: U230608A_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SMT

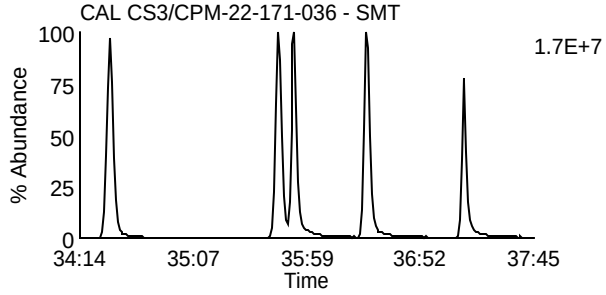


Homologue Group: Hexas

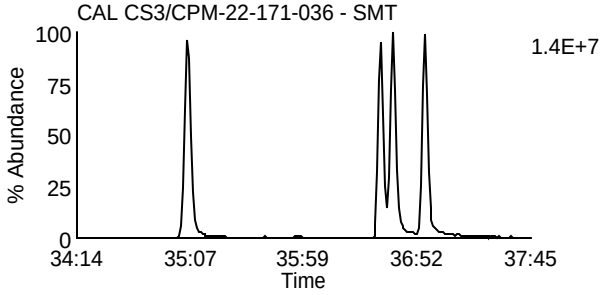
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

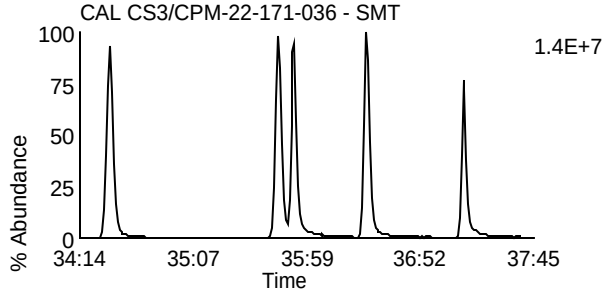
Data File: U230608A_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SMT



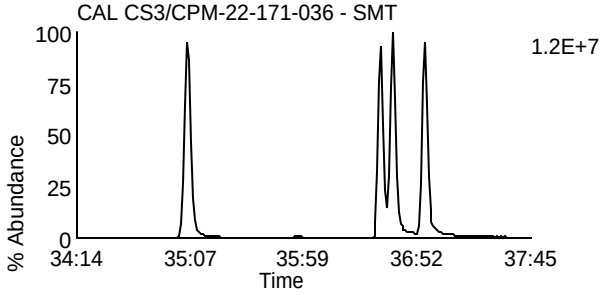
Data File: U230608A_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SMT



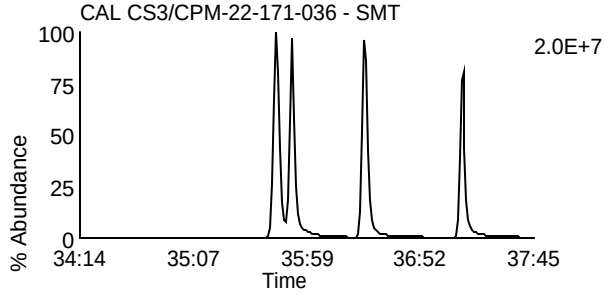
Data File: U230608A_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SMT



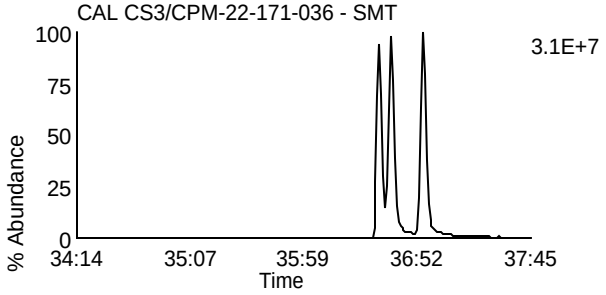
Data File: U230608A_01 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - SMT



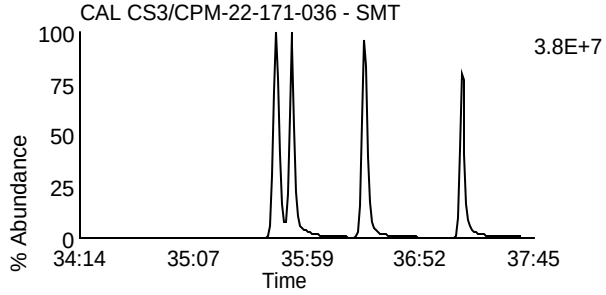
Data File: U230608A_01 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - SMT



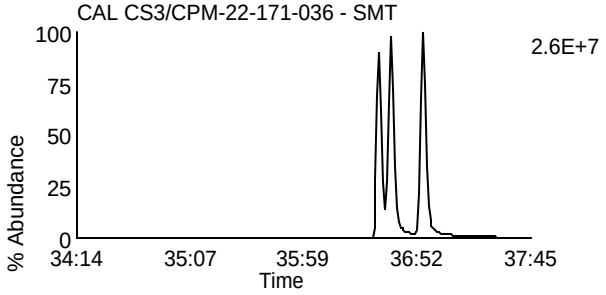
Data File: U230608A_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SMT



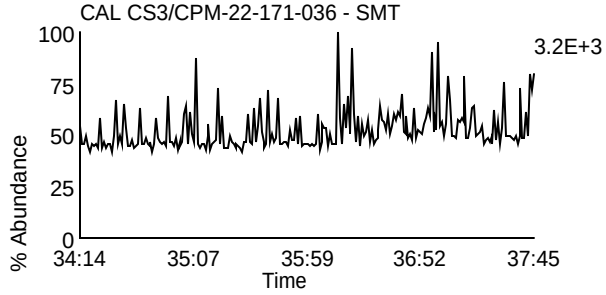
Data File: U230608A_01 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - SMT



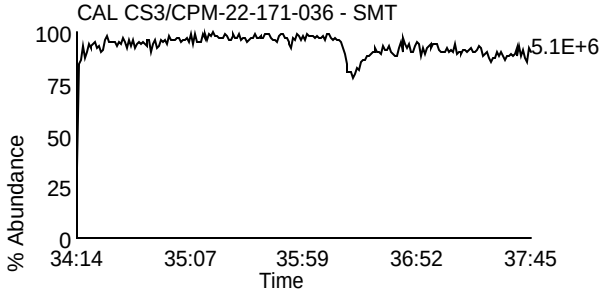
Data File: U230608A_01 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SMT

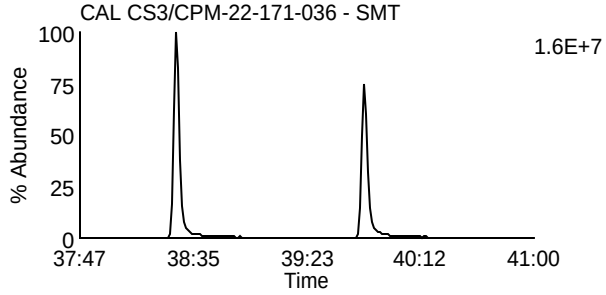


Homologue Group: Heptas

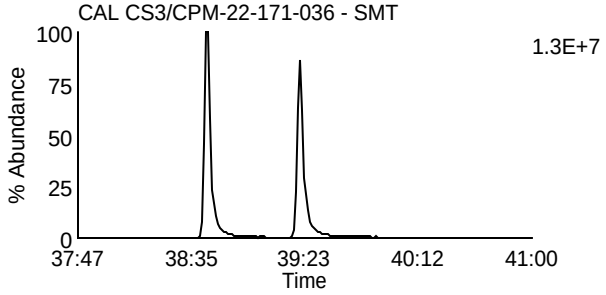
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

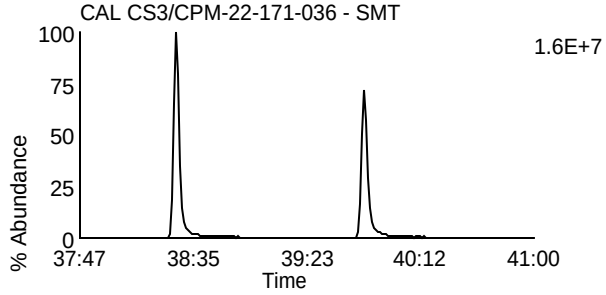
Data File: U230608A_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SMT



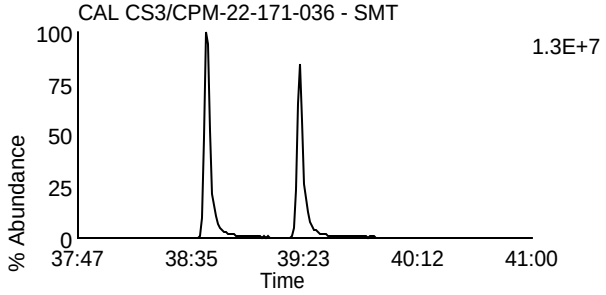
Data File: U230608A_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SMT



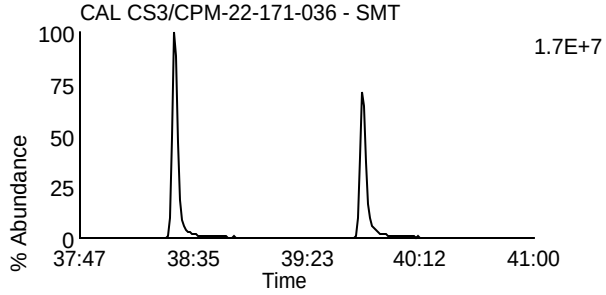
Data File: U230608A_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SMT



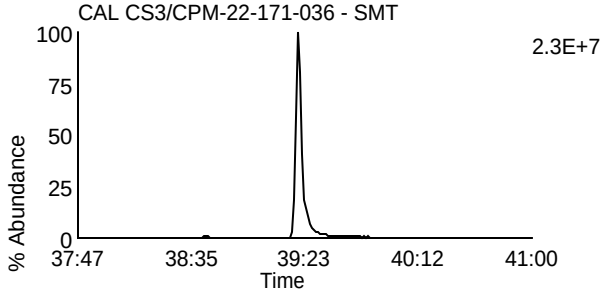
Data File: U230608A_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SMT



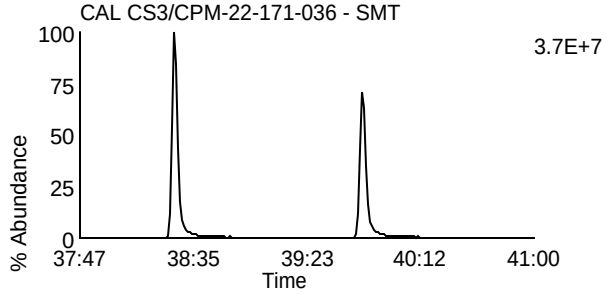
Data File: U230608A_01 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - SMT



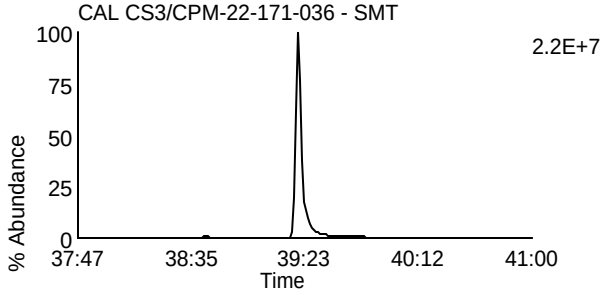
Data File: U230608A_01 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - SMT



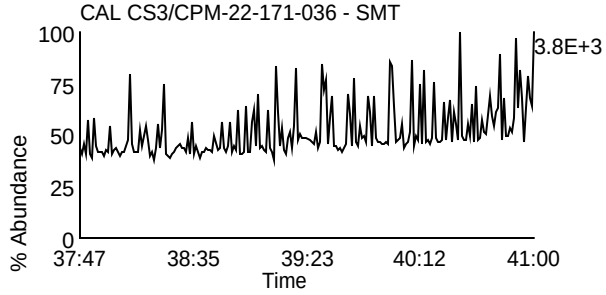
Data File: U230608A_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SMT



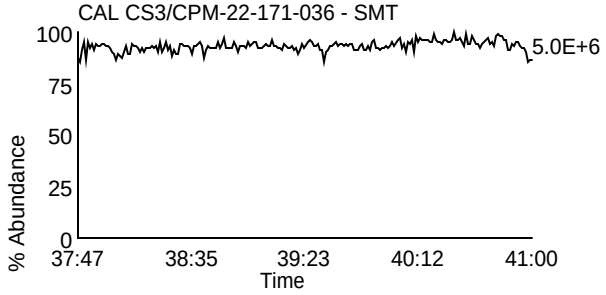
Data File: U230608A_01 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SMT

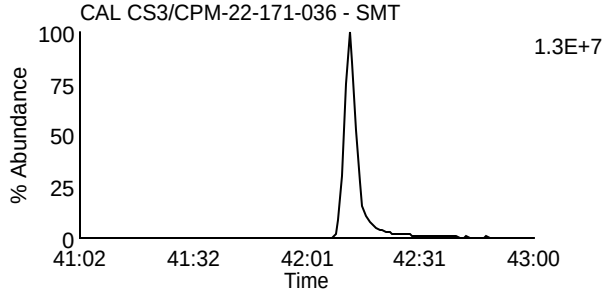


Homologue Group: Octas

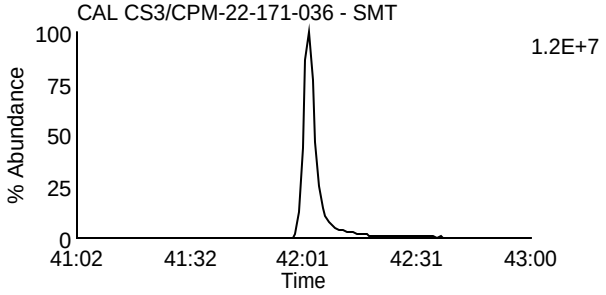
Data File Name: U230608A_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SMT

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

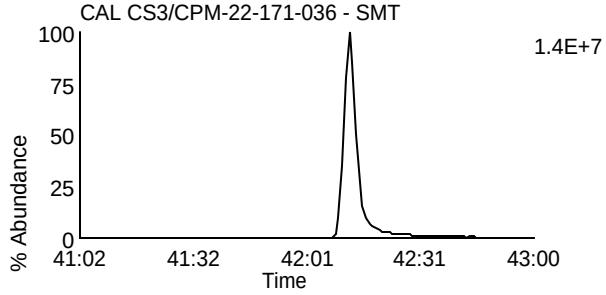
Data File: U230608A_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SMT



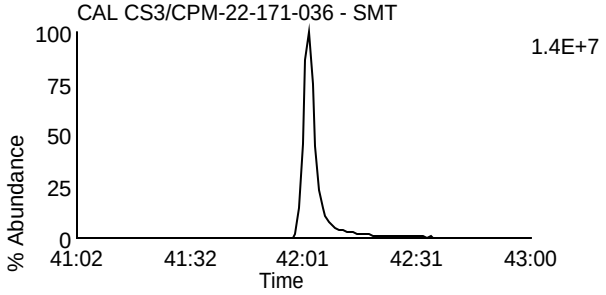
Data File: U230608A_01 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - SMT



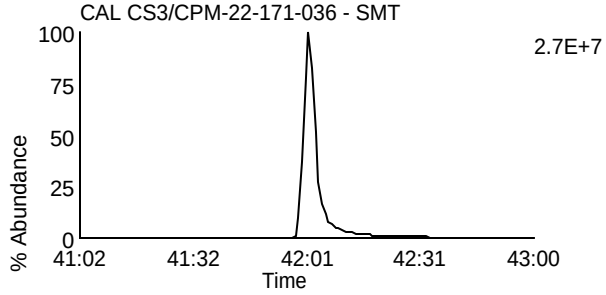
Data File: U230608A_01 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - SMT



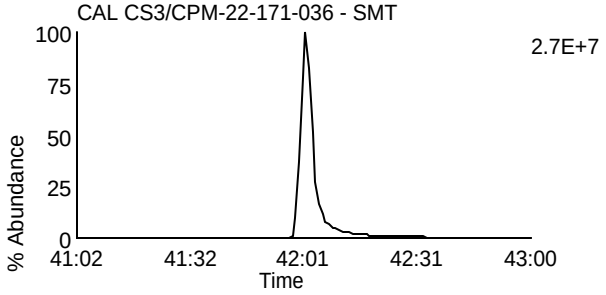
Data File: U230608A_01 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - SMT



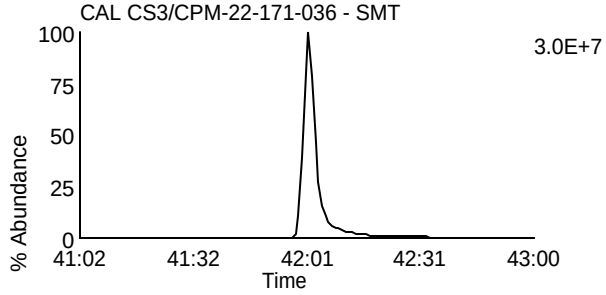
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



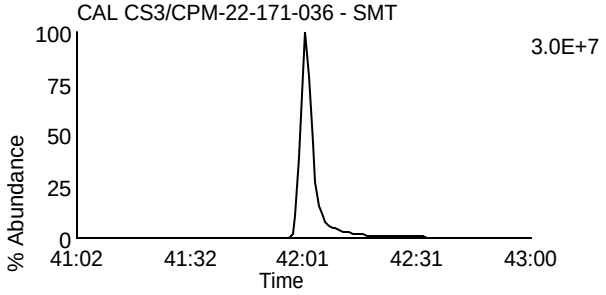
Data File: U230608A_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SMT



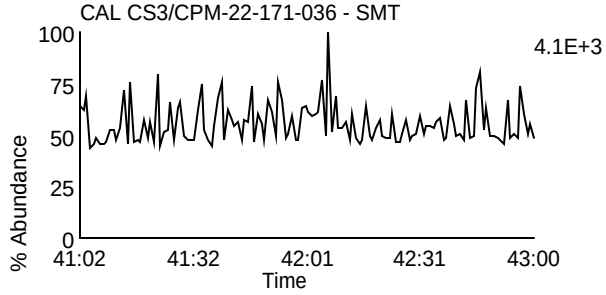
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



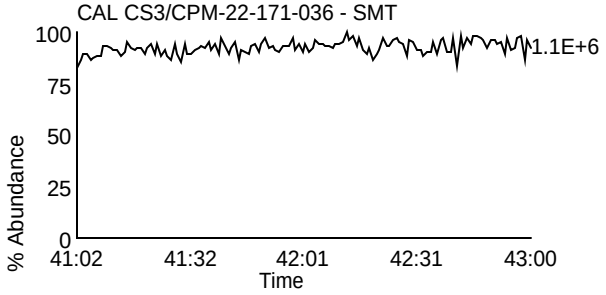
Data File: U230608A_01 G5 C12 - 471.7749
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C13 - 513.6775
CAL CS3/CPM-22-171-036 - SMT



Data File: U230608A_01 G5 C2 - 430.9728
CAL CS3/CPM-22-171-036 - SMT

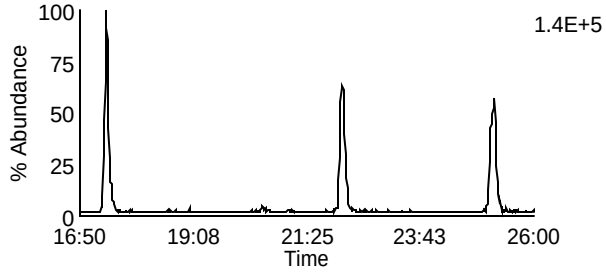


Homologue Group: Tetras

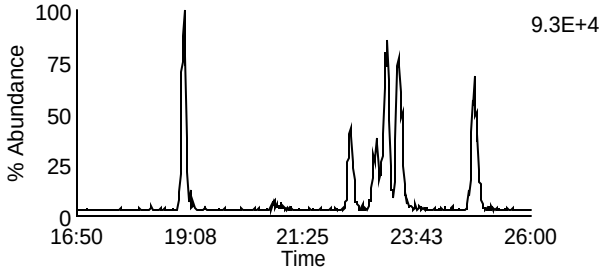
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

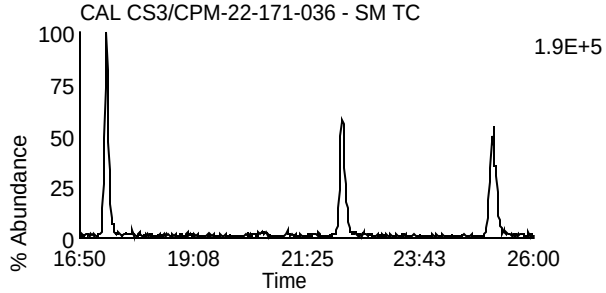
Data File: U230608B_01 G1 C1 - 303.9016
CAL CS3/CPM-22-171-036 - SM TC



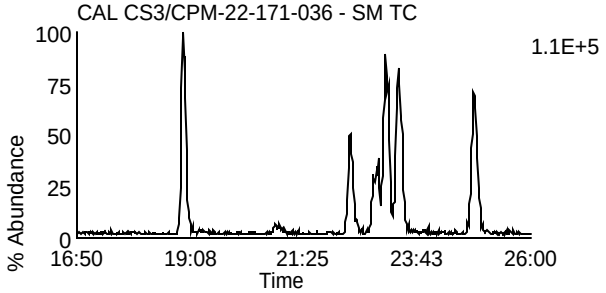
Data File: U230608B_01 G1 C7 - 319.8965
CAL CS3/CPM-22-171-036 - SM TC



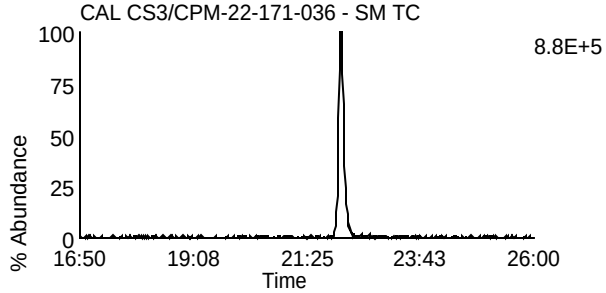
Data File: U230608B_01 G1 C2 - 305.8987
CAL CS3/CPM-22-171-036 - SM TC



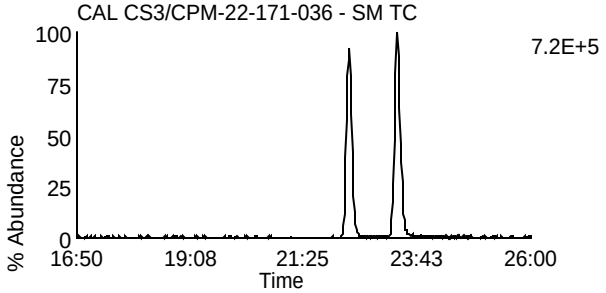
Data File: U230608B_01 G1 C8 - 321.8936
CAL CS3/CPM-22-171-036 - SM TC



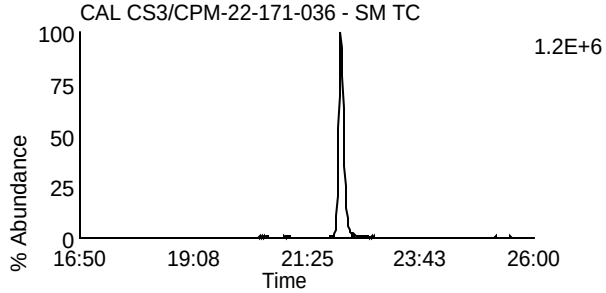
Data File: U230608B_01 G1 C3 - 315.9418
CAL CS3/CPM-22-171-036 - SM TC



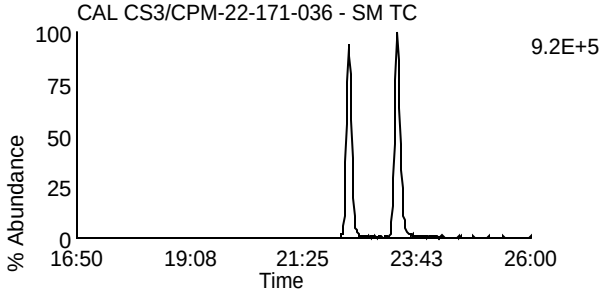
Data File: U230608B_01 G1 C10 - 331.9367
CAL CS3/CPM-22-171-036 - SM TC



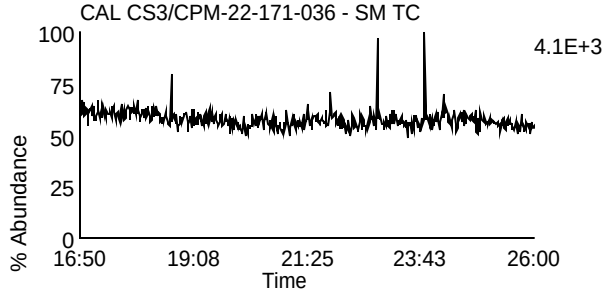
Data File: U230608B_01 G1 C4 - 317.9389
CAL CS3/CPM-22-171-036 - SM TC



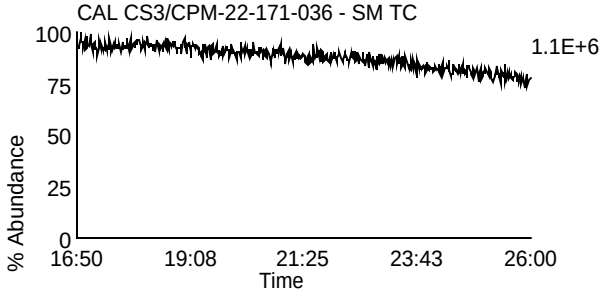
Data File: U230608B_01 G1 C11 - 333.9338
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G1 C14 - 375.8364
CAL CS3/CPM-22-171-036 - SM TC



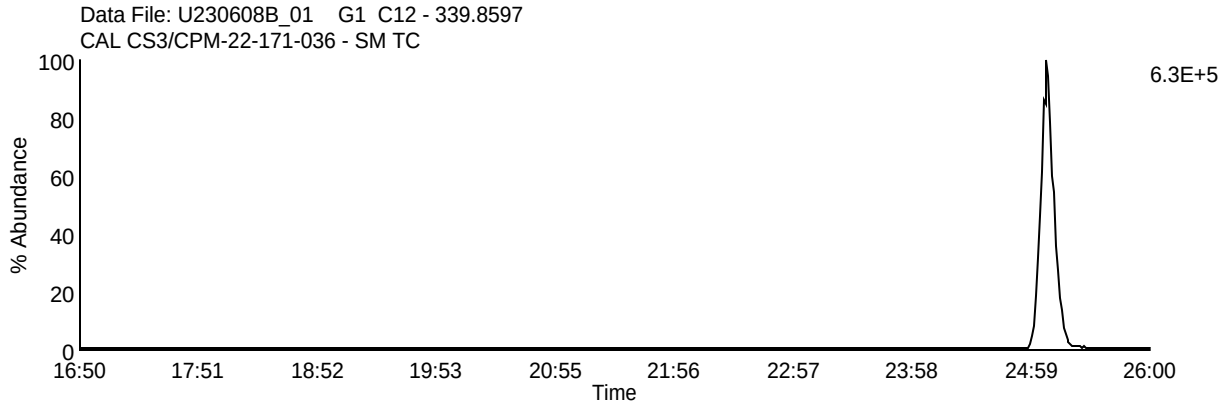
Data File: U230608B_01 G1 C5 - 318.9792
CAL CS3/CPM-22-171-036 - SM TC

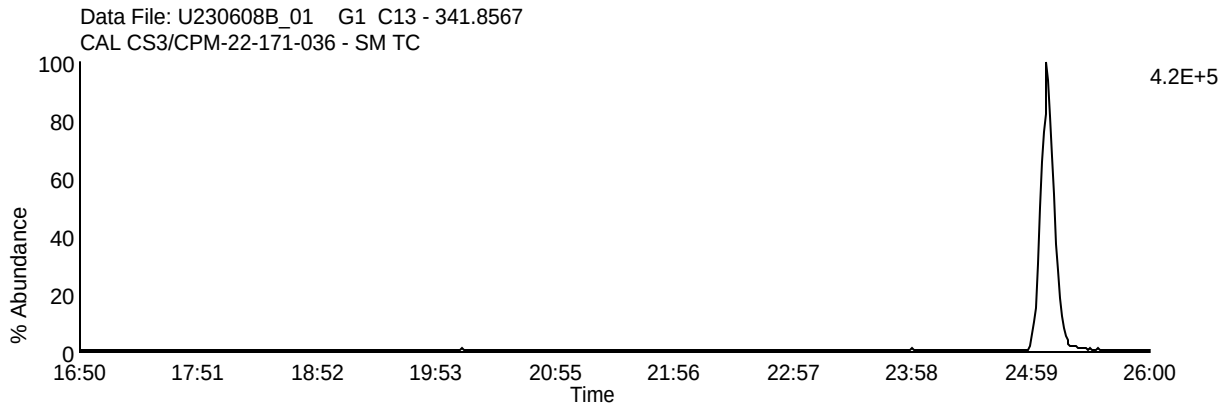


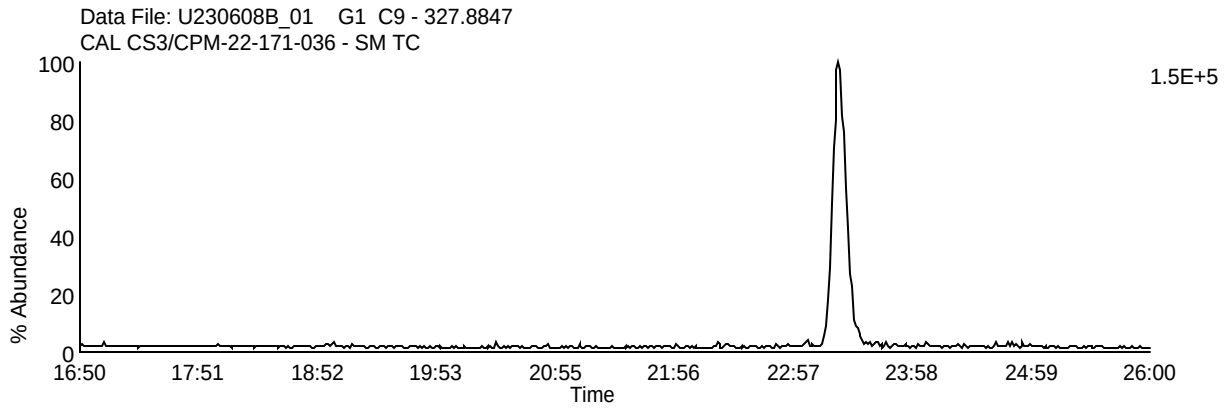
Homologue Group: Penta & Cleanup

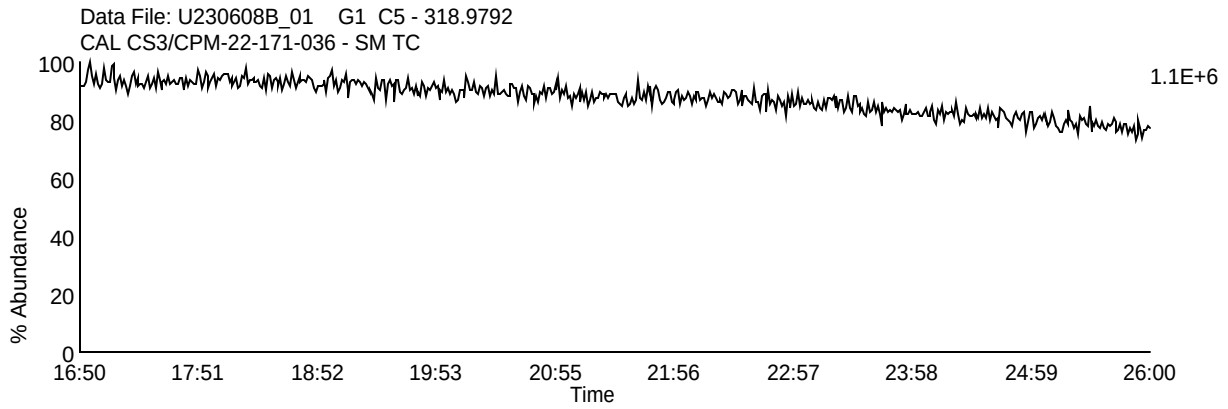
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)







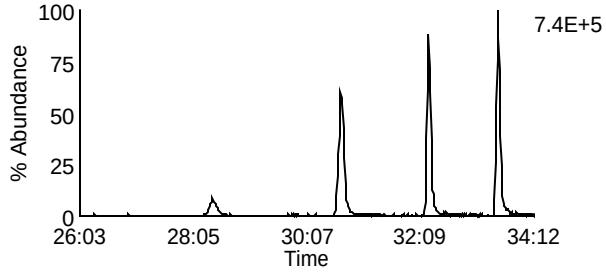


Homologue Group: Pentas

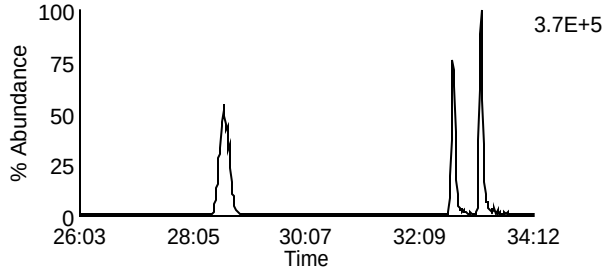
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

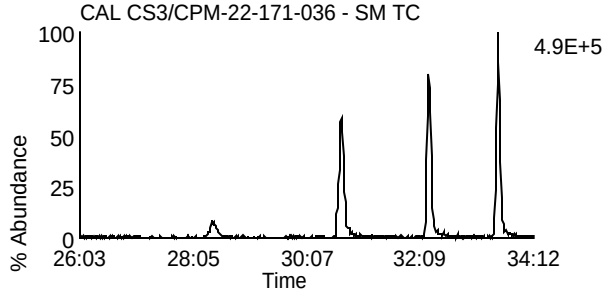
Data File: U230608B_01 G2 C1 - 339.8597
CAL CS3/CPM-22-171-036 - SM TC



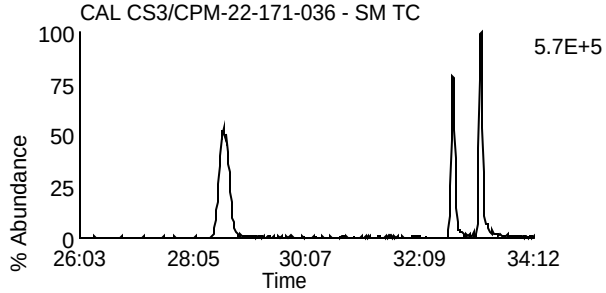
Data File: U230608B_01 G2 C4 - 353.8576
CAL CS3/CPM-22-171-036 - SM TC



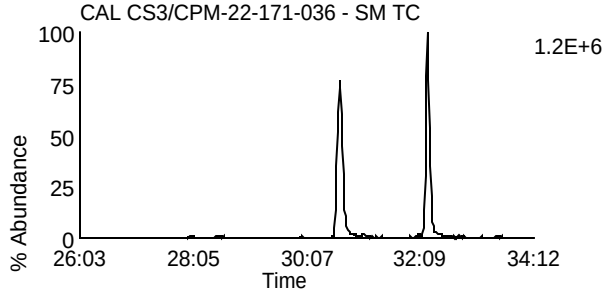
Data File: U230608B_01 G2 C2 - 341.8567
CAL CS3/CPM-22-171-036 - SM TC



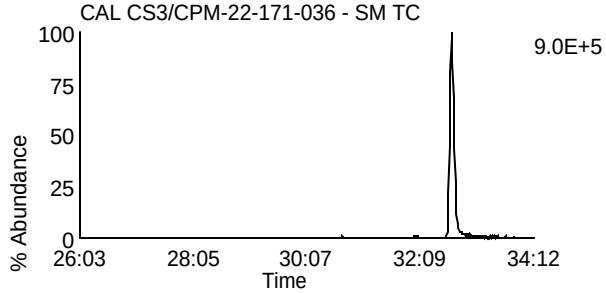
Data File: U230608B_01 G2 C8 - 355.8546
CAL CS3/CPM-22-171-036 - SM TC



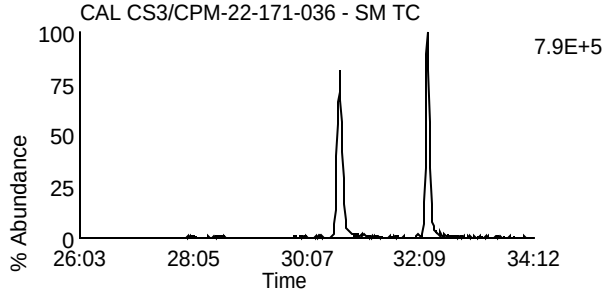
Data File: U230608B_01 G2 C3 - 351.8999
CAL CS3/CPM-22-171-036 - SM TC



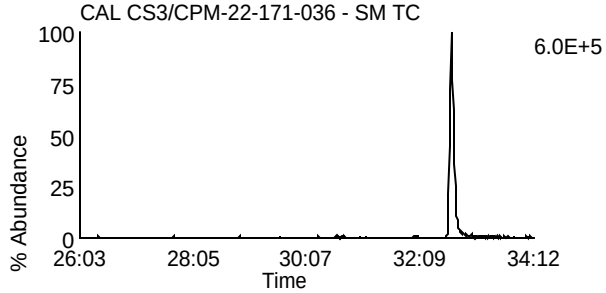
Data File: U230608B_01 G2 C10 - 367.8948
CAL CS3/CPM-22-171-036 - SM TC



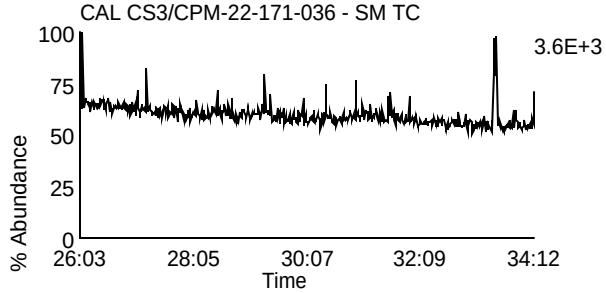
Data File: U230608B_01 G2 C5 - 353.8969
CAL CS3/CPM-22-171-036 - SM TC



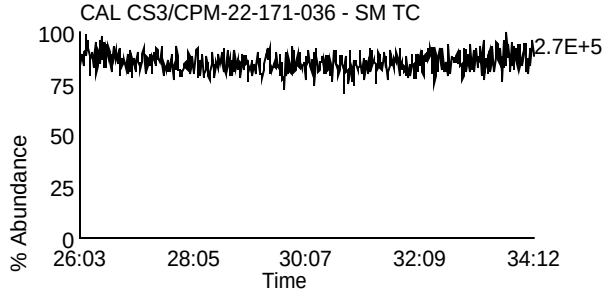
Data File: U230608B_01 G2 C11 - 369.8918
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C12 - 409.7974
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G2 C6 - 354.9792
CAL CS3/CPM-22-171-036 - SM TC

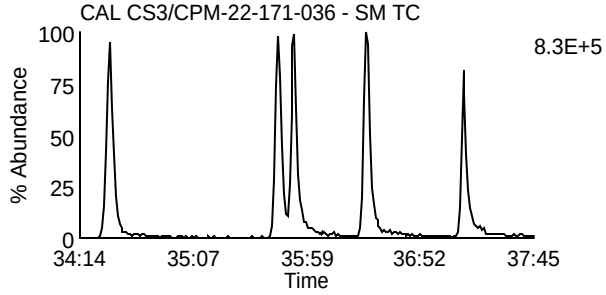


Homologue Group: Hexas

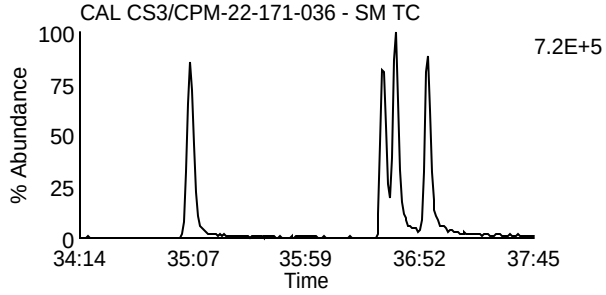
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

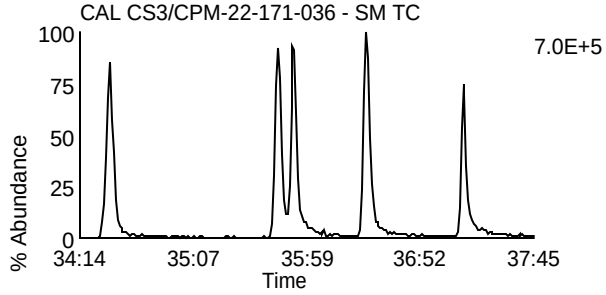
Data File: U230608B_01 G3 C1 - 373.8207
CAL CS3/CPM-22-171-036 - SM TC



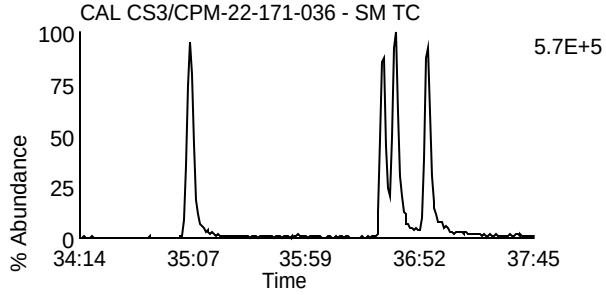
Data File: U230608B_01 G3 C7 - 389.8156
CAL CS3/CPM-22-171-036 - SM TC



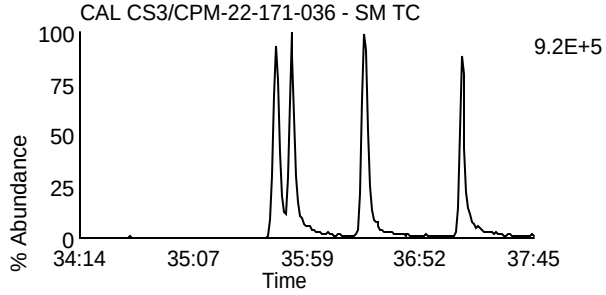
Data File: U230608B_01 G3 C2 - 375.8178
CAL CS3/CPM-22-171-036 - SM TC



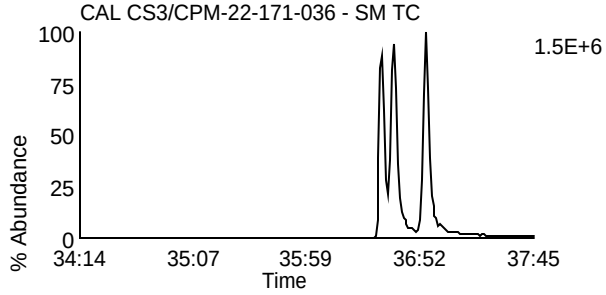
Data File: U230608B_01 G3 C8 - 391.8127
CAL CS3/CPM-22-171-036 - SM TC



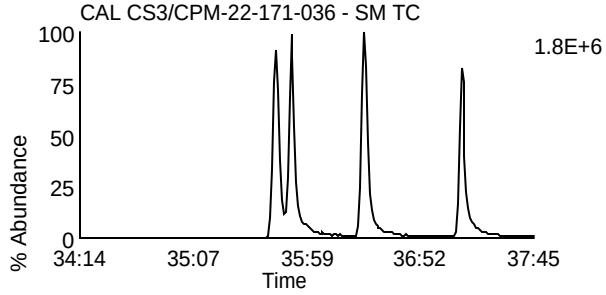
Data File: U230608B_01 G3 C5 - 383.8639
CAL CS3/CPM-22-171-036 - SM TC



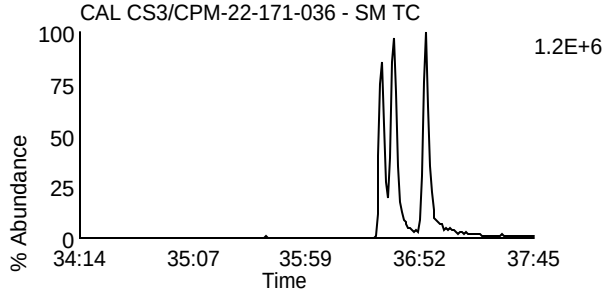
Data File: U230608B_01 G3 C9 - 401.8559
CAL CS3/CPM-22-171-036 - SM TC



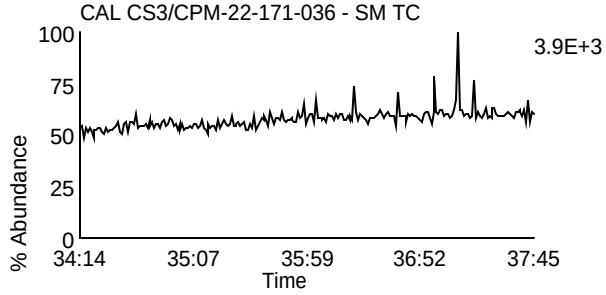
Data File: U230608B_01 G3 C6 - 385.861
CAL CS3/CPM-22-171-036 - SM TC



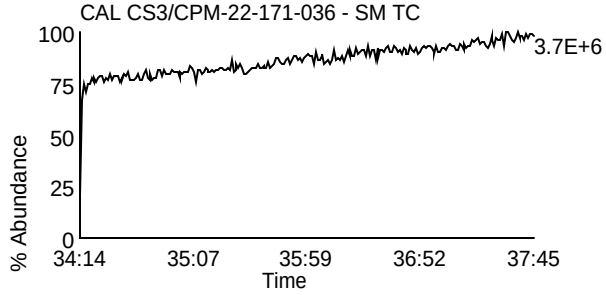
Data File: U230608B_01 G3 C10 - 403.8529
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C11 - 445.7555
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G3 C3 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

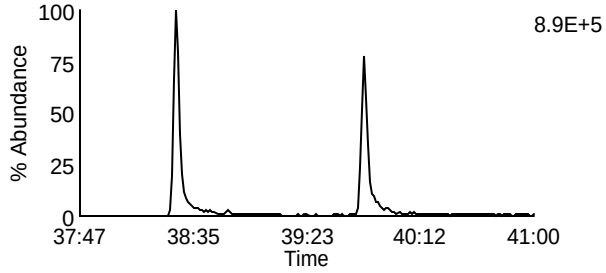


Homologue Group: Heptas

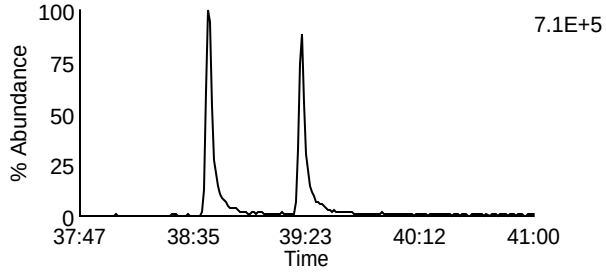
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

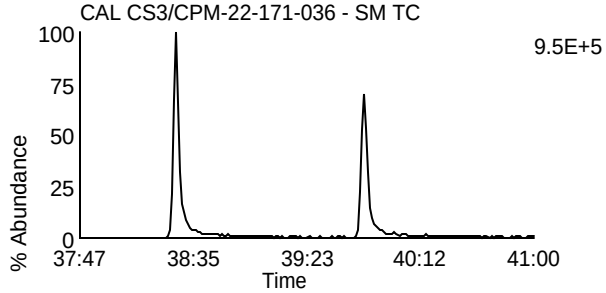
Data File: U230608B_01 G4 C3 - 407.7818
CAL CS3/CPM-22-171-036 - SM TC



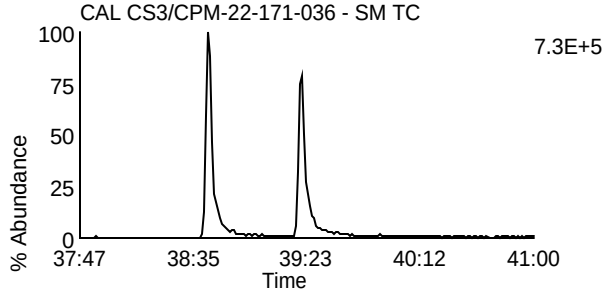
Data File: U230608B_01 G4 C8 - 423.7767
CAL CS3/CPM-22-171-036 - SM TC



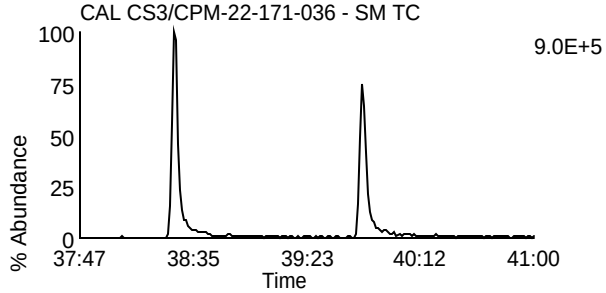
Data File: U230608B_01 G4 C4 - 409.7788
CAL CS3/CPM-22-171-036 - SM TC



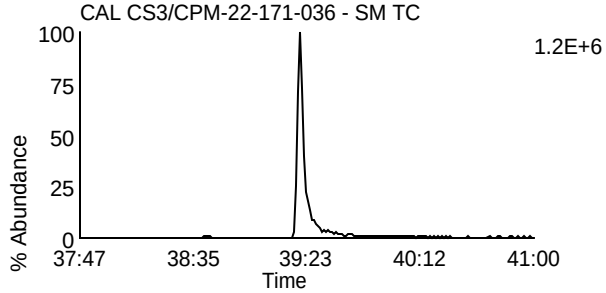
Data File: U230608B_01 G4 C9 - 425.7737
CAL CS3/CPM-22-171-036 - SM TC



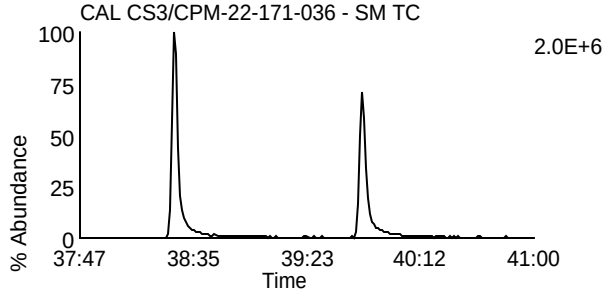
Data File: U230608B_01 G4 C6 - 417.825
CAL CS3/CPM-22-171-036 - SM TC



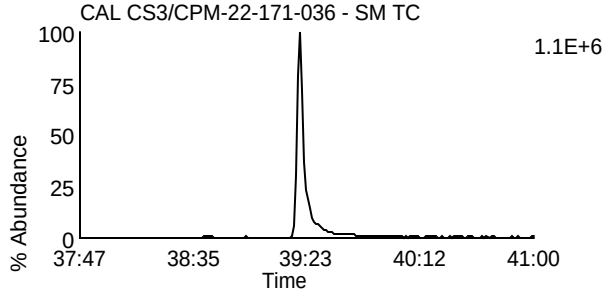
Data File: U230608B_01 G4 C11 - 435.8169
CAL CS3/CPM-22-171-036 - SM TC



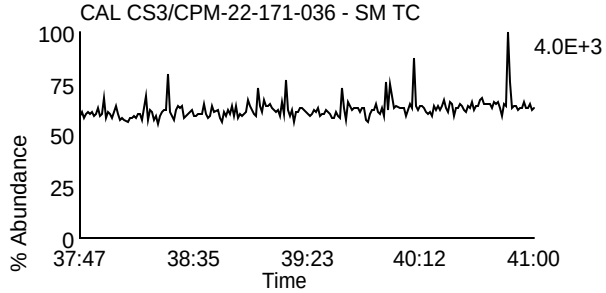
Data File: U230608B_01 G4 C7 - 419.822
CAL CS3/CPM-22-171-036 - SM TC



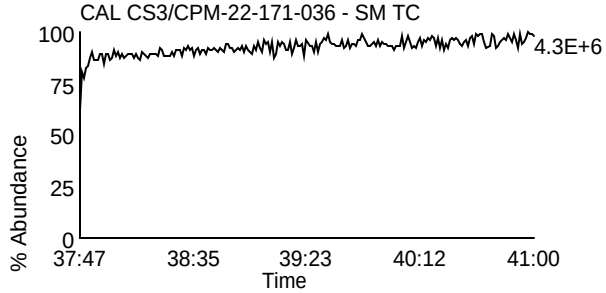
Data File: U230608B_01 G4 C12 - 437.814
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C13 - 479.7165
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G4 C1 - 380.976
CAL CS3/CPM-22-171-036 - SM TC

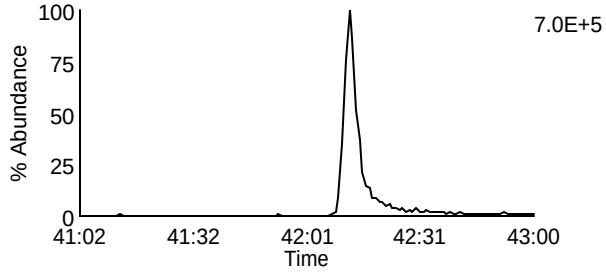


Homologue Group: Octas

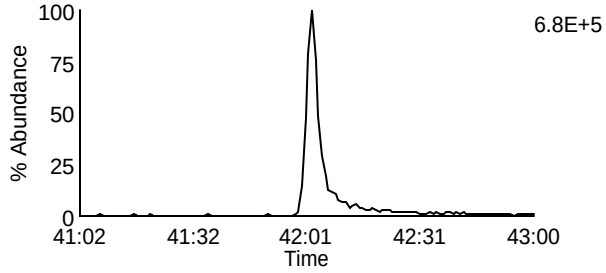
Data File Name: U230608B_01
Date Acquired: 6/8/2023
Sample Description: CAL CS3/CPM-22-171-036 - SM TC

Lab Sample ID: CS3/CPM-22-171-036
Client Sample ID: CPM/WDM
Instrument: 10MSHR06 (U)

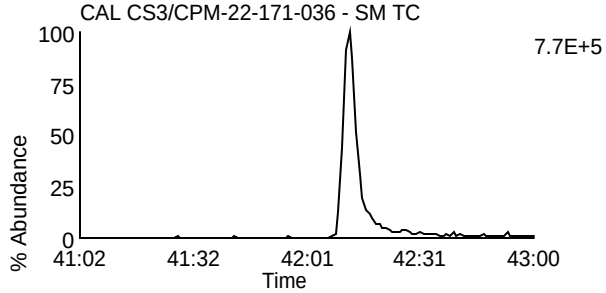
Data File: U230608B_01 G5 C4 - 441.7428
CAL CS3/CPM-22-171-036 - SM TC



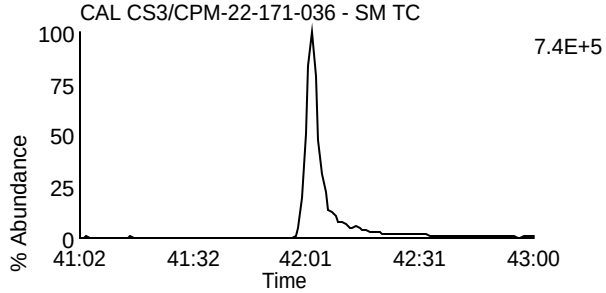
Data File: U230608B_01 G5 C8 - 457.7377
CAL CS3/CPM-22-171-036 - SM TC



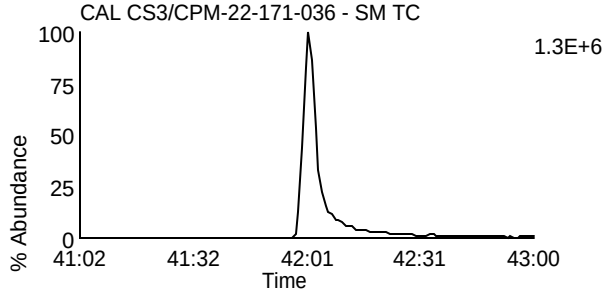
Data File: U230608B_01 G5 C5 - 443.7398
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C9 - 459.7347
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C11 - 469.7779
CAL CS3/CPM-22-171-036 - SM TC



Data File: U230608B_01 G5 C11 - 469.7779
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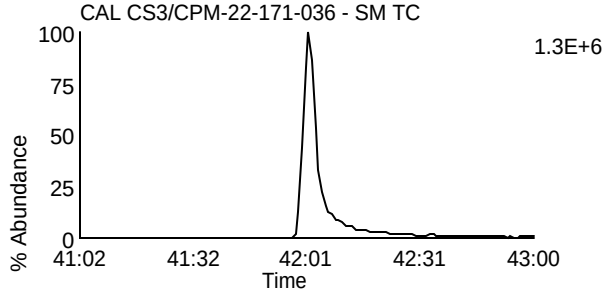

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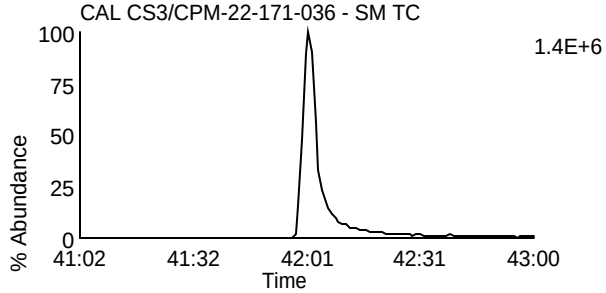

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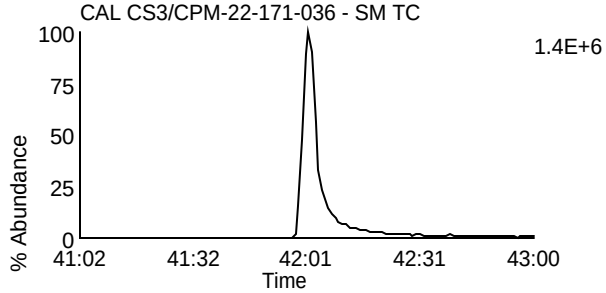

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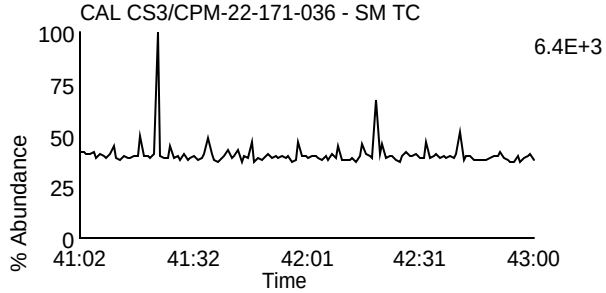

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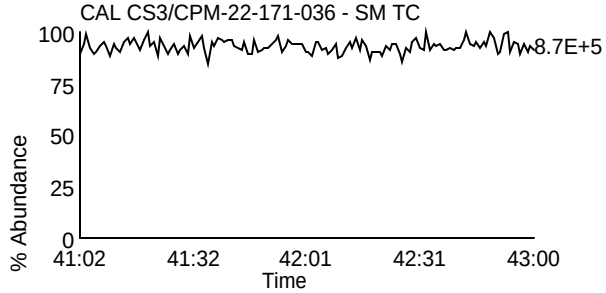

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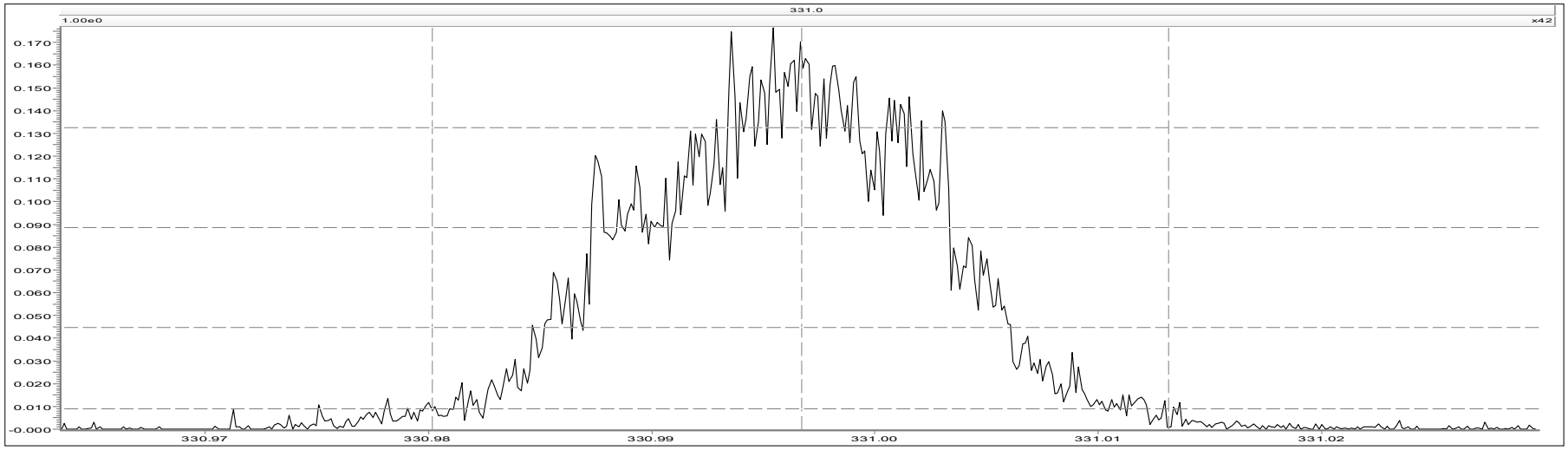
Printed: Saturday, June 10, 2023 11:28:49 Central Daylight Time

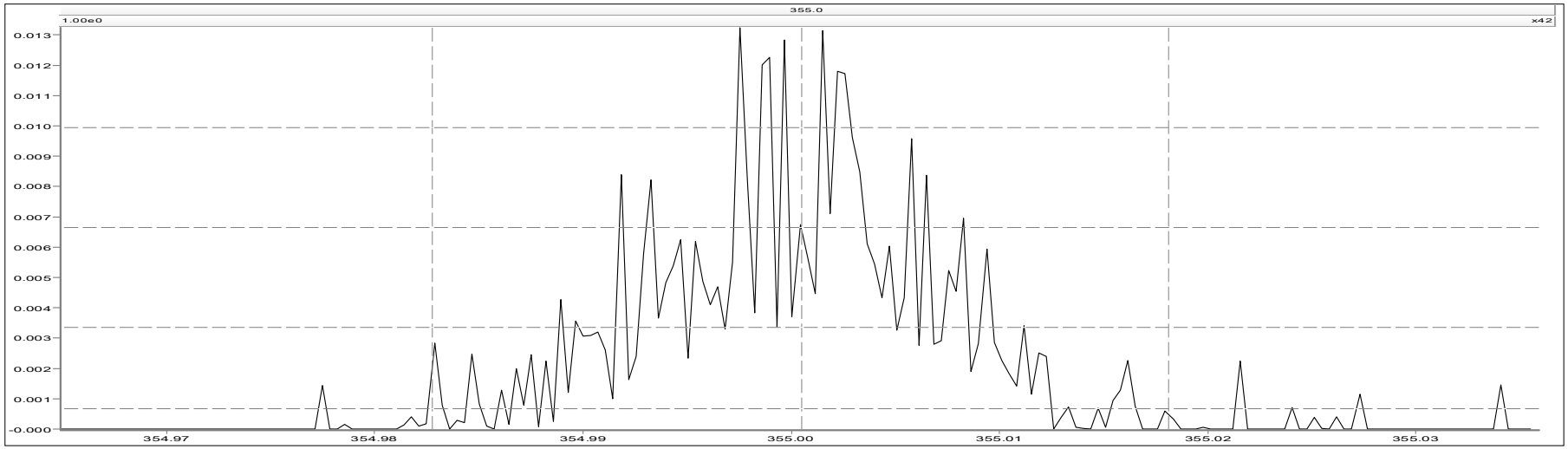


Source (EI+)

Ion Repeller (V)	-7.40	Ion Energy	6.00
Focus 1	684	Z4 Restrictor	Off
Beam Centre	32.3	Vacc Limit	8000
Focus 2	4106		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	35.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	9.9	**Engineer**	
Z Deflect 1	10.6	No information	
Z Deflect 2	15.0		
Z Focus 2	2041		
Z Focus 3	0		
Z Deflect 3	-21.3		
Y Focus	3678		
Rotate 2	0.7		
Curve 2	7.1		
Curve 3	-6.3		
Rotate 3	12.7		
Rotate 4	1.8		
V Acc (V)	6700.39		
Magnet Mass	331.0		
Source Slit	32.03		
Collector Slit	11.66		
MIKES Slit	100.00		
Alpha	58.00		
Detector Voltage	360		

File: C:\MassLynx\PaceNew.PRO\ACQUDB\10MSHR15L.ipr

Printed: Saturday, June 10, 2023 16:05:17 Central Daylight Time



Source (EI+)

Ion Repeller (V)	-7.40
Focus 1	684
Beam Centre	32.3
Focus 2	4106
Temperature (C)	280
Elec Energy (eV)	35.0
Trap Current (uA)	500.0
Y Deflect 1	9.9
Z Deflect 1	10.6
Z Deflect 2	15.0
Z Focus 2	2041
Z Focus 3	0
Z Deflect 3	-21.3
Y Focus	3678
Rotate 2	0.7
Curve 2	7.1
Curve 3	-6.3
Rotate 3	12.7
Rotate 4	1.8
V Acc (V)	6700.39
Magnet Mass	331.0
Source Slit	32.03
Collector Slit	11.66
MIKES Slit	100.00
Aperture	58.00
Detector Voltage	360
Ion Energy	6.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

Engineer

No information

File: C:\MassLynx\Default.pro\Acqudb\U10MSHR06.IPR

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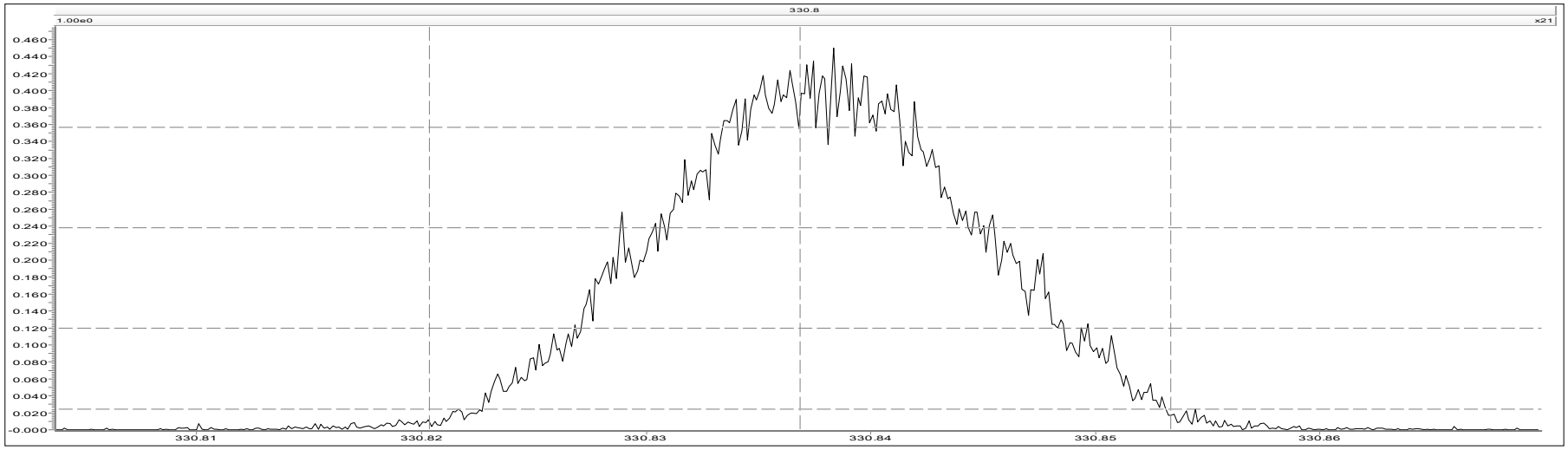

Source (EI+)

Ion Repeller (V)	-7.85	Ion Energy	-5.00
Focus 1	803	Z4 Restrictor	Off
Beam Centre	40.4	Vacc Limit	8000
Focus 2	4264		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-144.6	**Engineer**	
Z Deflect 1	-63.0	No information	
Z Deflect 2	-4.2		
Z Focus 2	2245		
Z Focus 3	0		
Z Deflect 3	79.8		
Y Focus	4437		
Rotate 2	-7.2		
Curve 2	1.2		
Curve 3	-1.4		
Rotate 3	-22.7		
Rotate 4	-40.2		
V Acc (V)	7378.31		
Magnet Mass	330.8		
Source Slit	20.96		
Collector Slit	15.64		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

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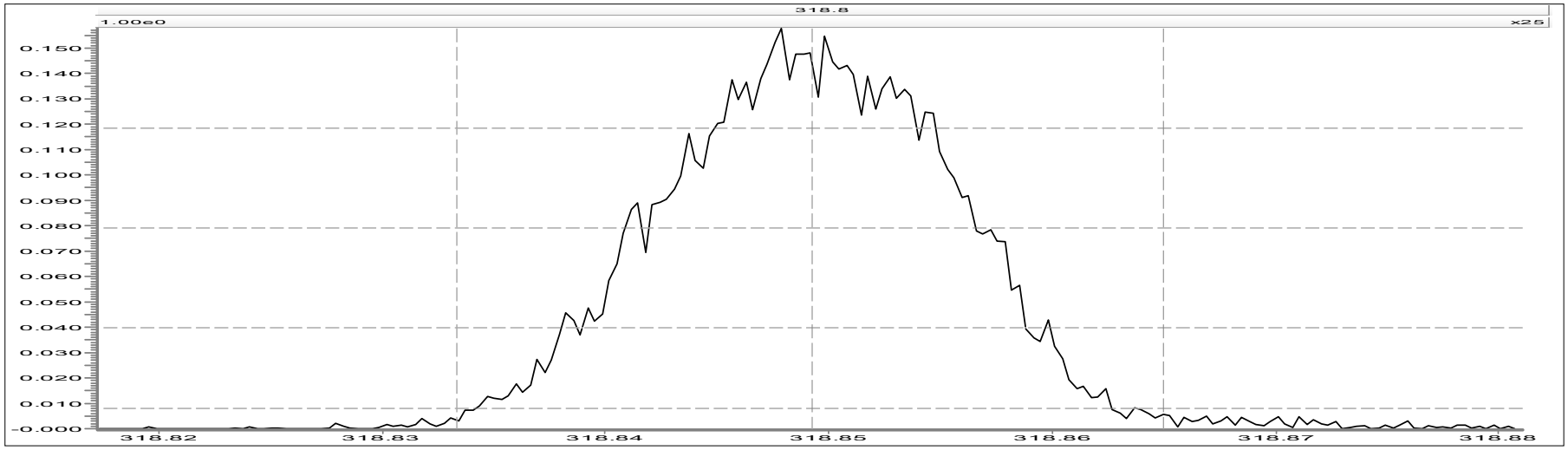

Source (EI+)

Ion Repeller (V)	-7.82
Focus 1	795
Beam Centre	37.1
Focus 2	4281
Temperature (C)	280
Elec Energy (eV)	31.0
Trap Current (uA)	500.0
Y Deflect 1	-141.0
Z Deflect 1	-26.1
Z Deflect 2	6.3
Z Focus 2	2306
Z Focus 3	0
Z Deflect 3	72.5
Y Focus	4451
Rotate 2	-9.0
Curve 2	4.9
Curve 3	2.5
Rotate 3	-22.4
Rotate 4	-44.4
V Acc (V)	7377.66
Magnet Mass	330.9
Source Slit	20.96
Collector Slit	15.10
MIKES Slit	100.00
Alpha	48.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

Engineer

No information

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

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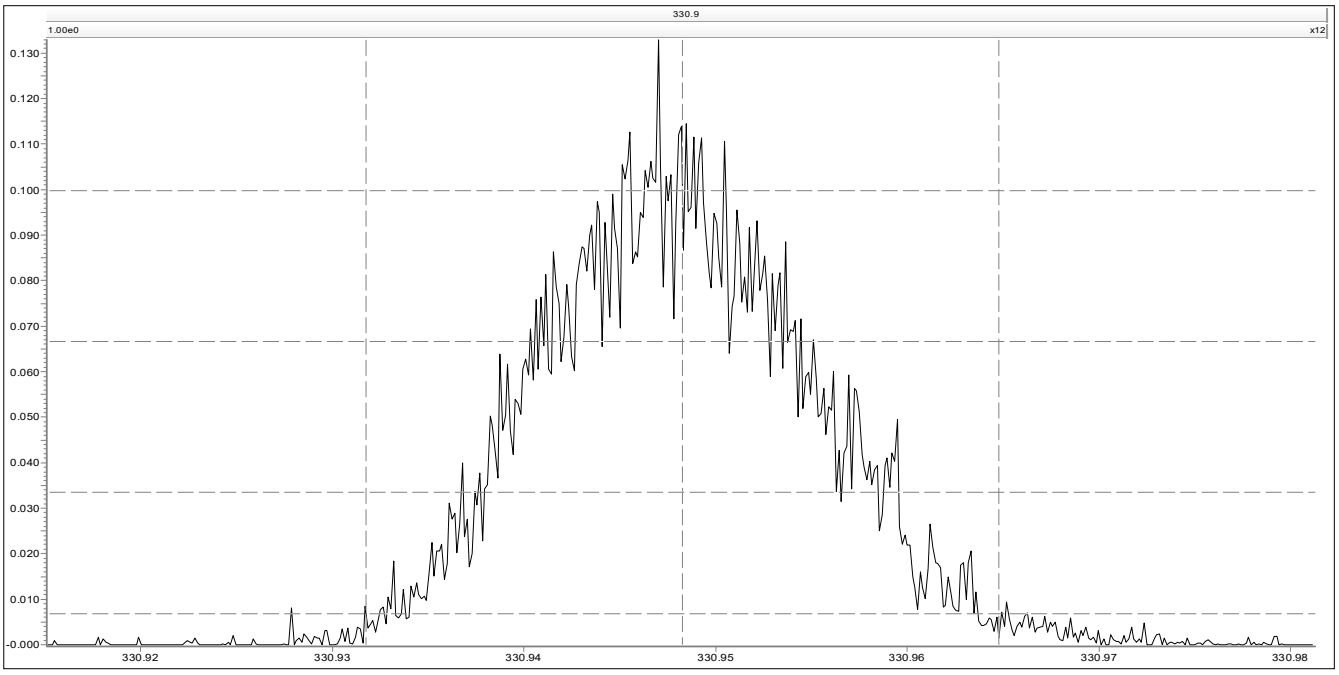

Source (EI+)

Ion Repeller (V)	-5.09
Focus 1	427
Beam Centre	31.0
Focus 2	4257
Temperature (C)	280
Elec Energy (eV)	31.0
Trap Current (uA)	500.0
Y Deflect 1	-116.4
Z Deflect 1	-15.9
Z Deflect 2	14.8
Z Focus 2	2510
Z Focus 3	0
Z Deflect 3	59.6
Y Focus	4148
Rotate 2	-12.7
Curve 2	6.4
Curve 3	4.5
Rotate 3	-22.6
Rotate 4	-46.6
V Acc (V)	7001.57
Magnet Mass	330.9
Source Slit	20.98
Collector Slit	15.40
MIKES Slit	100.00
Alpha	48.00
Detector Voltage	350
Ion Energy	-5.00
Z4 Restrictor	Off
Vacc Limit	8000

Analyser

No information

Engineer

No information

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

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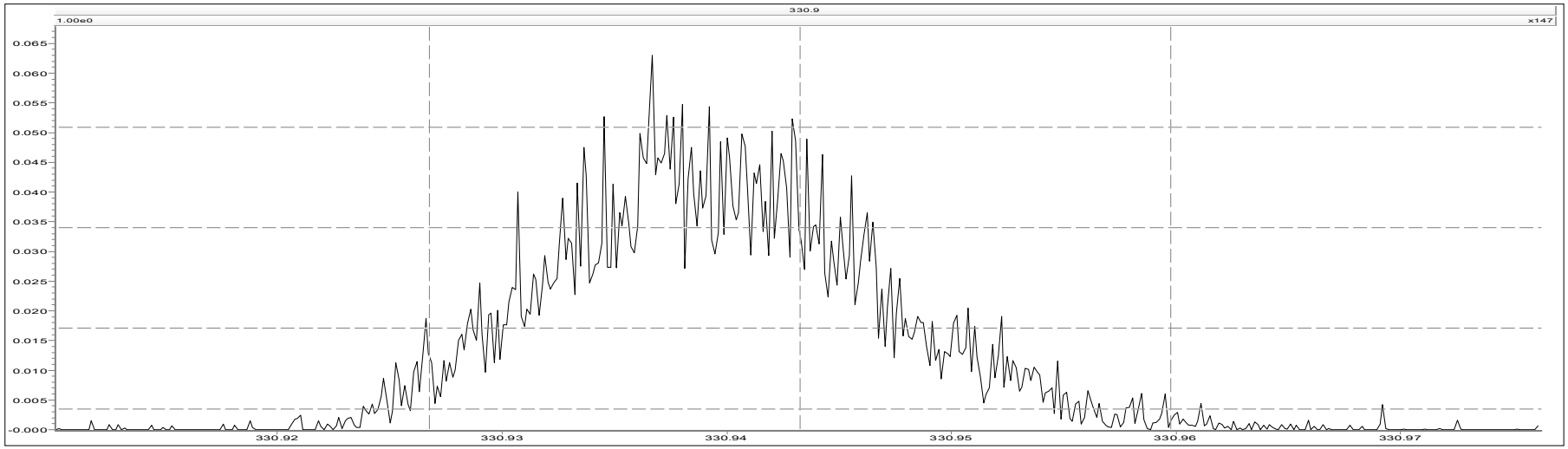

Source (EI+)

Ion Repeller (V)	-5.09	Ion Energy	-5.00
Focus 1	427	Z4 Restrictor	Off
Beam Centre	31.0	Vacc Limit	8000
Focus 2	4257		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-116.4	**Engineer**	
Z Deflect 1	-15.9	No information	
Z Deflect 2	14.8		
Z Focus 2	2510		
Z Focus 3	0		
Z Deflect 3	59.6		
Y Focus	4148		
Rotate 2	-12.7		
Curve 2	6.4		
Curve 3	4.5		
Rotate 3	-22.6		
Rotate 4	-46.6		
V Acc (V)	7001.67		
Magnet Mass	330.9		
Source Slit	20.98		
Collector Slit	15.40		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

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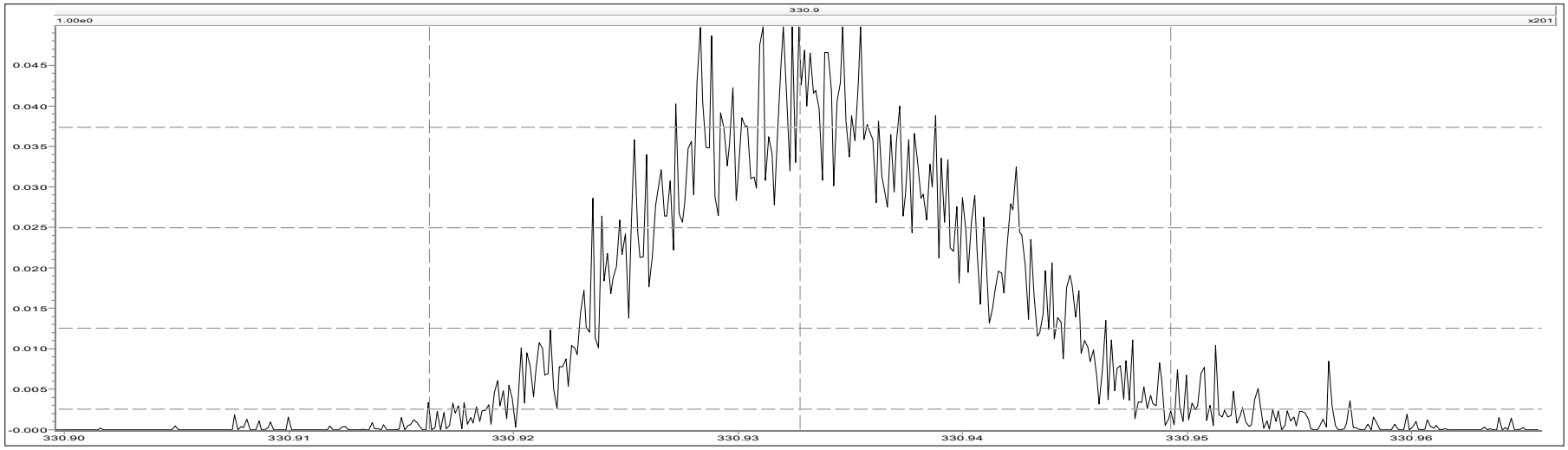

Source (EI+)

Ion Repeller (V)	-4.64	Ion Energy	-5.00
Focus 1	460	Z4 Restrictor	Off
Beam Centre	28.4	Vacc Limit	8000
Focus 2	4303		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-116.0	**Engineer**	
Z Deflect 1	-15.9	No information	
Z Deflect 2	14.8		
Z Focus 2	2510		
Z Focus 3	0		
Z Deflect 3	59.6		
Y Focus	4148		
Rotate 2	-12.7		
Curve 2	6.4		
Curve 3	4.5		
Rotate 3	-22.6		
Rotate 4	-46.6		
V Acc (V)	7001.90		
Magnet Mass	330.9		
Source Slit	20.98		
Collector Slit	15.40		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

File: C:\MassLynx\DEFAULT.PRO\ACQUDB\U10MSHR06.IPR

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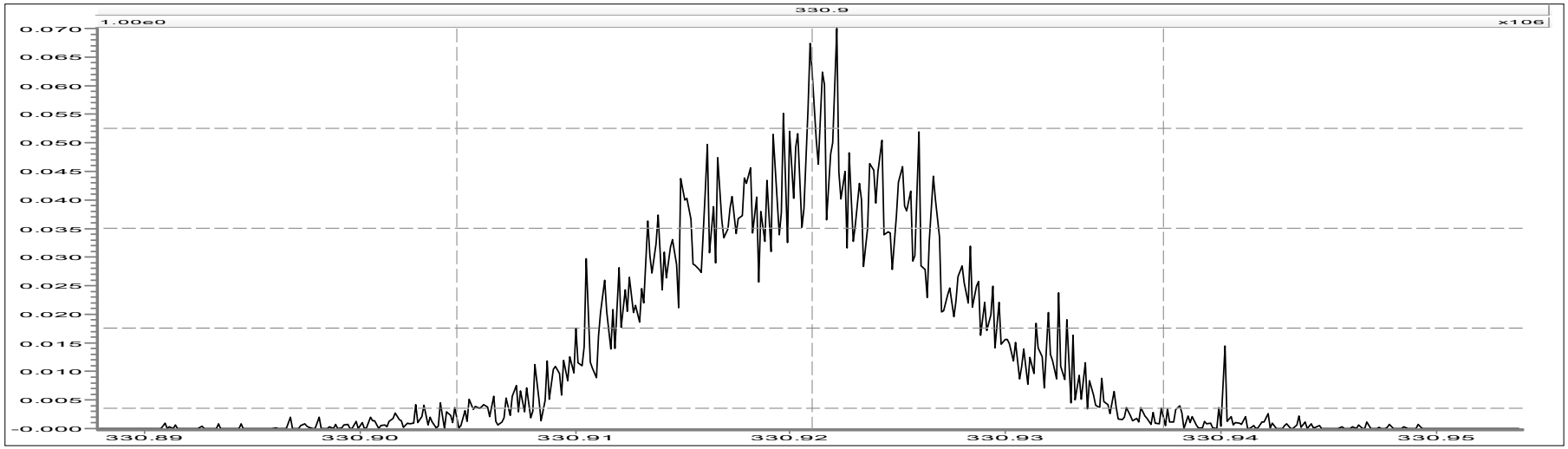

Source (EI+)

Ion Repeller (V)	-5.67	Ion Energy	-5.00
Focus 1	454	Z4 Restrictor	Off
Beam Centre	26.8	Vacc Limit	8000
Focus 2	4294		
Temperature (C)	280	**Analyser**	
Elec Energy (eV)	31.0	No information	
Trap Current (uA)	500.0		
Y Deflect 1	-122.2	**Engineer**	
Z Deflect 1	-4.1	No information	
Z Deflect 2	5.9		
Z Focus 2	2550		
Z Focus 3	0		
Z Deflect 3	56.1		
Y Focus	4148		
Rotate 2	-12.0		
Curve 2	4.3		
Curve 3	2.4		
Rotate 3	-16.5		
Rotate 4	-32.2		
V Acc (V)	7002.13		
Magnet Mass	330.9		
Source Slit	20.08		
Collector Slit	15.16		
MIKES Slit	100.00		
Alpha	48.00		
Detector Voltage	350		

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Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Appendix F

QC Raw Data

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Homologue Group: Tetras

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

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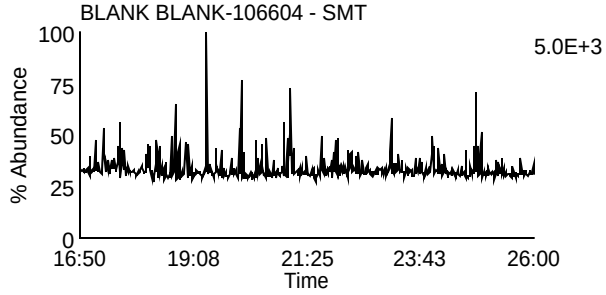
BLANK BLANK-106604 - SMT



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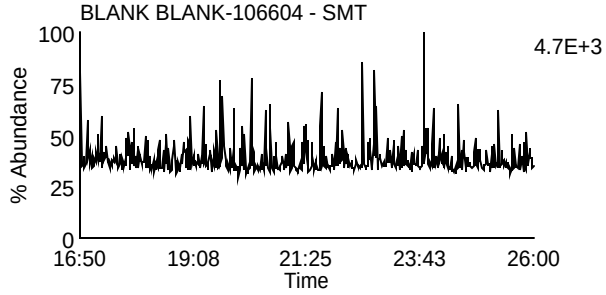

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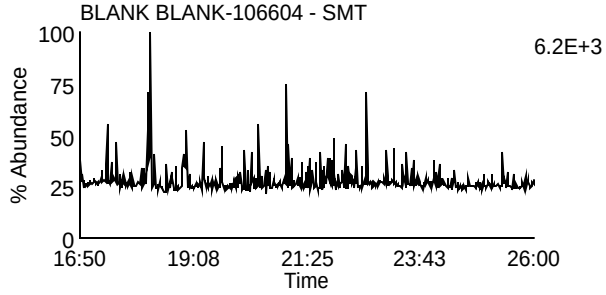

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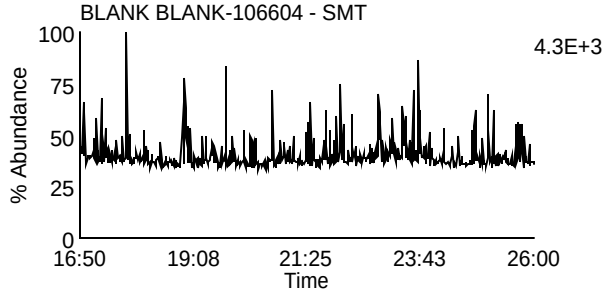

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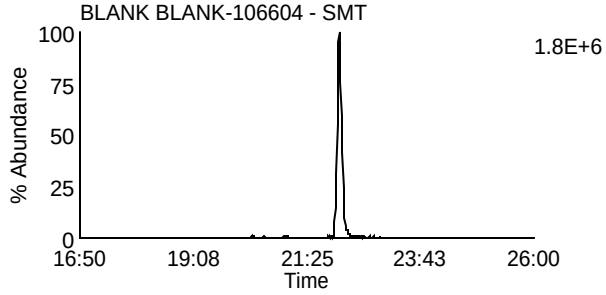

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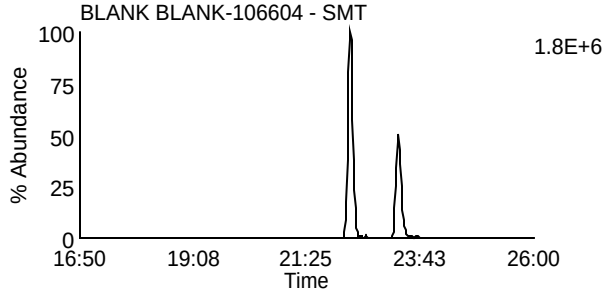

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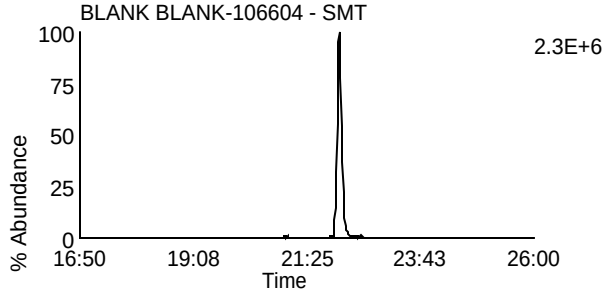
BLANK BLANK-106604 - SMT



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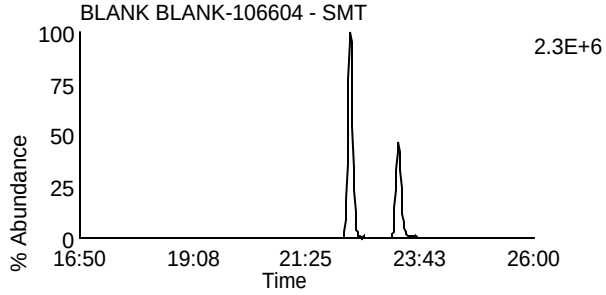

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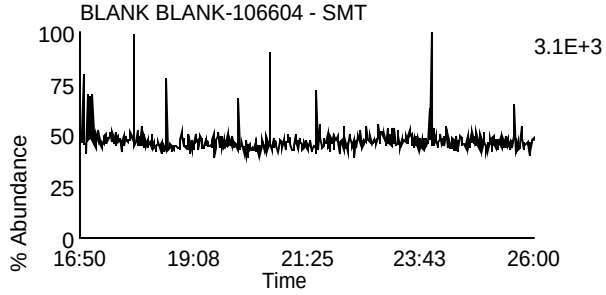

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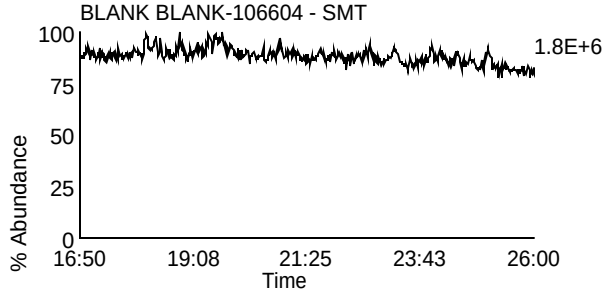
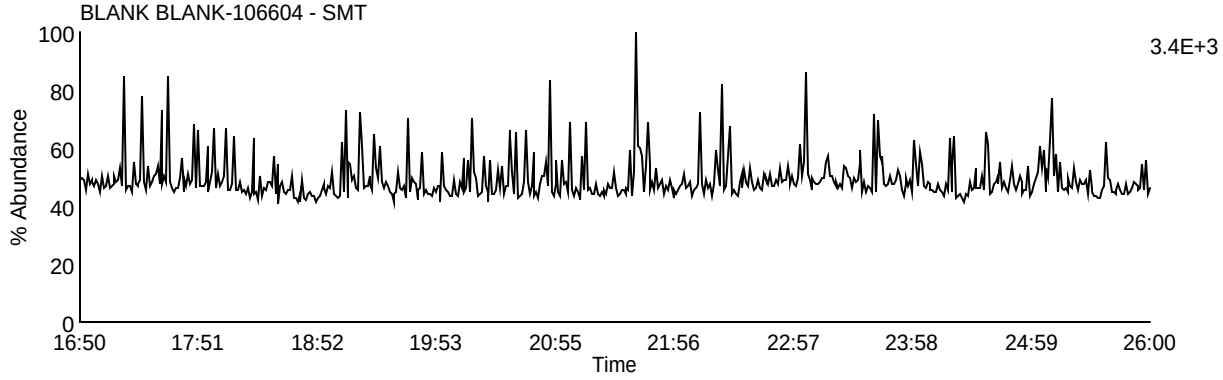


Homologue Group: Penta & Cleanup

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

Data File: U230608A_04 G1 C12 - 339.8597
BLANK BLANK-106604 - SMT



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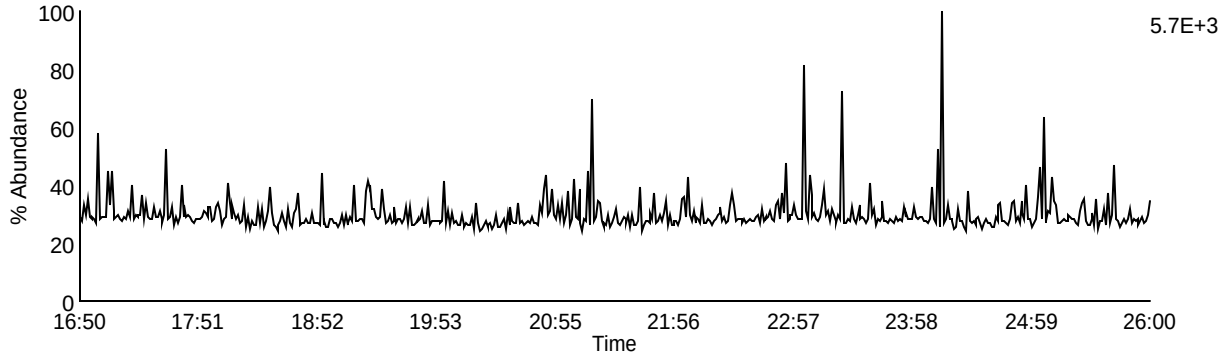

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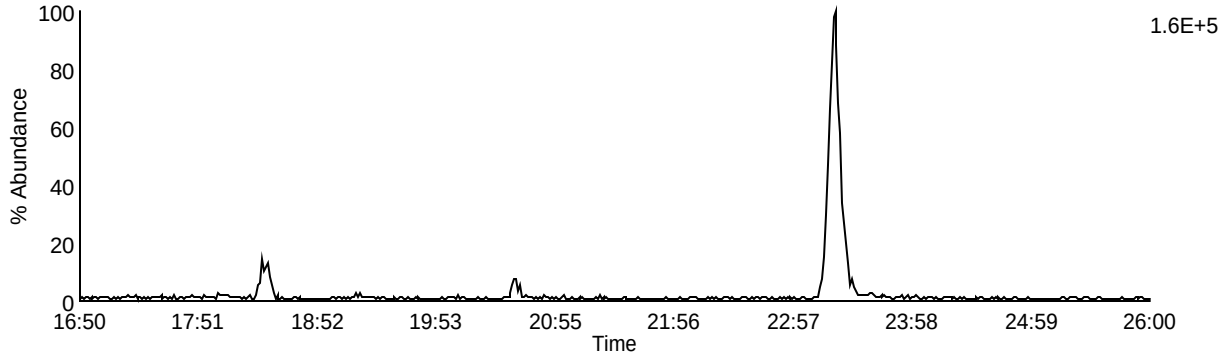

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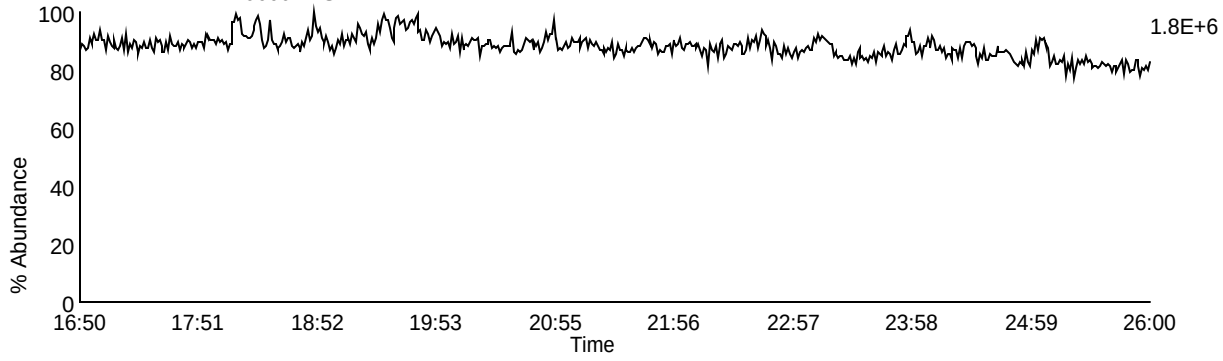

Homologue Group: Pentas

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

Data File: U230608A_04 G2 C1 - 339.8597
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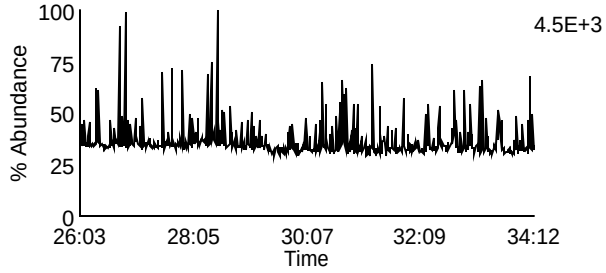

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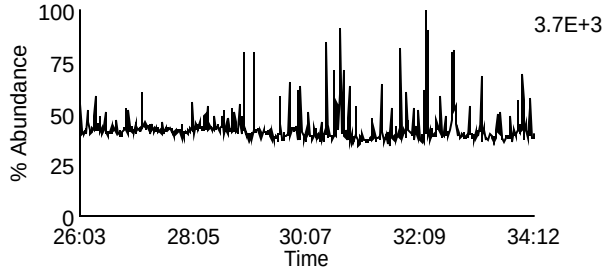
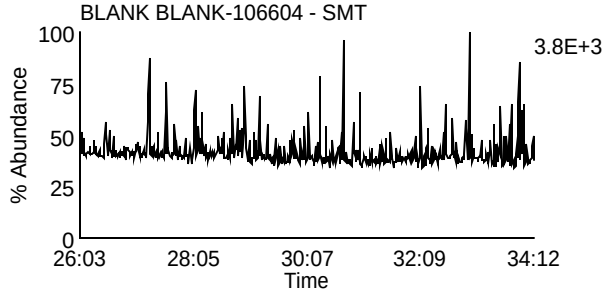
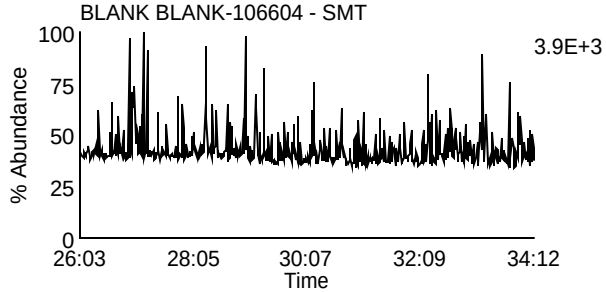


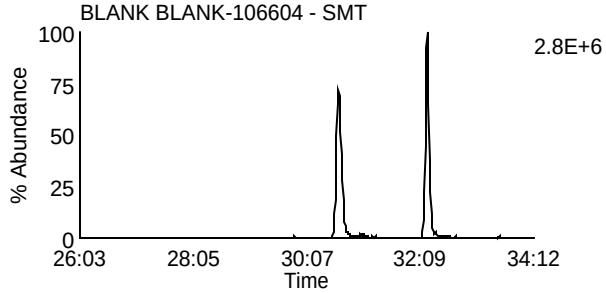
Data File: U230608A_04 G2 C2 - 341.8567
BLANK BLANK-106604 - SMT



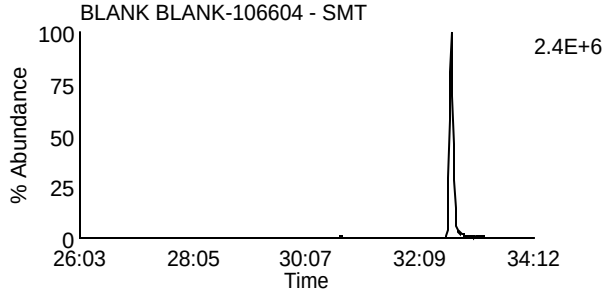
Data File: U230608A_04 G2 C8 - 355.8546
BLANK BLANK-106604 - SMT



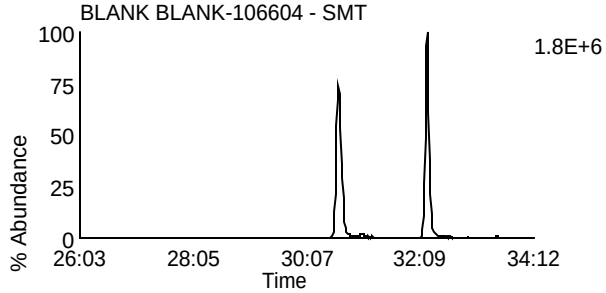
Data File: U230608A_04 G2 C3 - 351.8999
BLANK BLANK-106604 - SMT



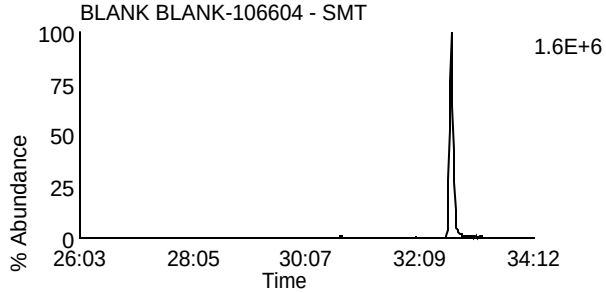
Data File: U230608A_04 G2 C10 - 367.8948
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G2 C5 - 353.8969
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G2 C11 - 369.8918
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G2 C12 - 409.7974
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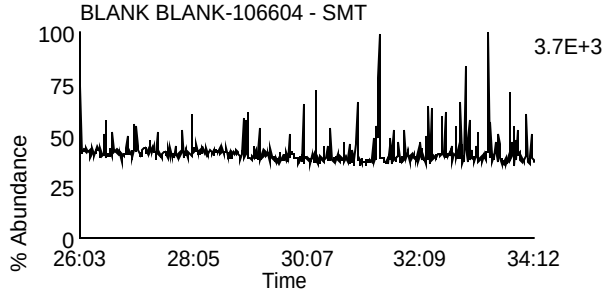
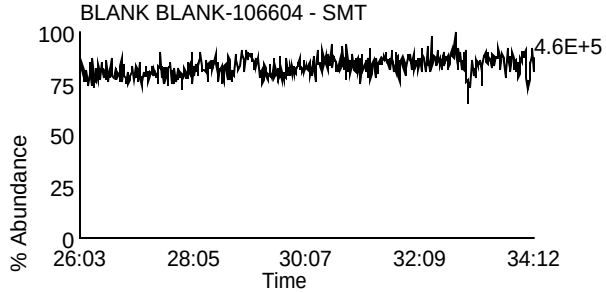


Data File: U230608A_04 G2 C6 - 354.9792
BLANK BLANK-106604 - SMT

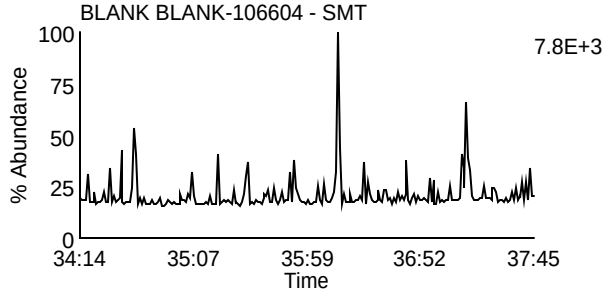


Homologue Group: Hexas

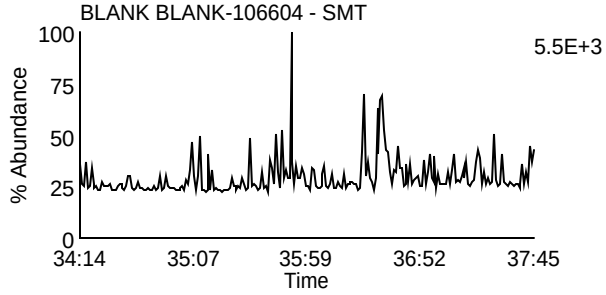
Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

Data File: U230608A_04 G3 C1 - 373.8207
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C7 - 389.8156
BLANK BLANK-106604 - SMT



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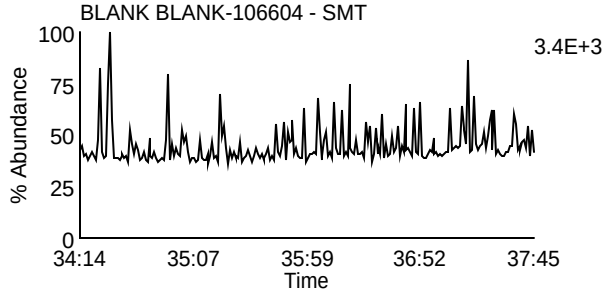
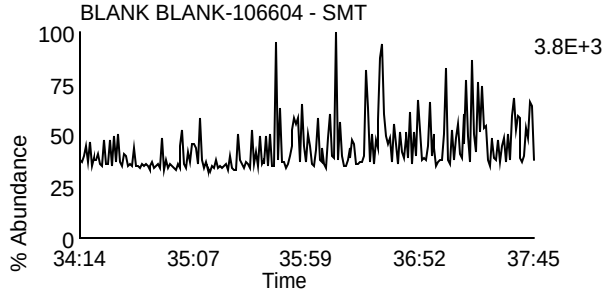
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C8 - 391.8127
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C5 - 383.8639
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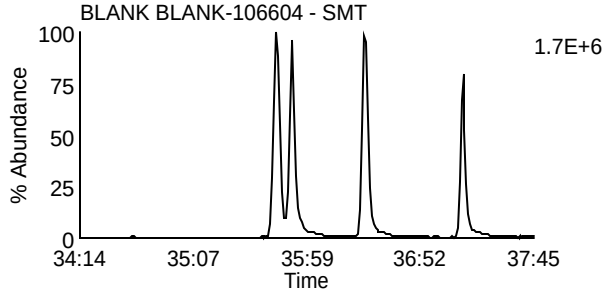
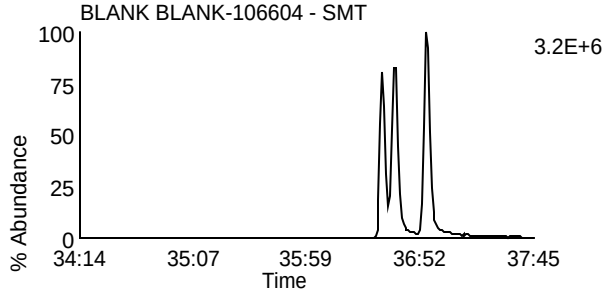
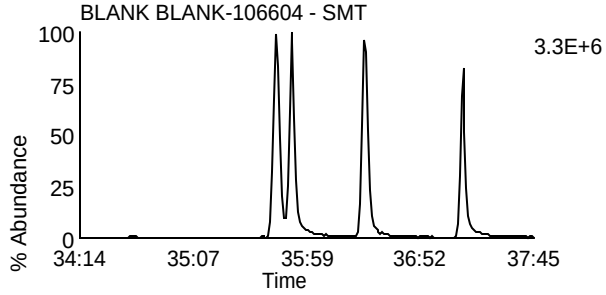


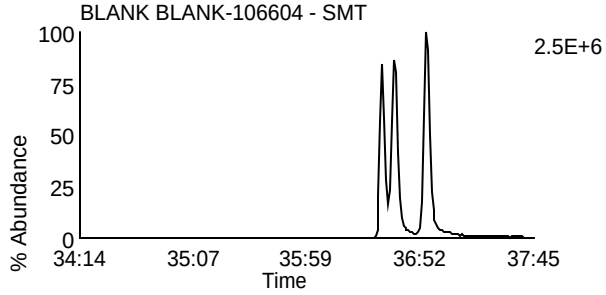
Data File: U230608A_04 G3 C9 - 401.8559
BLANK BLANK-106604 - SMT



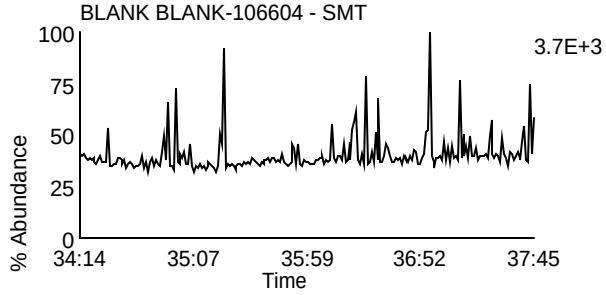
Data File: U230608A_04 G3 C6 - 385.861
BLANK BLANK-106604 - SMT



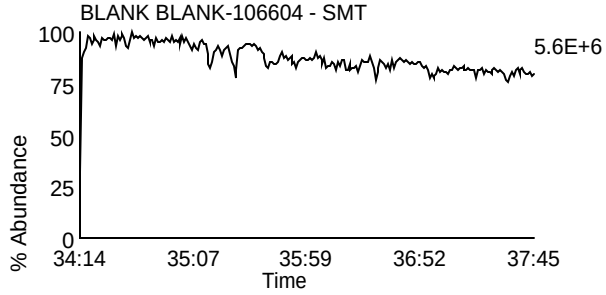
Data File: U230608A_04 G3 C10 - 403.8529
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C11 - 445.7555
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G3 C3 - 380.976
BLANK BLANK-106604 - SMT

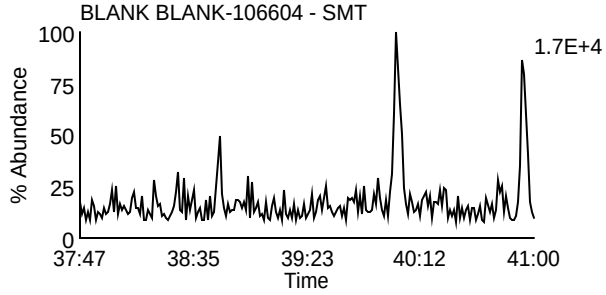


Homologue Group: Heptas

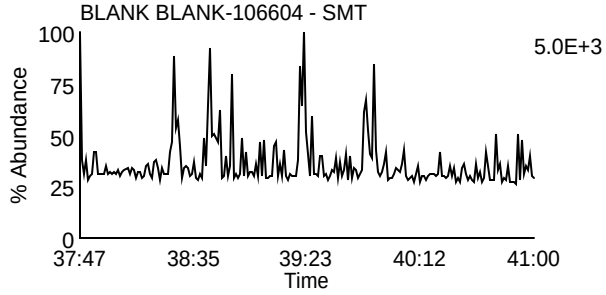
Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

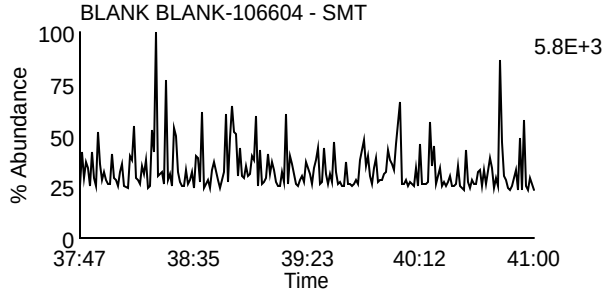
Data File: U230608A_04 G4 C3 - 407.7818
BLANK BLANK-106604 - SMT



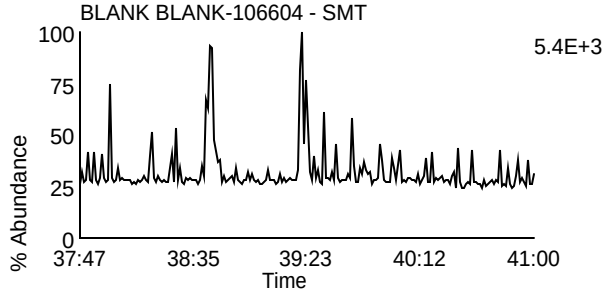
Data File: U230608A_04 G4 C8 - 423.7767
BLANK BLANK-106604 - SMT



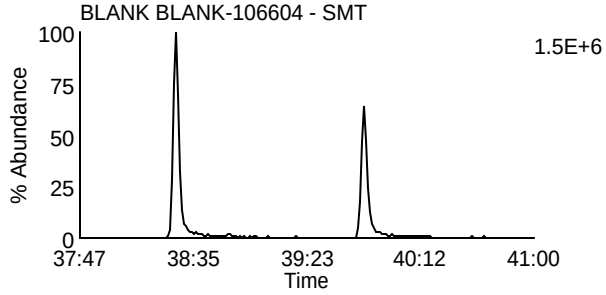
Data File: U230608A_04 G4 C4 - 409.7788
BLANK BLANK-106604 - SMT



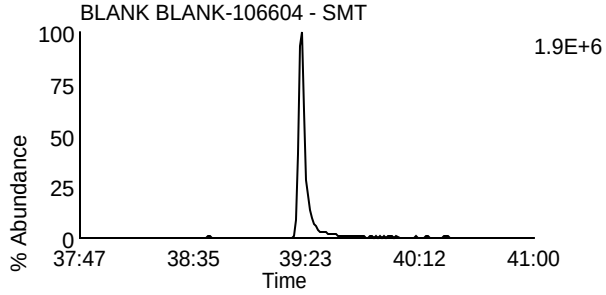
Data File: U230608A_04 G4 C9 - 425.7737
BLANK BLANK-106604 - SMT



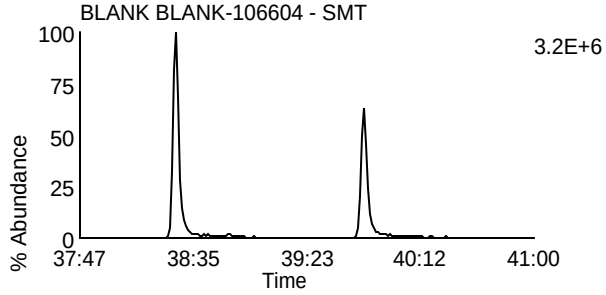
Data File: U230608A_04 G4 C6 - 417.825
BLANK BLANK-106604 - SMT



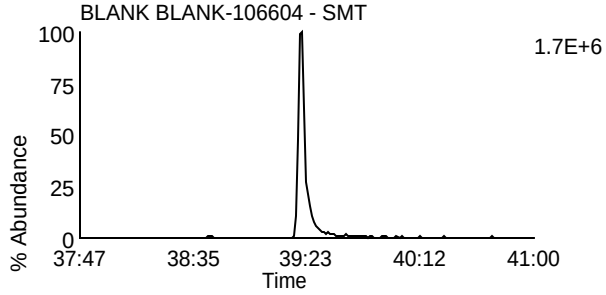
Data File: U230608A_04 G4 C11 - 435.8169
BLANK BLANK-106604 - SMT



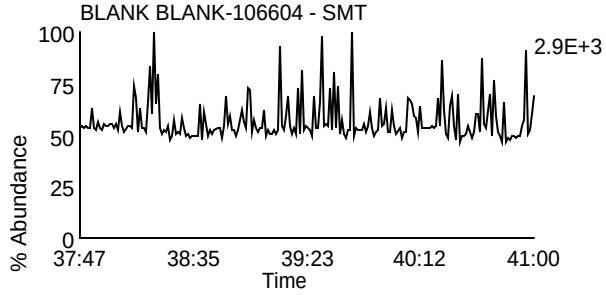
Data File: U230608A_04 G4 C7 - 419.822
BLANK BLANK-106604 - SMT



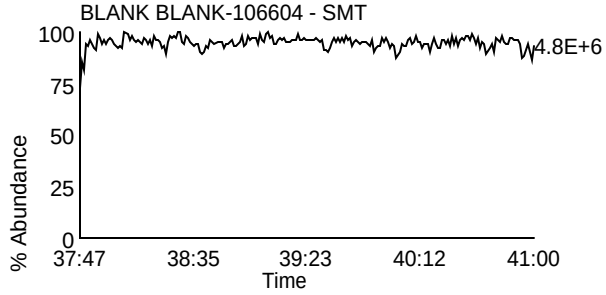
Data File: U230608A_04 G4 C12 - 437.814
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G4 C13 - 479.7165
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G4 C1 - 380.976
BLANK BLANK-106604 - SMT

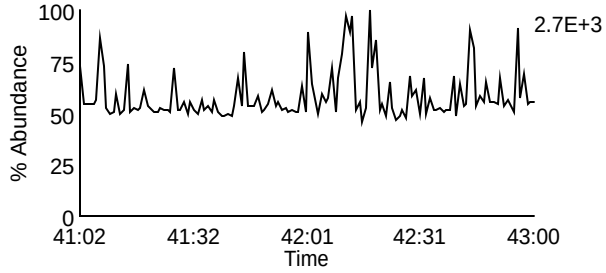


Homologue Group: Octas

Data File Name: U230608A_04
Date Acquired: 6/8/2023
Sample Description: BLANK BLANK-106604 - SMT

Lab Sample ID: BLANK-106604
Client Sample ID: DFBLKTO
Instrument: 10MSHR06 (U)

Data File: U230608A_04 G5 C4 - 441.7428
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G5 C8 - 457.7377
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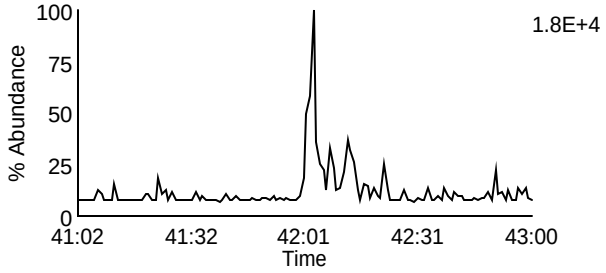
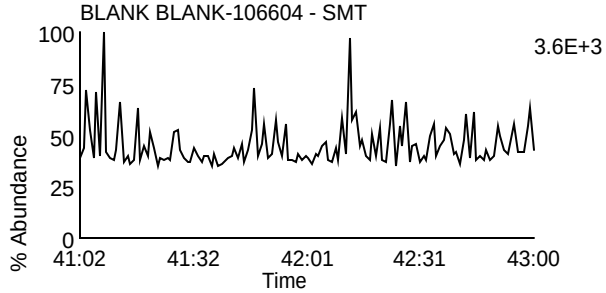
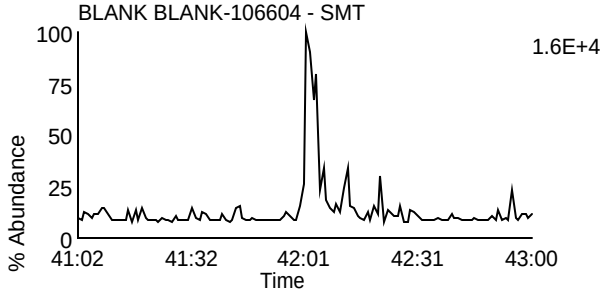


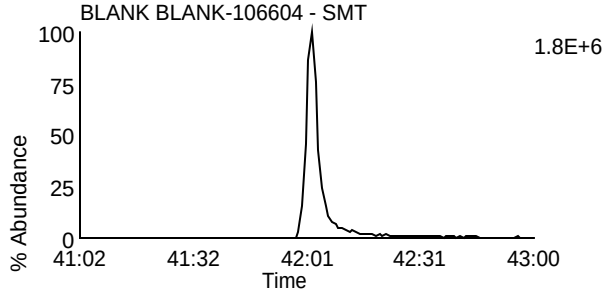
Data File: U230608A_04 G5 C5 - 443.7398
BLANK BLANK-106604 - SMT



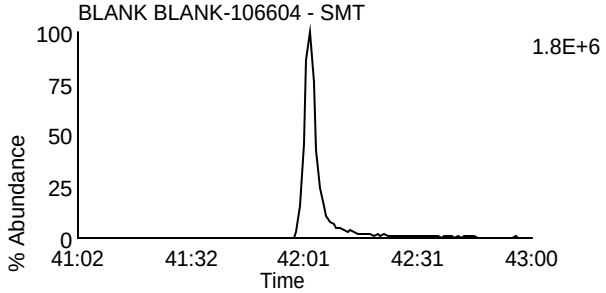
Data File: U230608A_04 G5 C9 - 459.7347
BLANK BLANK-106604 - SMT



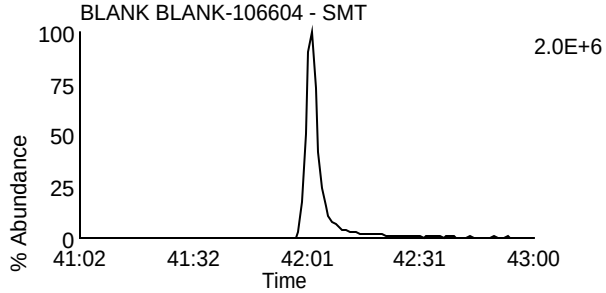
Data File: U230608A_04 G5 C11 - 469.7779
BLANK BLANK-106604 - SMT



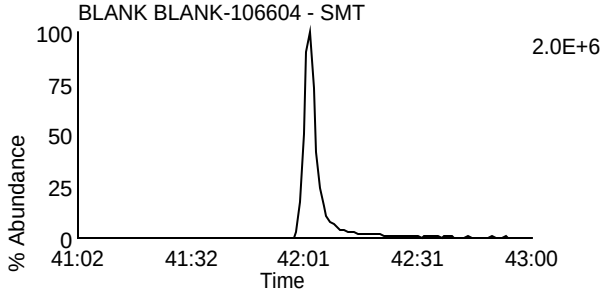
Data File: U230608A_04 G5 C11 - 469.7779
BLANK BLANK-106604 - SMT



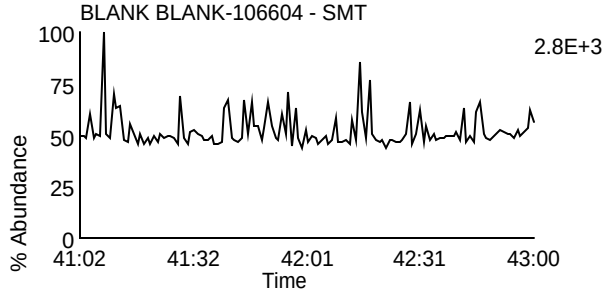
Data File: U230608A_04 G5 C12 - 471.7749
BLANK BLANK-106604 - SMT



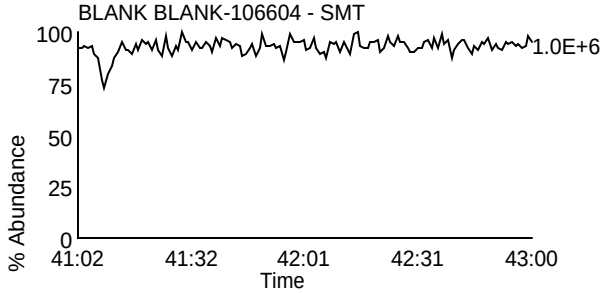
Data File: U230608A_04 G5 C12 - 471.7749
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G5 C13 - 513.6775
BLANK BLANK-106604 - SMT



Data File: U230608A_04 G5 C2 - 430.9728
BLANK BLANK-106604 - SMT

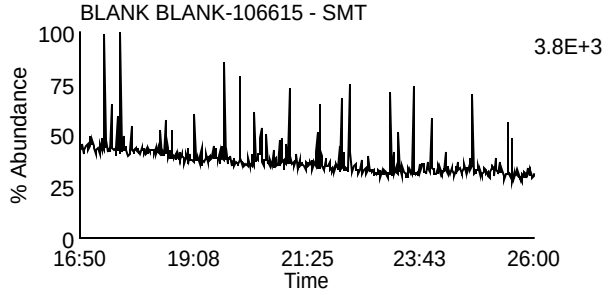


Homologue Group: Tetras

Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

Data File: U230608B_10 G1 C1 - 303.9016
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C7 - 319.8965
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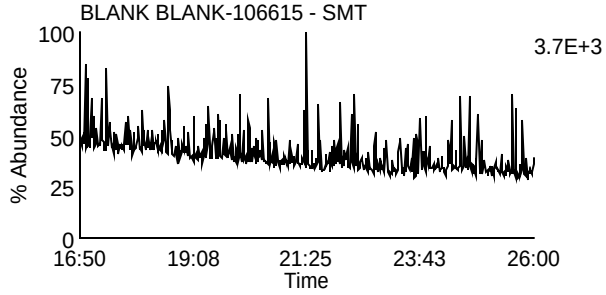

Data File: U230608B_10 G1 C2 - 305.8987
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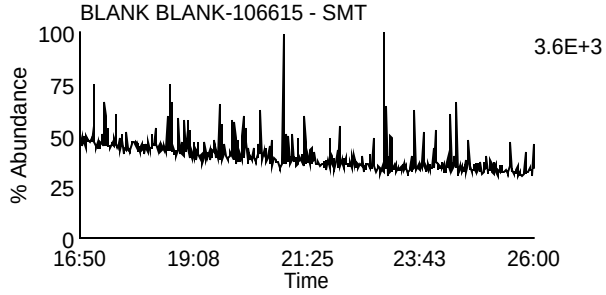
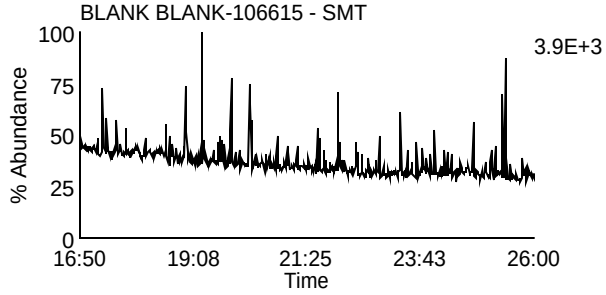
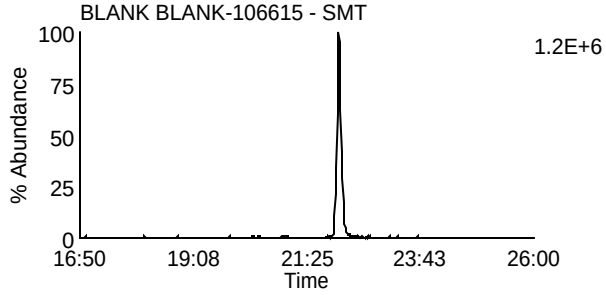


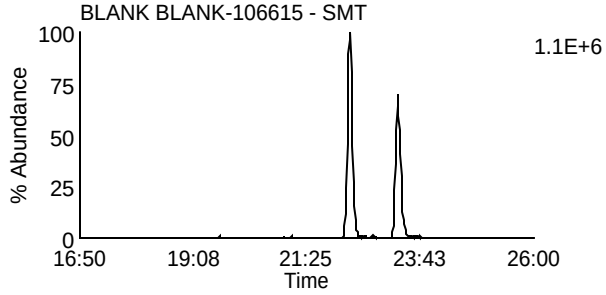
Data File: U230608B_10 G1 C8 - 321.8936
BLANK BLANK-106615 - SMT



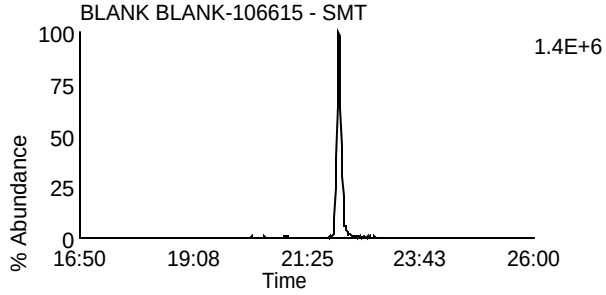
Data File: U230608B_10 G1 C3 - 315.9418
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C10 - 331.9367
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C4 - 317.9389
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C11 - 333.9338
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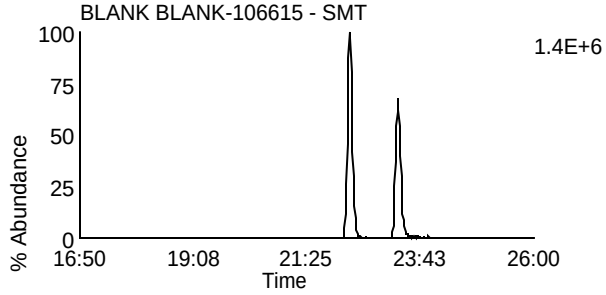

Data File: U230608B_10 G1 C14 - 375.8364
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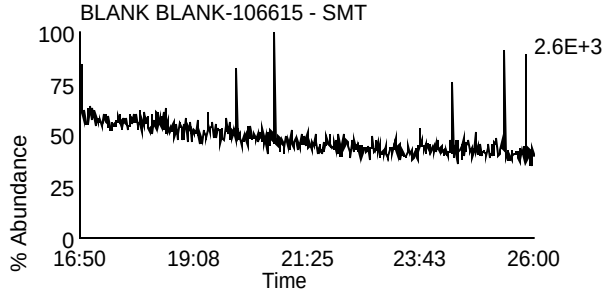
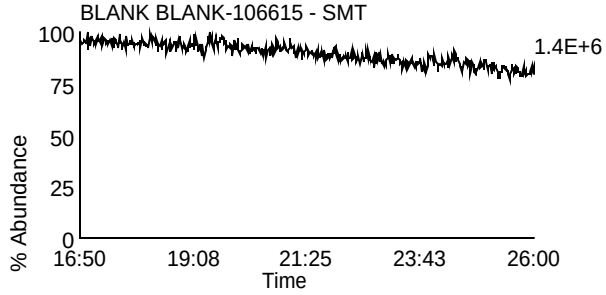


Data File: U230608B_10 G1 C5 - 318.9792
BLANK BLANK-106615 - SMT

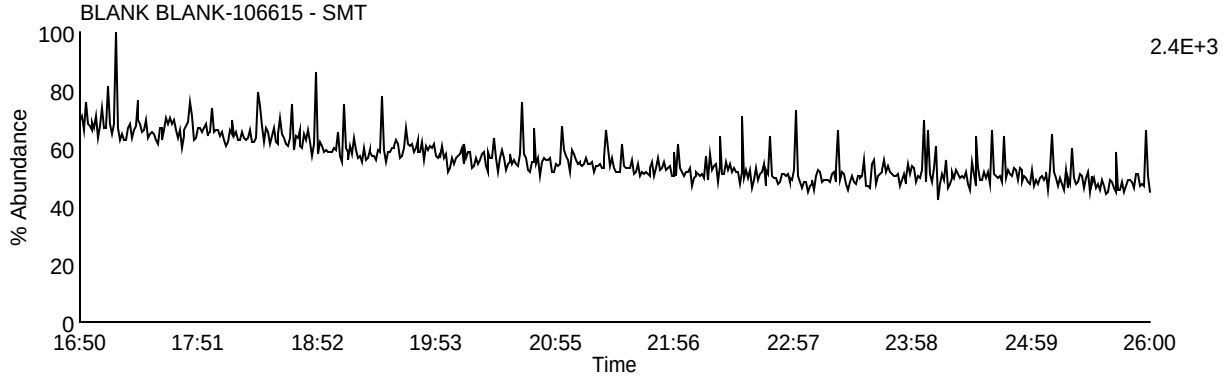


Homologue Group: Penta & Cleanup

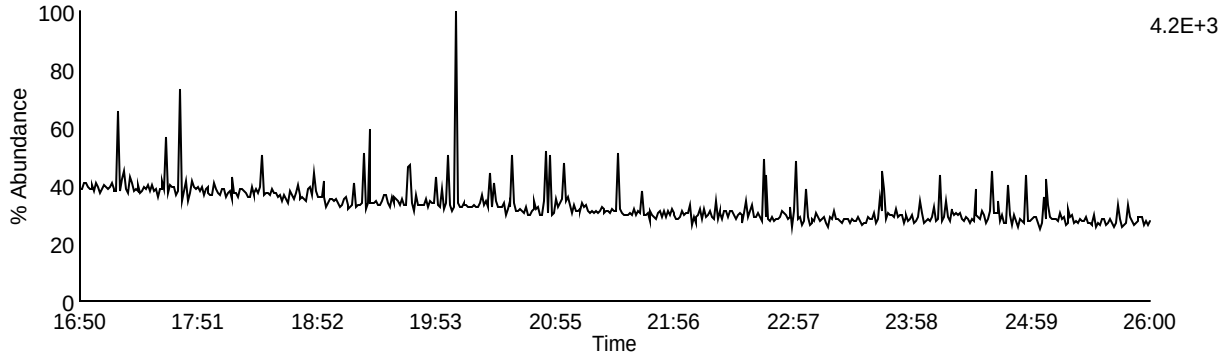
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

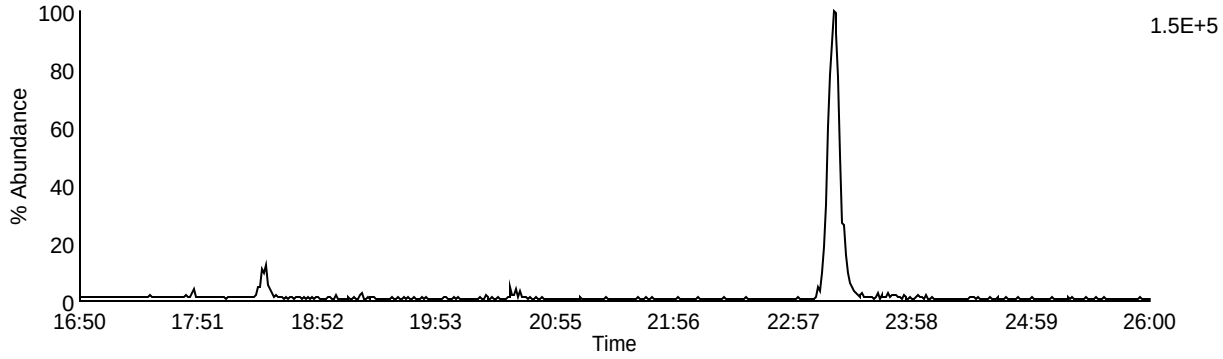
Data File: U230608B_10 G1 C12 - 339.8597
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C13 - 341.8567
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C9 - 327.8847
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G1 C5 - 318.9792
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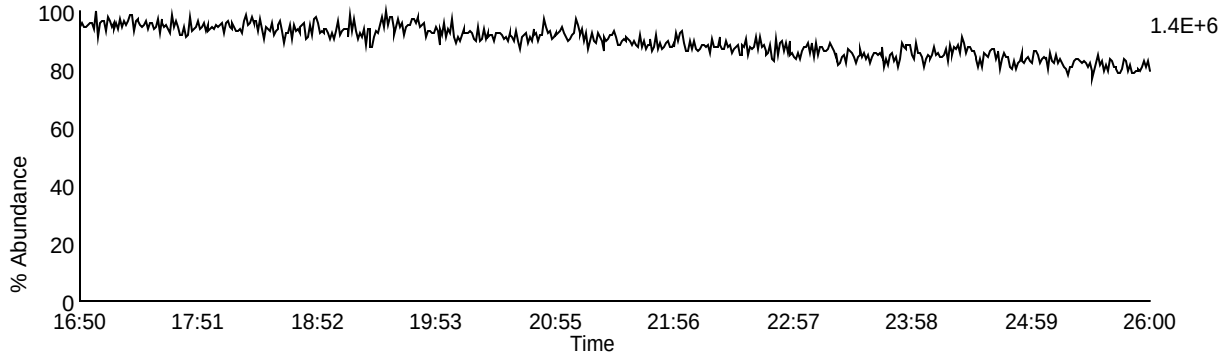
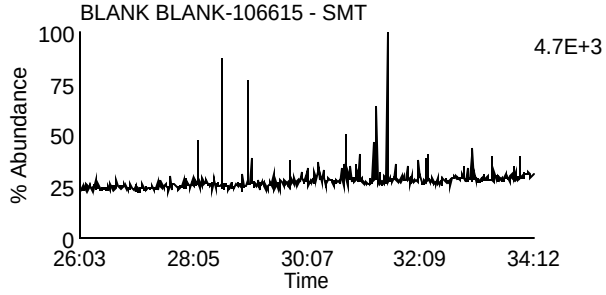


Homologue Group: Pentas

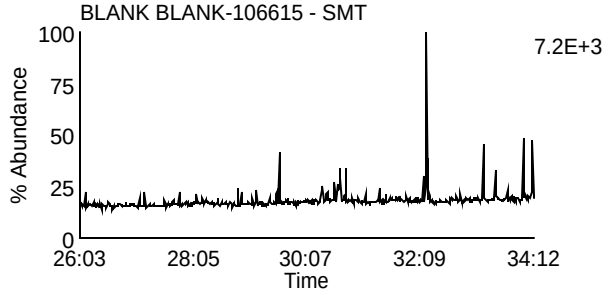
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

Data File: U230608B_10 G2 C1 - 339.8597
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G2 C4 - 353.8576
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G2 C2 - 341.8567
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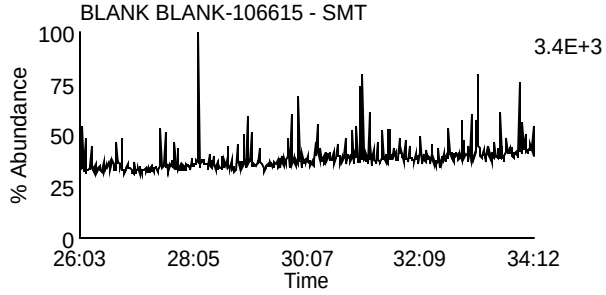
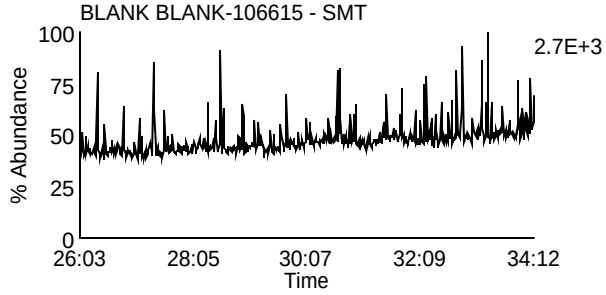
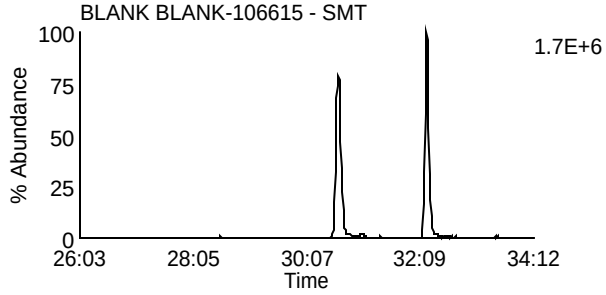


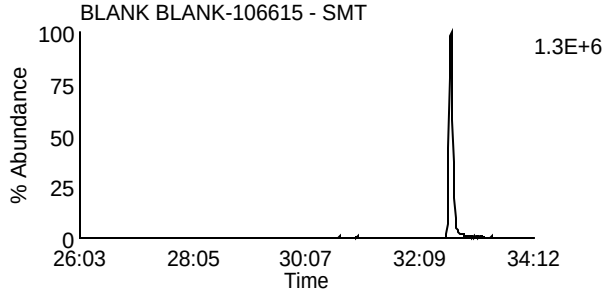
Data File: U230608B_10 G2 C8 - 355.8546
BLANK BLANK-106615 - SMT



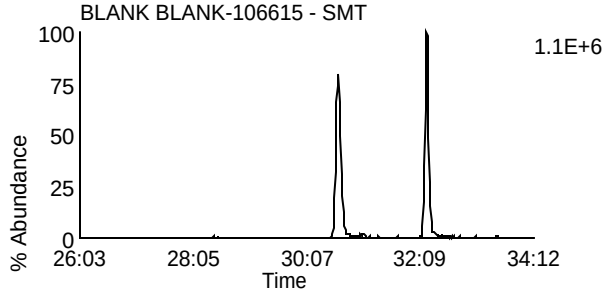
Data File: U230608B_10 G2 C3 - 351.8999
BLANK BLANK-106615 - SMT



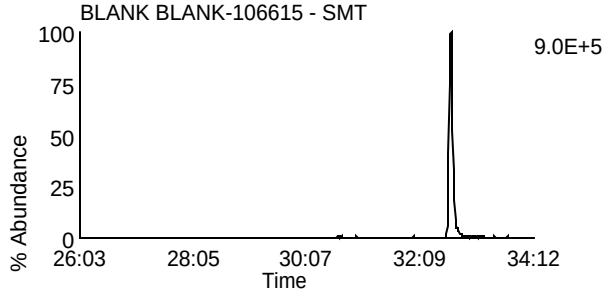
Data File: U230608B_10 G2 C10 - 367.8948
BLANK BLANK-106615 - SMT



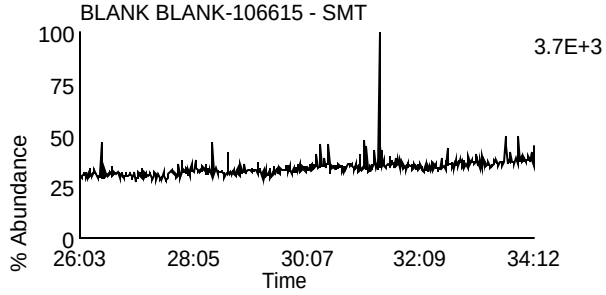
Data File: U230608B_10 G2 C5 - 353.8969
BLANK BLANK-106615 - SMT



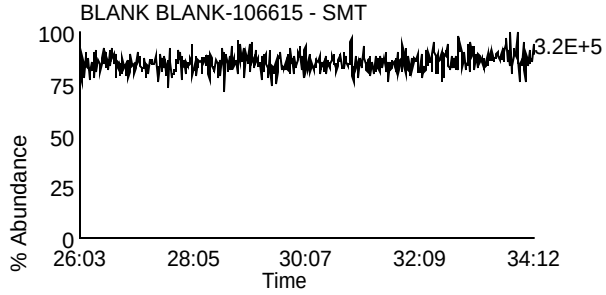
Data File: U230608B_10 G2 C11 - 369.8918
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G2 C12 - 409.7974
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G2 C6 - 354.9792
BLANK BLANK-106615 - SMT

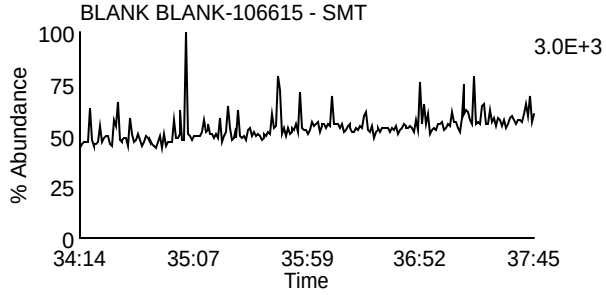


Homologue Group: Hexas

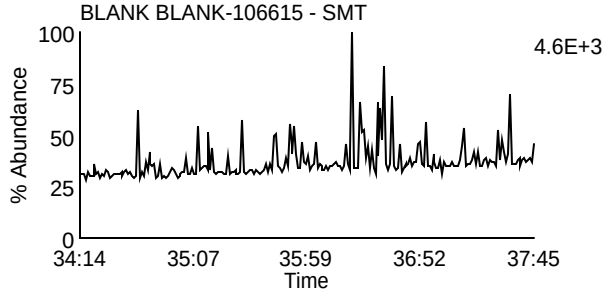
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

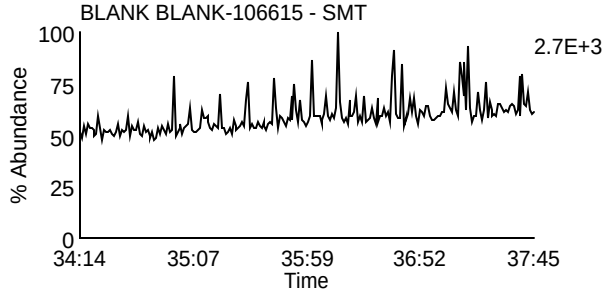
Data File: U230608B_10 G3 C1 - 373.8207
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C7 - 389.8156
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C2 - 375.8178
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C8 - 391.8127
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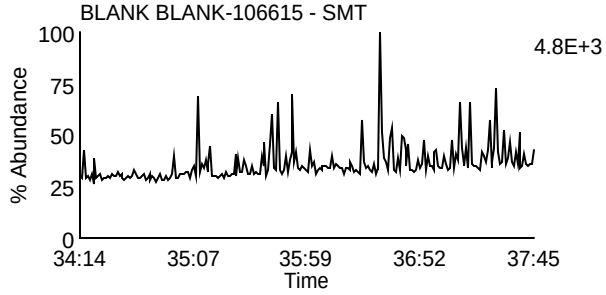

Data File: U230608B_10 G3 C5 - 383.8639
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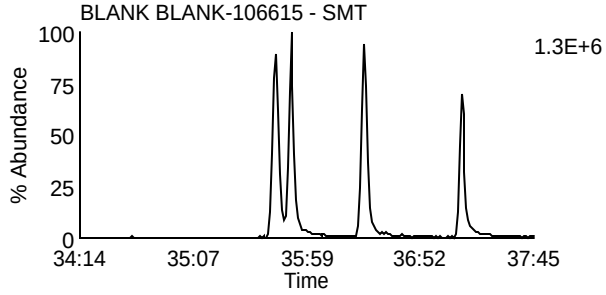
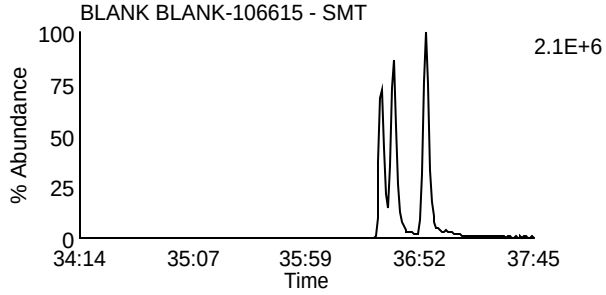
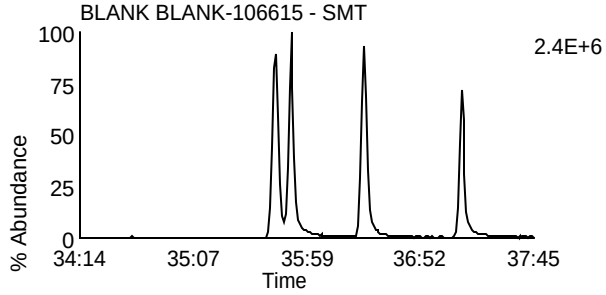


Data File: U230608B_10 G3 C9 - 401.8559
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C6 - 385.861
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C10 - 403.8529
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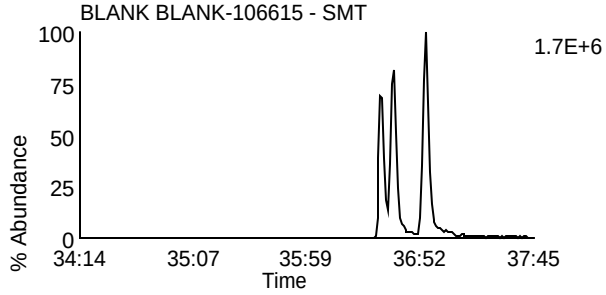
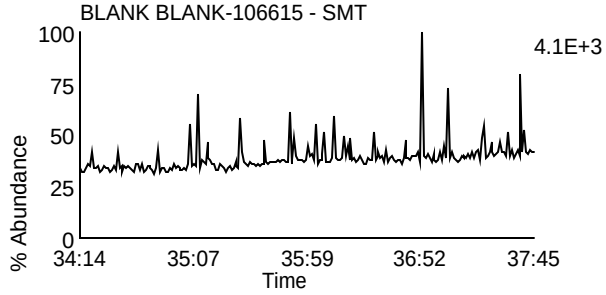
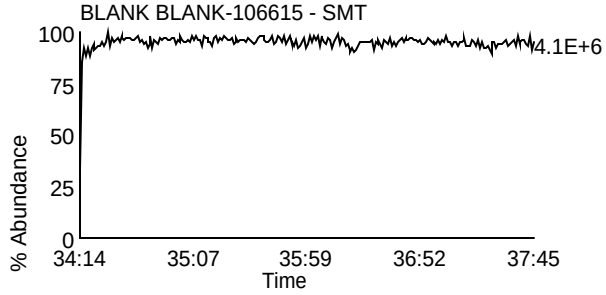


Data File: U230608B_10 G3 C11 - 445.7555
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G3 C3 - 380.976
BLANK BLANK-106615 - SMT

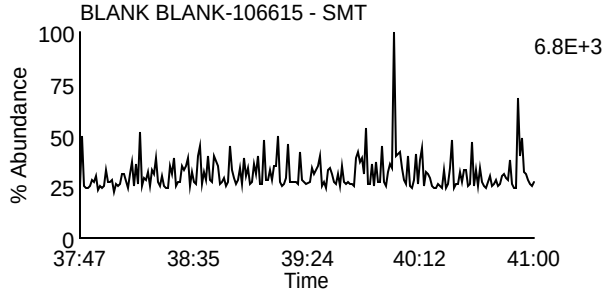


Homologue Group: Heptas

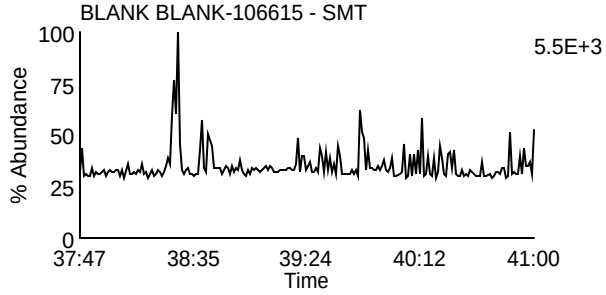
Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

Data File: U230608B_10 G4 C3 - 407.7818
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C8 - 423.7767
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C4 - 409.7788
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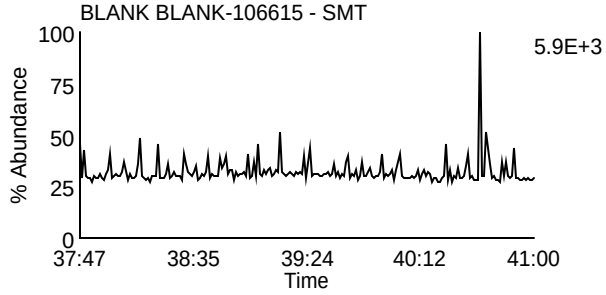

Data File: U230608B_10 G4 C9 - 425.7737
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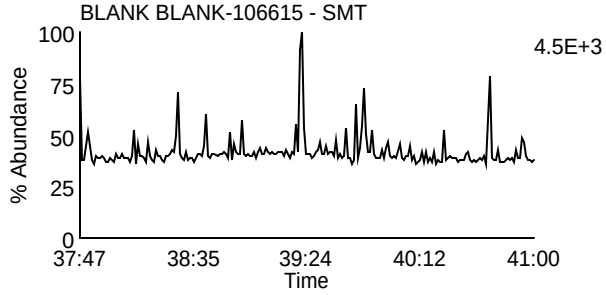
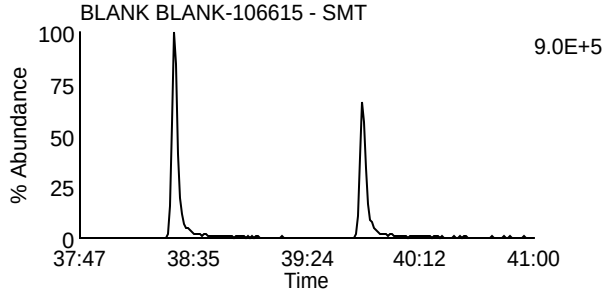
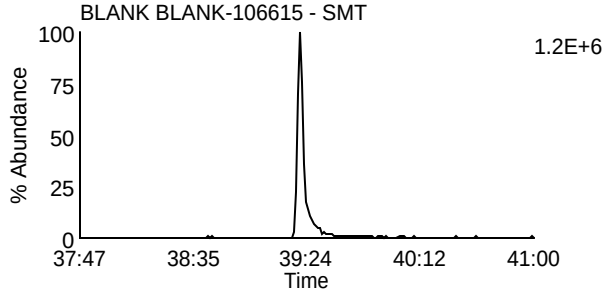


Data File: U230608B_10 G4 C6 - 417.825
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C11 - 435.8169
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C7 - 419.822
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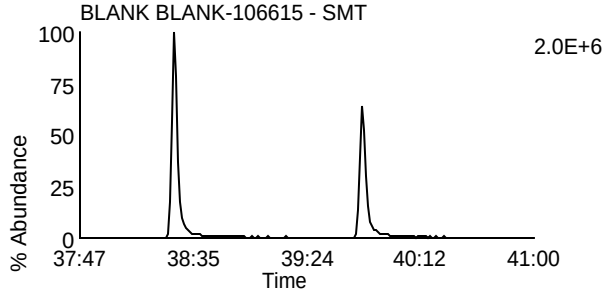

Data File: U230608B_10 G4 C12 - 437.814
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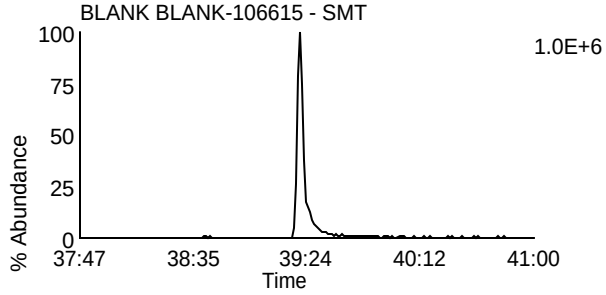
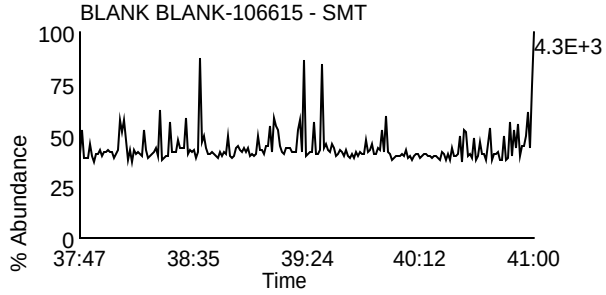


Data File: U230608B_10 G4 C13 - 479.7165
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G4 C1 - 380.976
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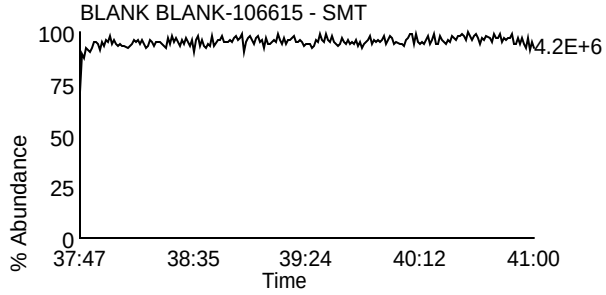
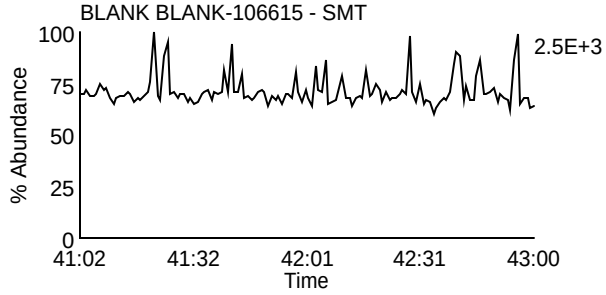


Homologue Group: Octas

Data File Name: U230608B_10
Date Acquired: 6/9/2023
Sample Description: BLANK BLANK-106615 - SMT

Lab Sample ID: BLANK-106615
Client Sample ID: DFBLKTS
Instrument: 10MSHR06 (U)

Data File: U230608B_10 G5 C4 - 441.7428
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G5 C8 - 457.7377
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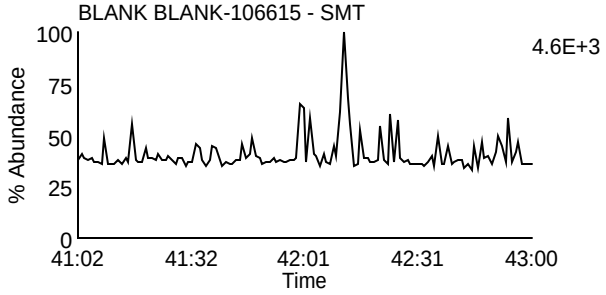

Data File: U230608B_10 G5 C5 - 443.7398
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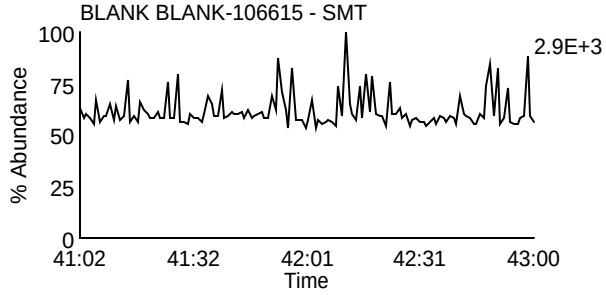
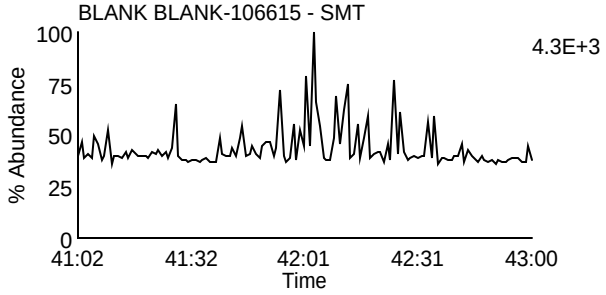


Data File: U230608B_10 G5 C9 - 459.7347
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G5 C11 - 469.7779
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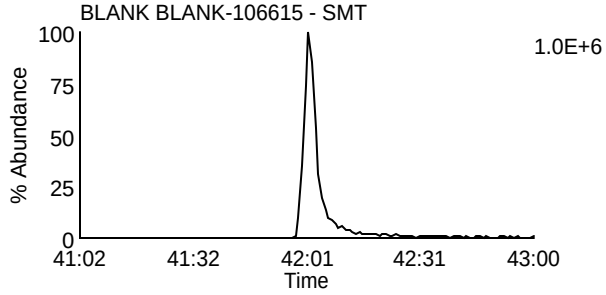

Data File: U230608B_10 G5 C11 - 469.7779
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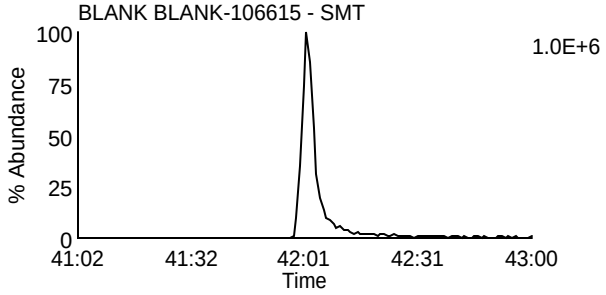

Data File: U230608B_10 G5 C12 - 471.7749
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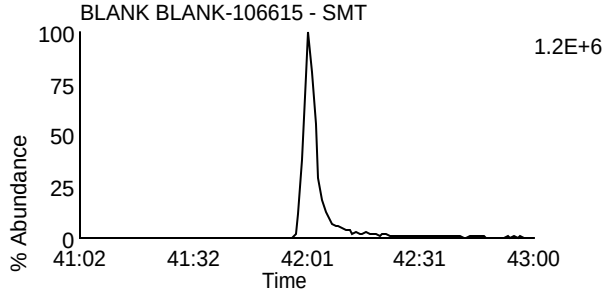
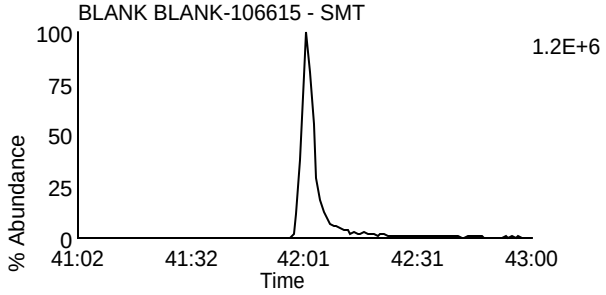
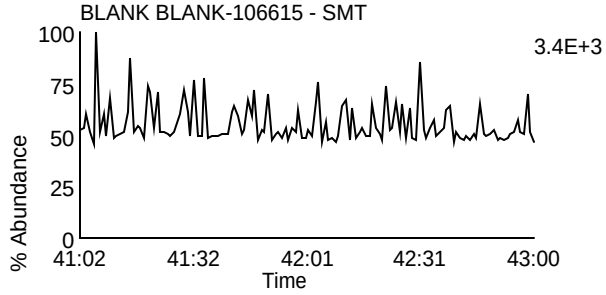


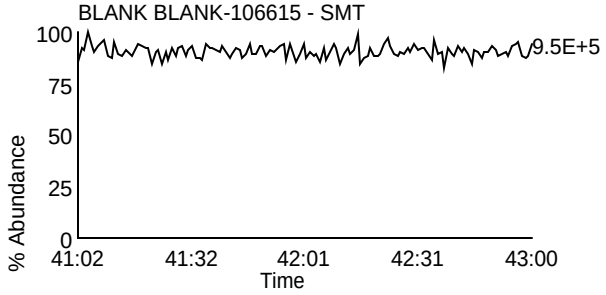
Data File: U230608B_10 G5 C12 - 471.7749
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G5 C13 - 513.6775
BLANK BLANK-106615 - SMT



Data File: U230608B_10 G5 C2 - 430.9728
BLANK BLANK-106615 - SMT

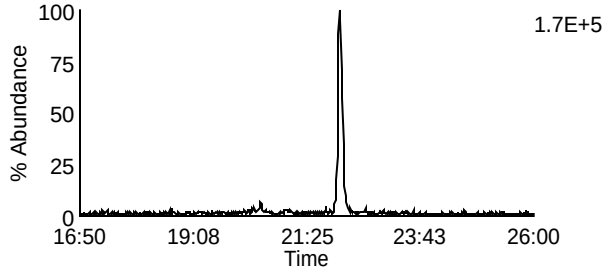


Homologue Group: Tetras

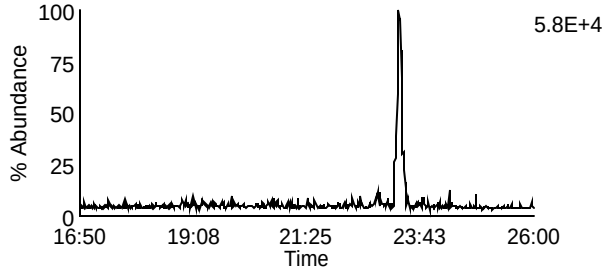
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

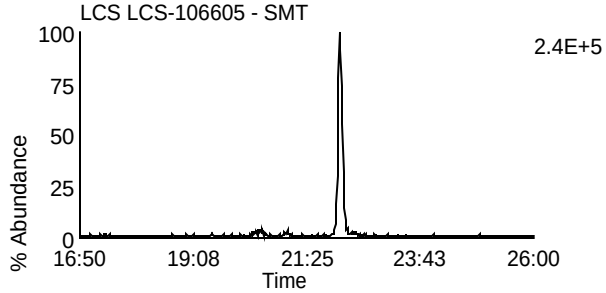
Data File: U230608A_02 G1 C1 - 303.9016
LCS LCS-106605 - SMT



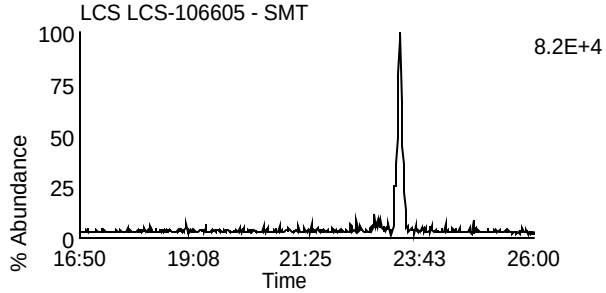
Data File: U230608A_02 G1 C7 - 319.8965
LCS LCS-106605 - SMT



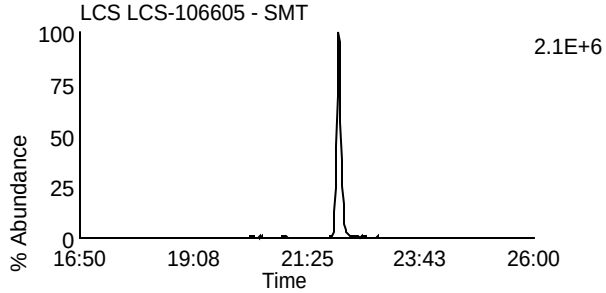
Data File: U230608A_02 G1 C2 - 305.8987
LCS LCS-106605 - SMT



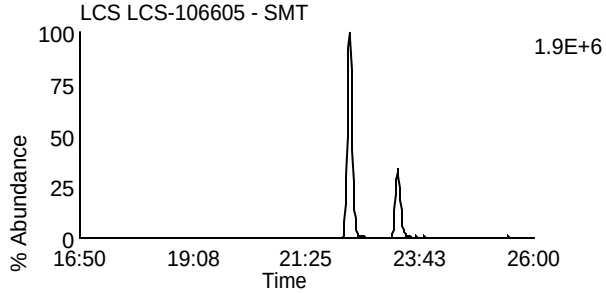
Data File: U230608A_02 G1 C8 - 321.8936
LCS LCS-106605 - SMT



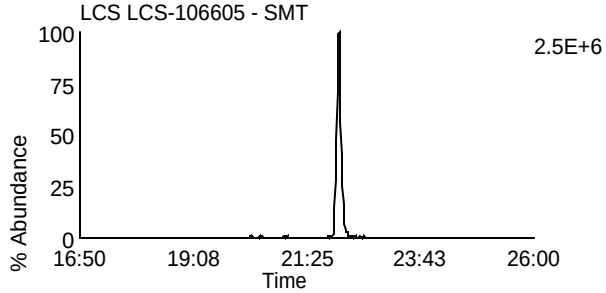
Data File: U230608A_02 G1 C3 - 315.9418
LCS LCS-106605 - SMT



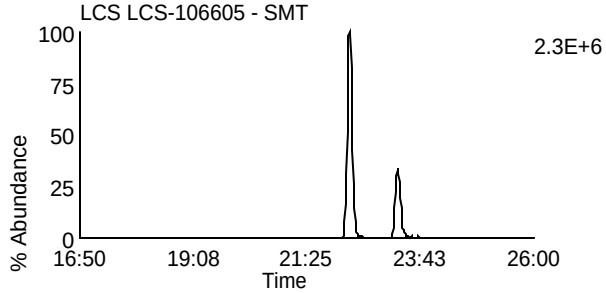
Data File: U230608A_02 G1 C10 - 331.9367
LCS LCS-106605 - SMT



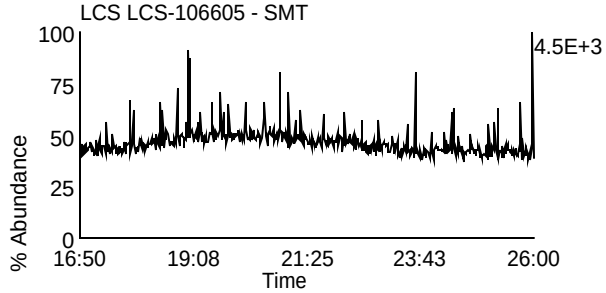
Data File: U230608A_02 G1 C4 - 317.9389
LCS LCS-106605 - SMT



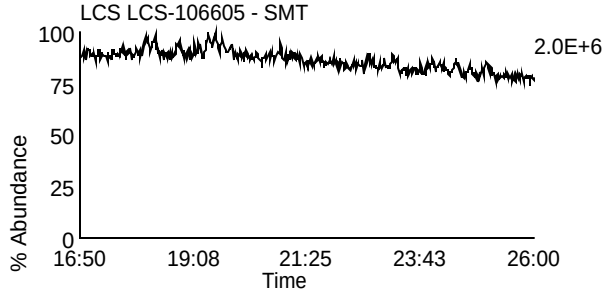
Data File: U230608A_02 G1 C11 - 333.9338
LCS LCS-106605 - SMT



Data File: U230608A_02 G1 C14 - 375.8364
LCS LCS-106605 - SMT



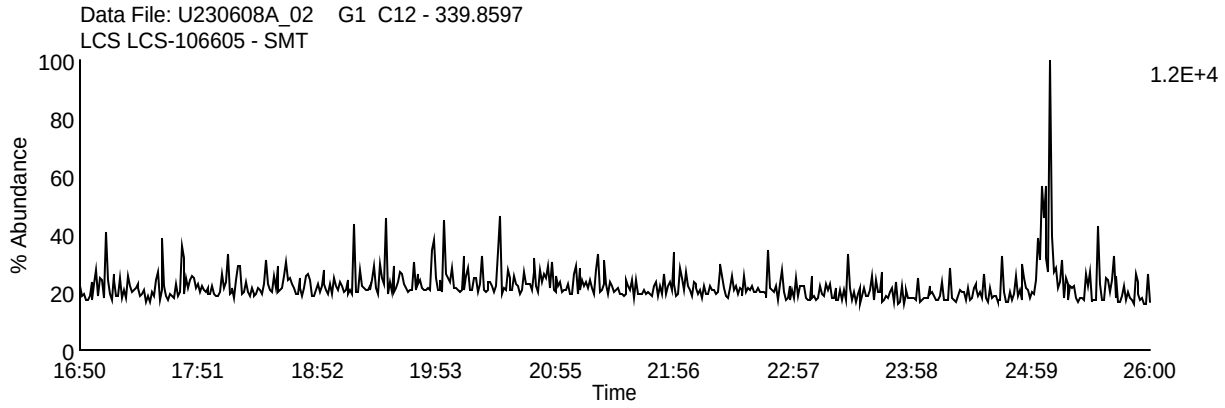
Data File: U230608A_02 G1 C5 - 318.9792
LCS LCS-106605 - SMT

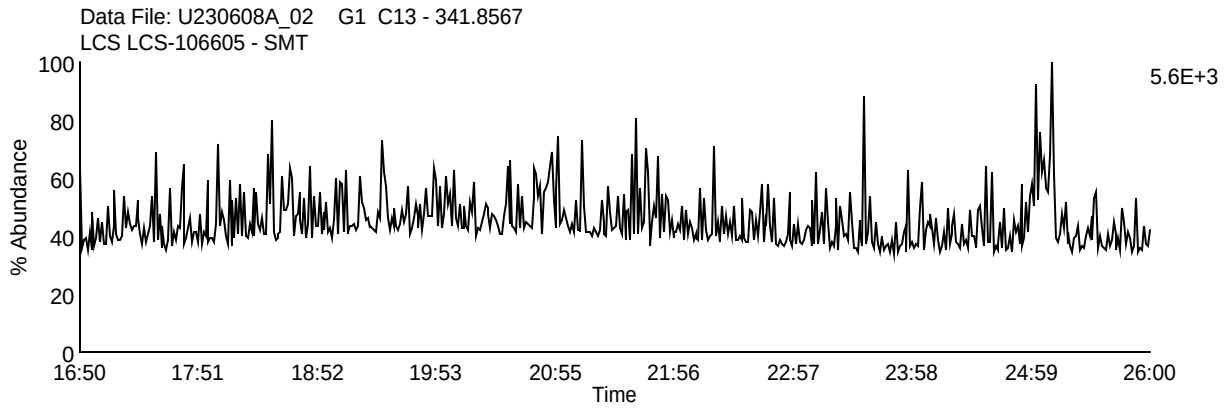


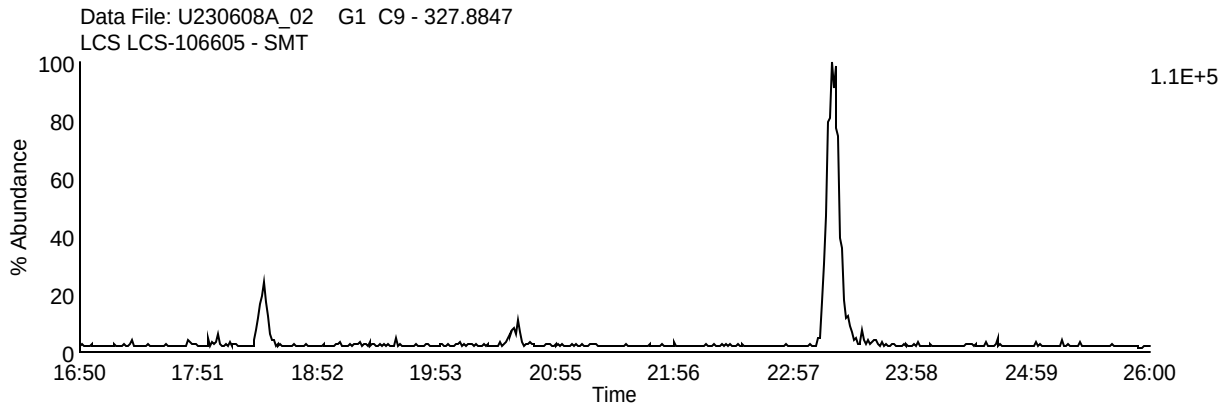
Homologue Group: Penta & Cleanup

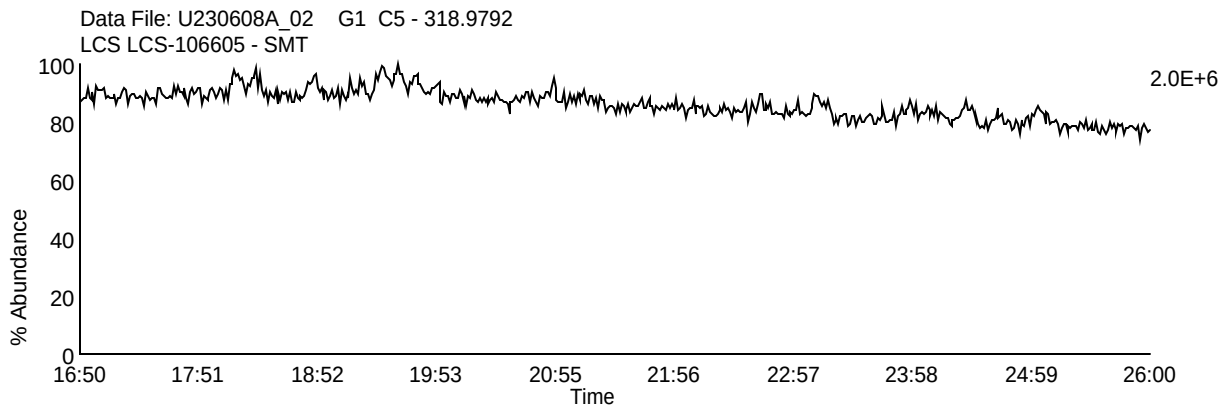
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)







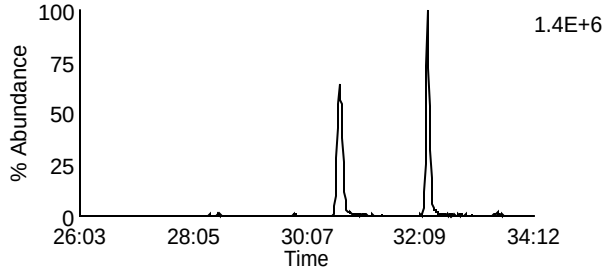


Homologue Group: Pentas

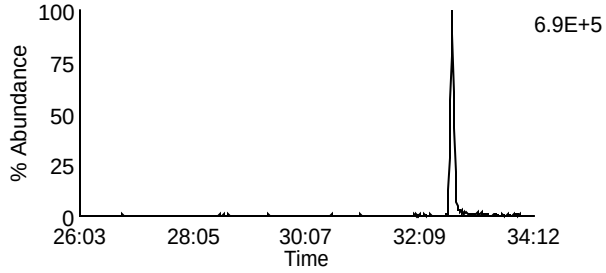
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

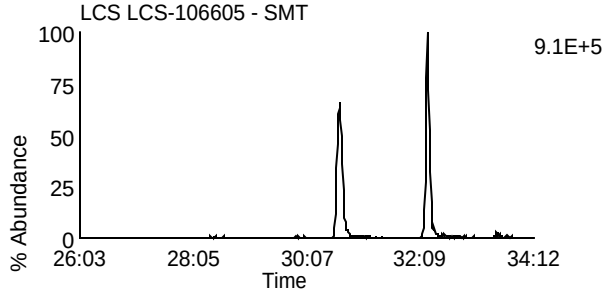
Data File: U230608A_02 G2 C1 - 339.8597
LCS LCS-106605 - SMT



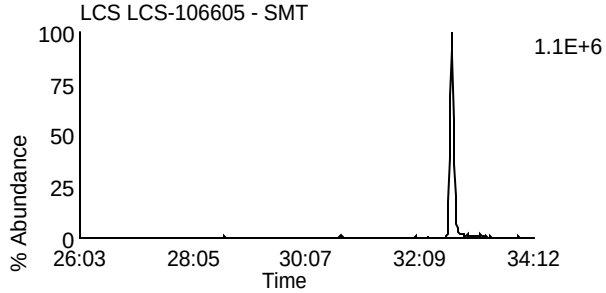
Data File: U230608A_02 G2 C4 - 353.8576
LCS LCS-106605 - SMT



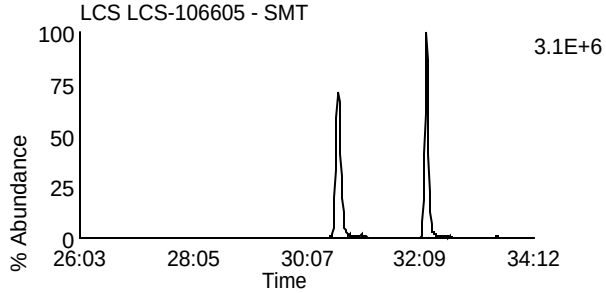
Data File: U230608A_02 G2 C2 - 341.8567
LCS LCS-106605 - SMT



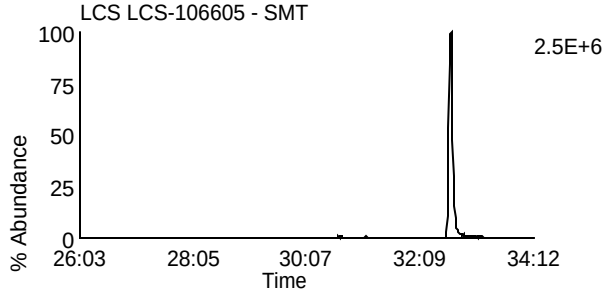
Data File: U230608A_02 G2 C8 - 355.8546
LCS LCS-106605 - SMT



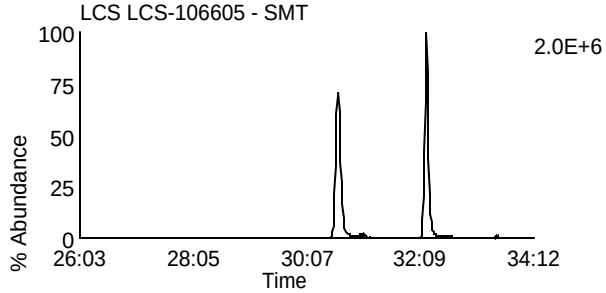
Data File: U230608A_02 G2 C3 - 351.8999
LCS LCS-106605 - SMT



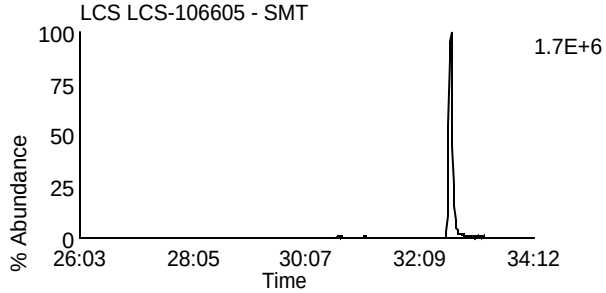
Data File: U230608A_02 G2 C10 - 367.8948
LCS LCS-106605 - SMT



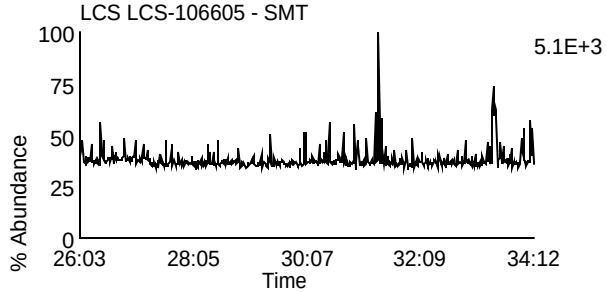
Data File: U230608A_02 G2 C5 - 353.8969
LCS LCS-106605 - SMT



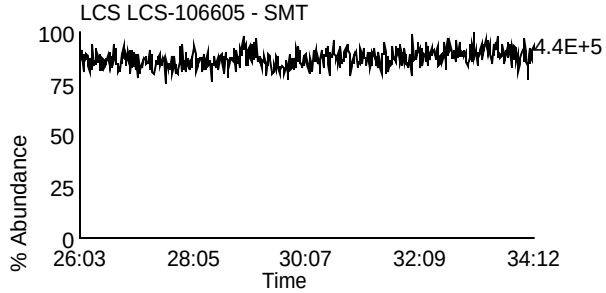
Data File: U230608A_02 G2 C11 - 369.8918
LCS LCS-106605 - SMT



Data File: U230608A_02 G2 C12 - 409.7974
LCS LCS-106605 - SMT



Data File: U230608A_02 G2 C6 - 354.9792
LCS LCS-106605 - SMT

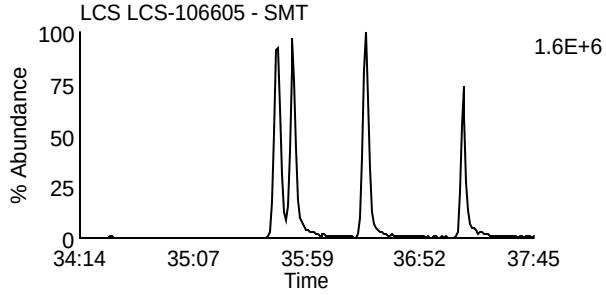


Homologue Group: Hexas

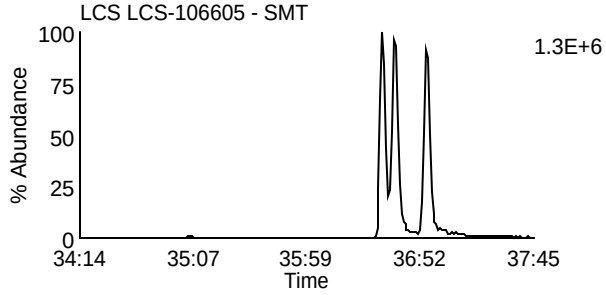
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

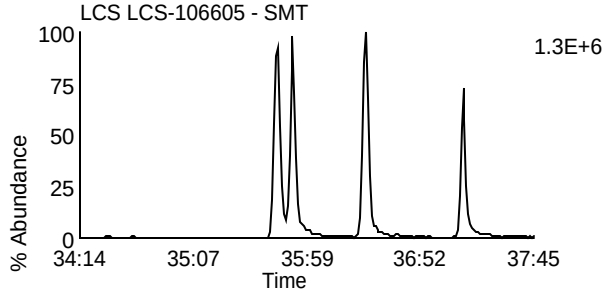
Data File: U230608A_02 G3 C1 - 373.8207
LCS LCS-106605 - SMT



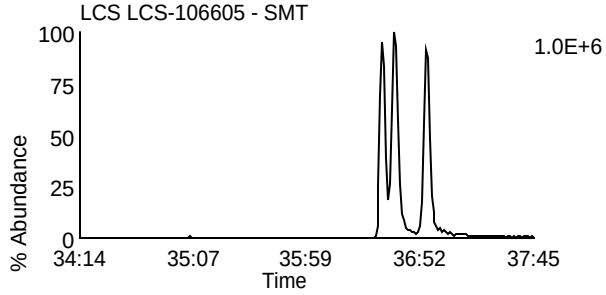
Data File: U230608A_02 G3 C7 - 389.8156
LCS LCS-106605 - SMT



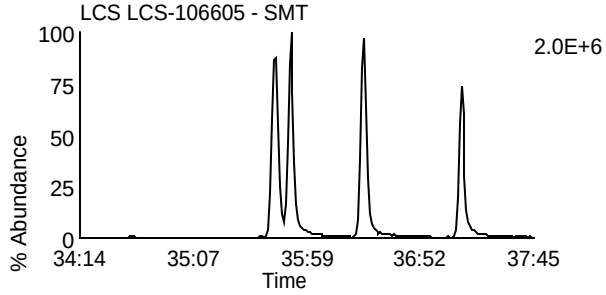
Data File: U230608A_02 G3 C2 - 375.8178
LCS LCS-106605 - SMT



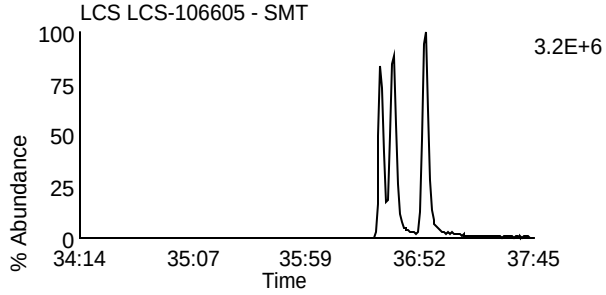
Data File: U230608A_02 G3 C8 - 391.8127
LCS LCS-106605 - SMT



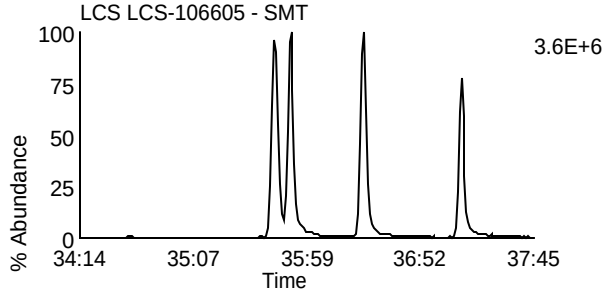
Data File: U230608A_02 G3 C5 - 383.8639
LCS LCS-106605 - SMT



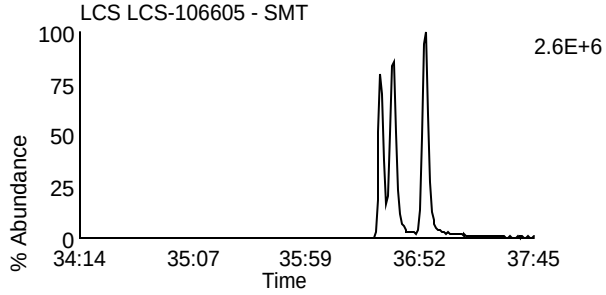
Data File: U230608A_02 G3 C9 - 401.8559
LCS LCS-106605 - SMT



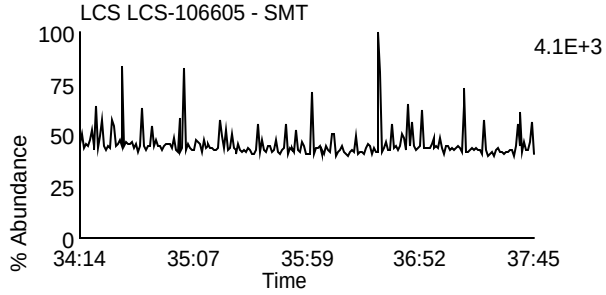
Data File: U230608A_02 G3 C6 - 385.861
LCS LCS-106605 - SMT



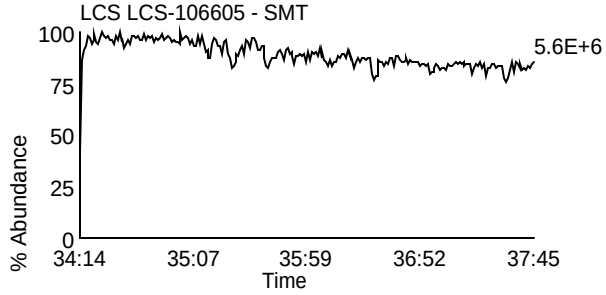
Data File: U230608A_02 G3 C10 - 403.8529
LCS LCS-106605 - SMT



Data File: U230608A_02 G3 C11 - 445.7555
LCS LCS-106605 - SMT



Data File: U230608A_02 G3 C3 - 380.976
LCS LCS-106605 - SMT

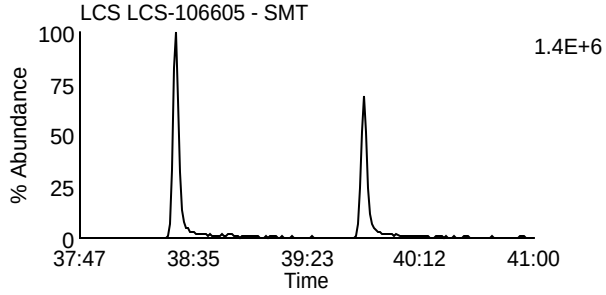


Homologue Group: Heptas

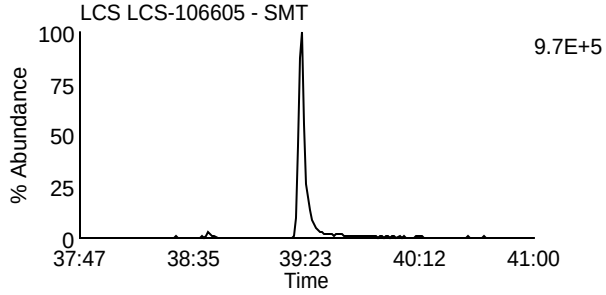
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

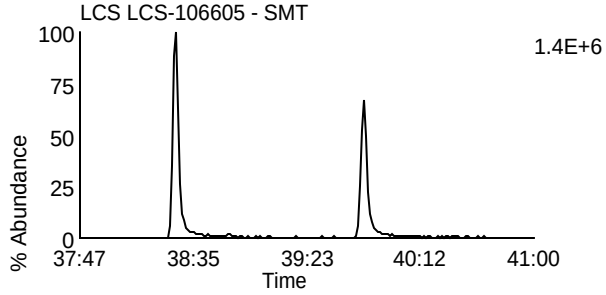
Data File: U230608A_02 G4 C3 - 407.7818
LCS LCS-106605 - SMT



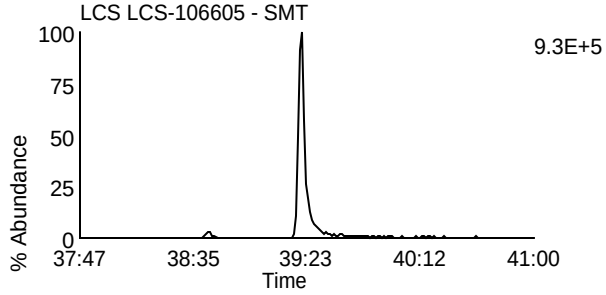
Data File: U230608A_02 G4 C8 - 423.7767
LCS LCS-106605 - SMT



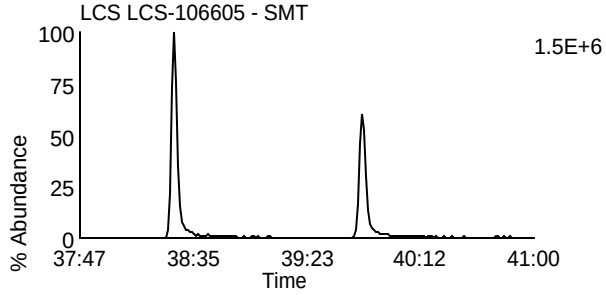
Data File: U230608A_02 G4 C4 - 409.7788
LCS LCS-106605 - SMT



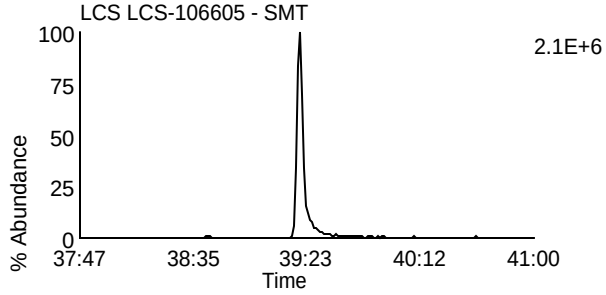
Data File: U230608A_02 G4 C9 - 425.7737
LCS LCS-106605 - SMT



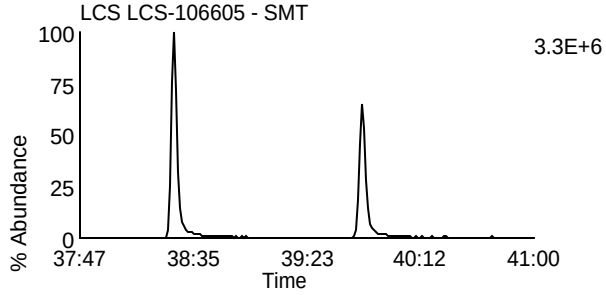
Data File: U230608A_02 G4 C6 - 417.825
LCS LCS-106605 - SMT



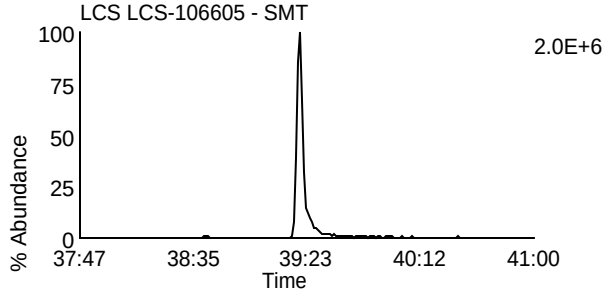
Data File: U230608A_02 G4 C11 - 435.8169
LCS LCS-106605 - SMT



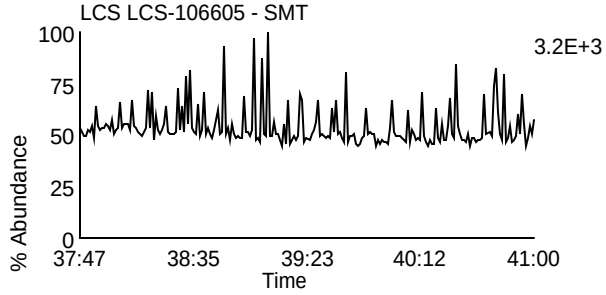
Data File: U230608A_02 G4 C7 - 419.822
LCS LCS-106605 - SMT



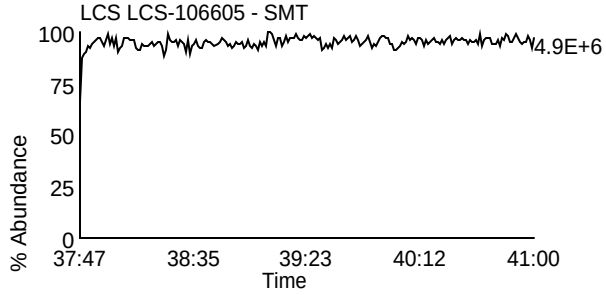
Data File: U230608A_02 G4 C12 - 437.814
LCS LCS-106605 - SMT



Data File: U230608A_02 G4 C13 - 479.7165
LCS LCS-106605 - SMT



Data File: U230608A_02 G4 C1 - 380.976
LCS LCS-106605 - SMT

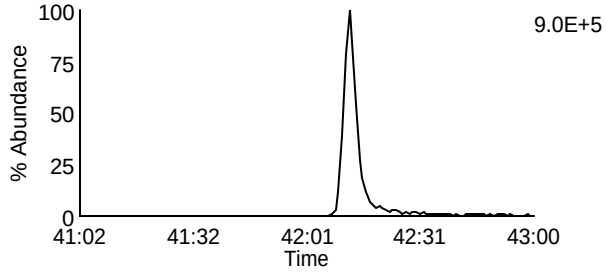


Homologue Group: Octas

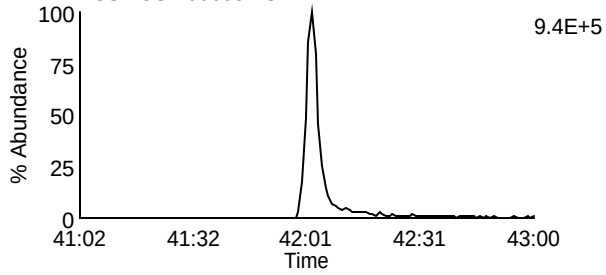
Data File Name: U230608A_02
Date Acquired: 6/8/2023
Sample Description: LCS LCS-106605 - SMT

Lab Sample ID: LCS-106605
Client Sample ID: DLCSRW
Instrument: 10MSHR06 (U)

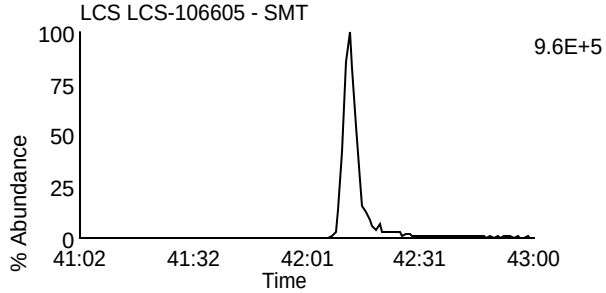
Data File: U230608A_02 G5 C4 - 441.7428
LCS LCS-106605 - SMT



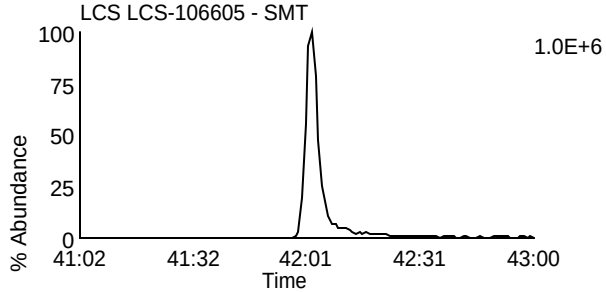
Data File: U230608A_02 G5 C8 - 457.7377
LCS LCS-106605 - SMT



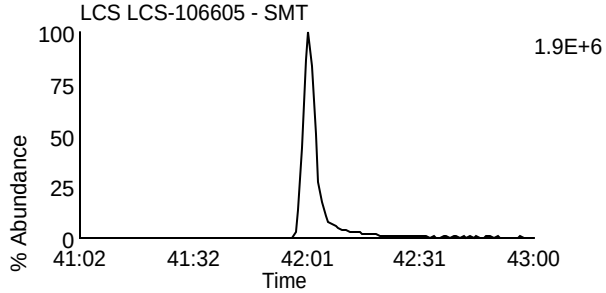
Data File: U230608A_02 G5 C5 - 443.7398
LCS LCS-106605 - SMT



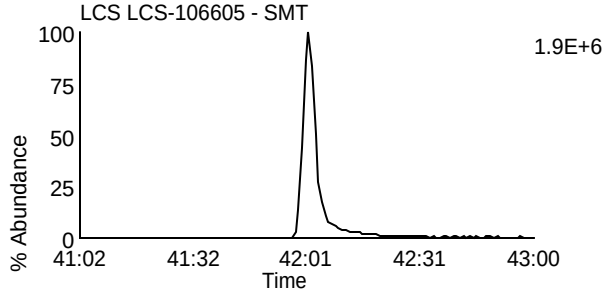
Data File: U230608A_02 G5 C9 - 459.7347
LCS LCS-106605 - SMT



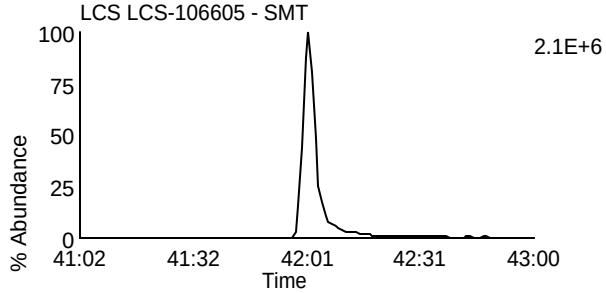
Data File: U230608A_02 G5 C11 - 469.7779
LCS LCS-106605 - SMT



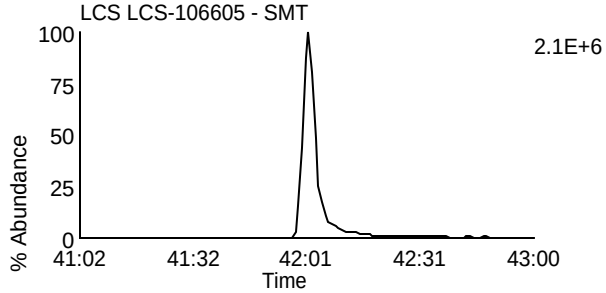
Data File: U230608A_02 G5 C11 - 469.7779
LCS LCS-106605 - SMT



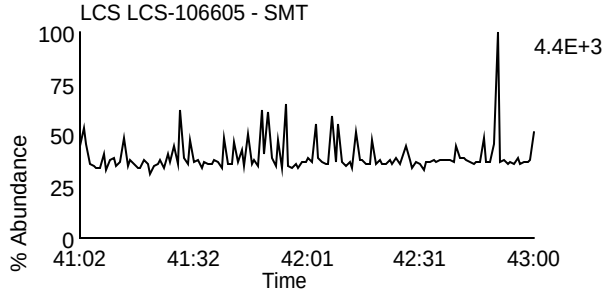
Data File: U230608A_02 G5 C12 - 471.7749
LCS LCS-106605 - SMT



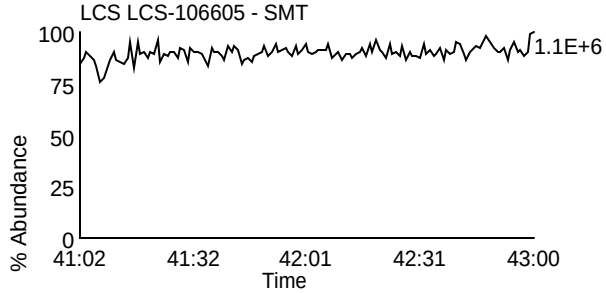
Data File: U230608A_02 G5 C12 - 471.7749
LCS LCS-106605 - SMT



Data File: U230608A_02 G5 C13 - 513.6775
LCS LCS-106605 - SMT



Data File: U230608A_02 G5 C2 - 430.9728
LCS LCS-106605 - SMT

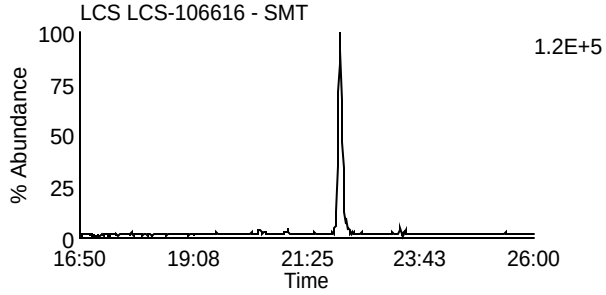


Homologue Group: Tetras

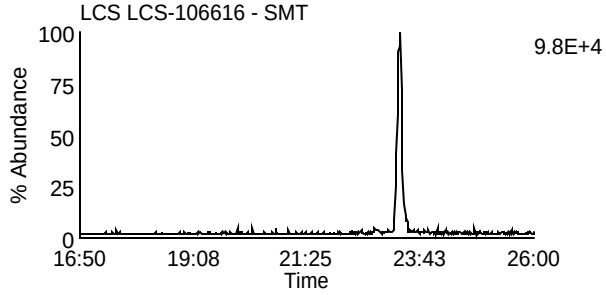
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

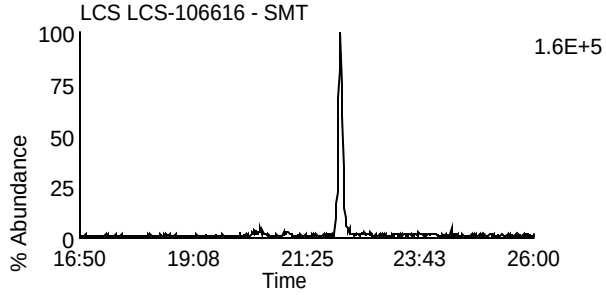
Data File: U230608B_06 G1 C1 - 303.9016
LCS LCS-106616 - SMT



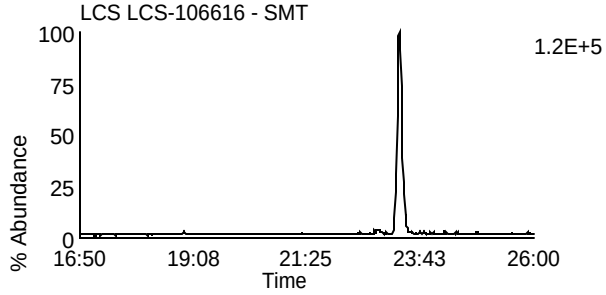
Data File: U230608B_06 G1 C7 - 319.8965
LCS LCS-106616 - SMT



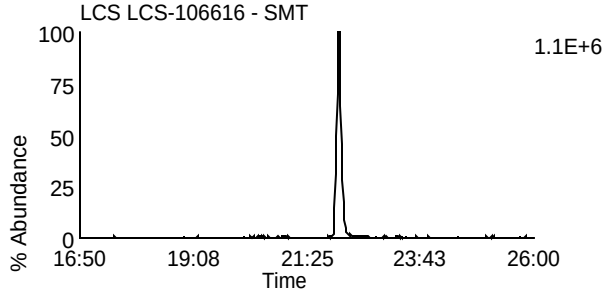
Data File: U230608B_06 G1 C2 - 305.8987
LCS LCS-106616 - SMT



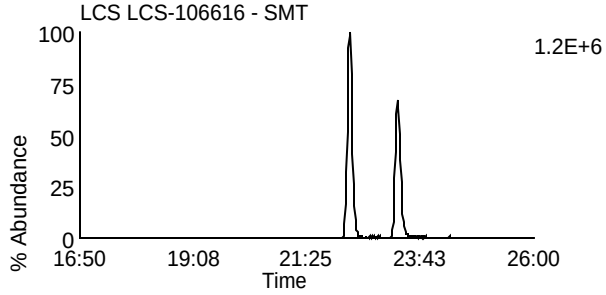
Data File: U230608B_06 G1 C8 - 321.8936
LCS LCS-106616 - SMT



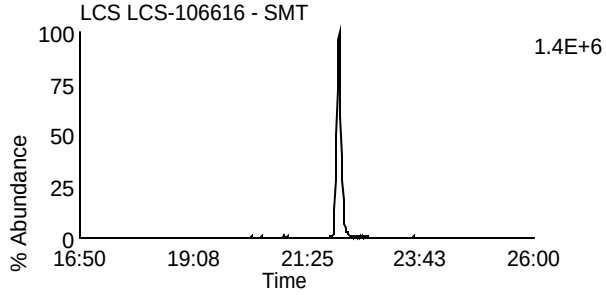
Data File: U230608B_06 G1 C3 - 315.9418
LCS LCS-106616 - SMT



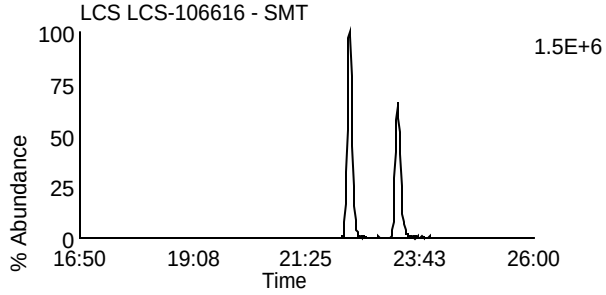
Data File: U230608B_06 G1 C10 - 331.9367
LCS LCS-106616 - SMT



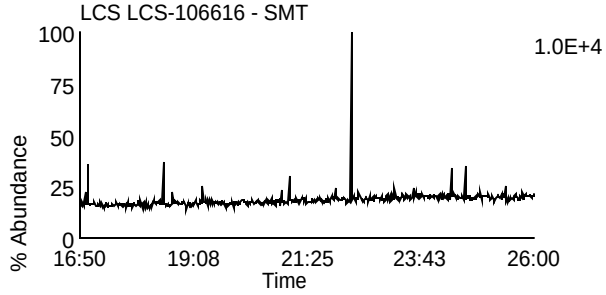
Data File: U230608B_06 G1 C4 - 317.9389
LCS LCS-106616 - SMT



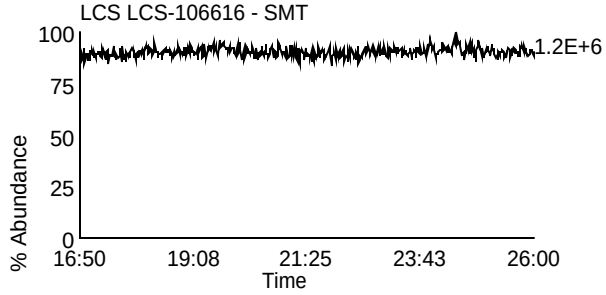
Data File: U230608B_06 G1 C11 - 333.9338
LCS LCS-106616 - SMT



Data File: U230608B_06 G1 C14 - 375.8364
LCS LCS-106616 - SMT



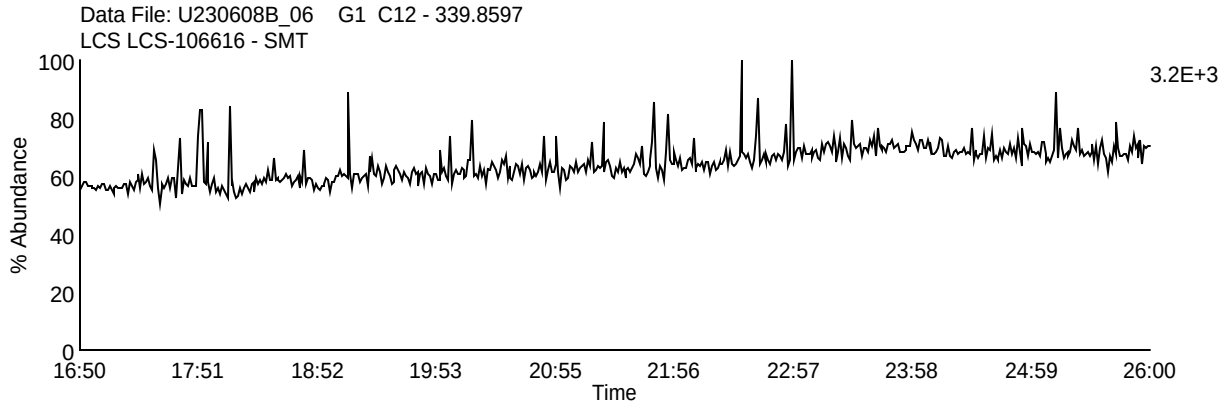
Data File: U230608B_06 G1 C5 - 318.9792
LCS LCS-106616 - SMT

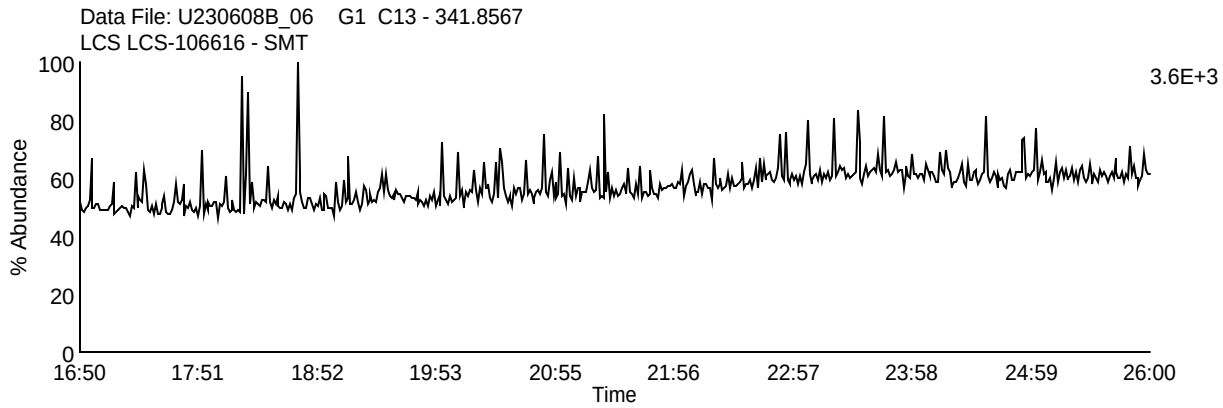


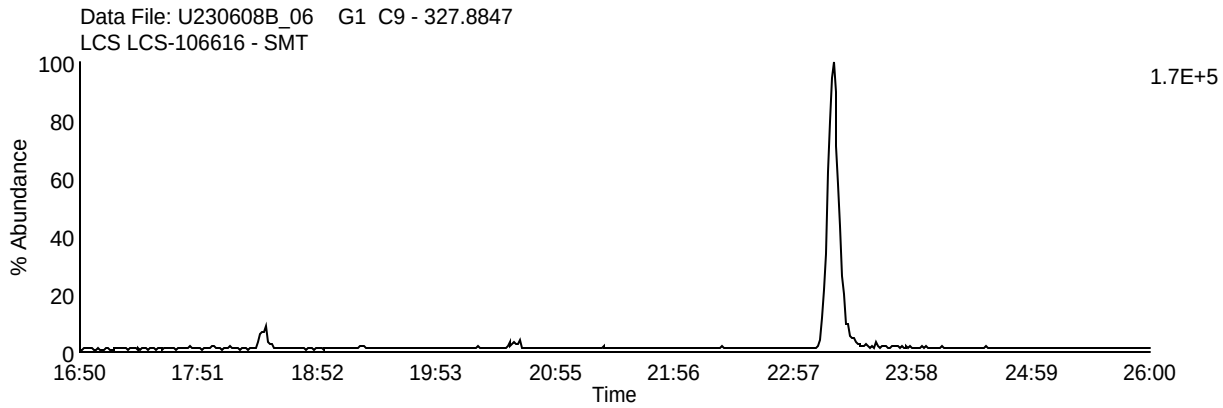
Homologue Group: Penta & Cleanup

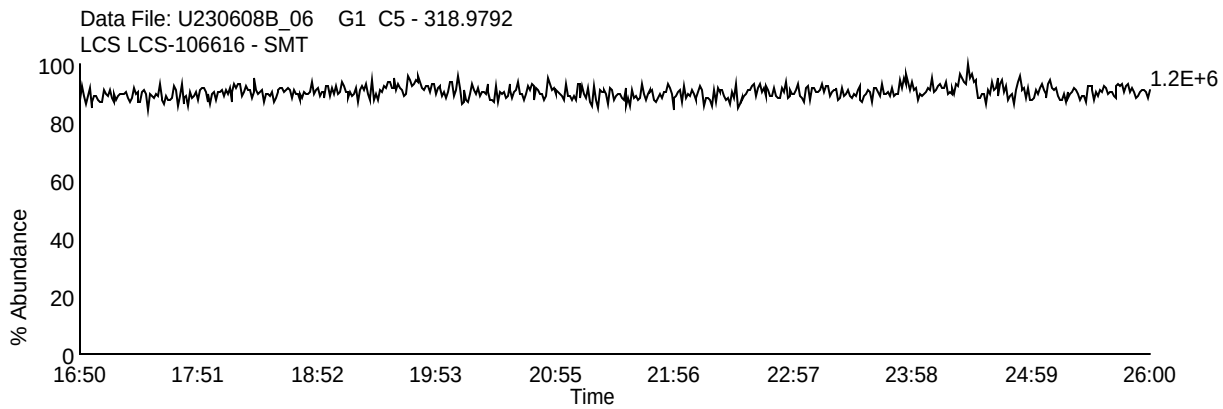
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)







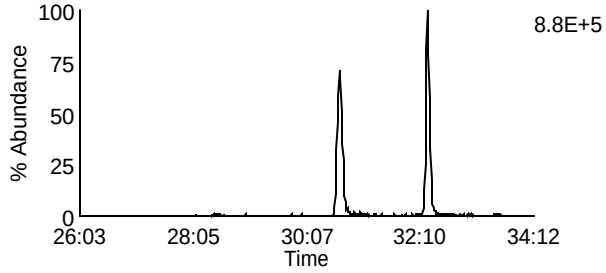


Homologue Group: Pentas

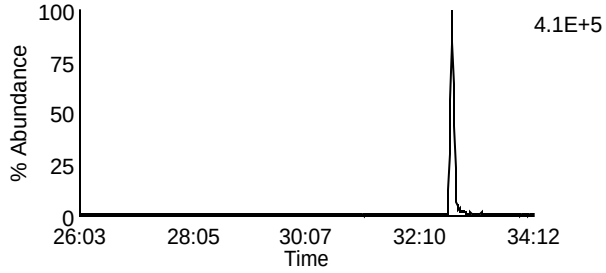
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

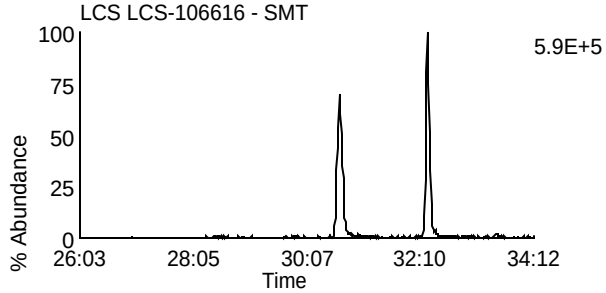
Data File: U230608B_06 G2 C1 - 339.8597
LCS LCS-106616 - SMT



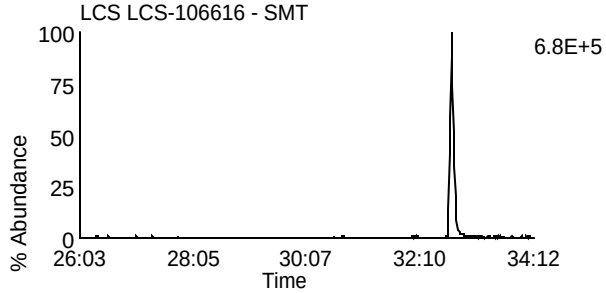
Data File: U230608B_06 G2 C4 - 353.8576
LCS LCS-106616 - SMT



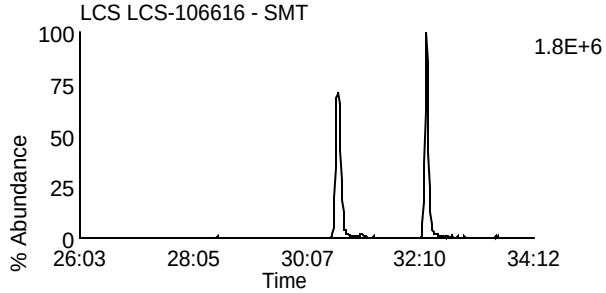
Data File: U230608B_06 G2 C2 - 341.8567
LCS LCS-106616 - SMT



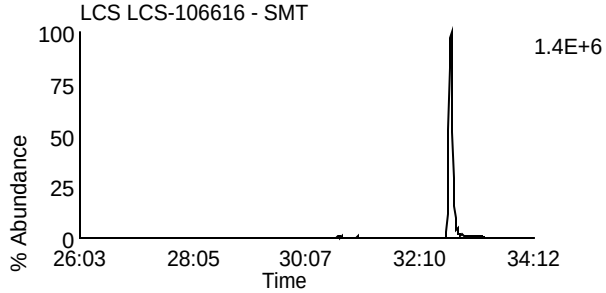
Data File: U230608B_06 G2 C8 - 355.8546
LCS LCS-106616 - SMT



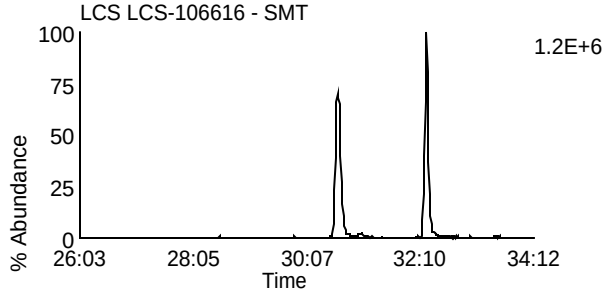
Data File: U230608B_06 G2 C3 - 351.8999
LCS LCS-106616 - SMT



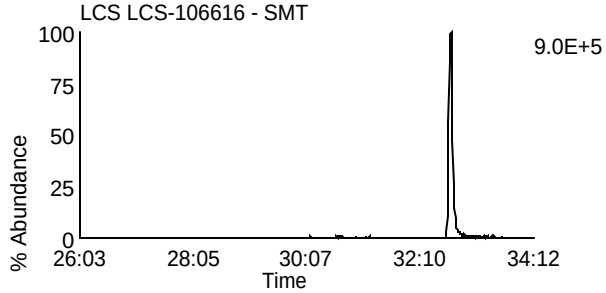
Data File: U230608B_06 G2 C10 - 367.8948
LCS LCS-106616 - SMT



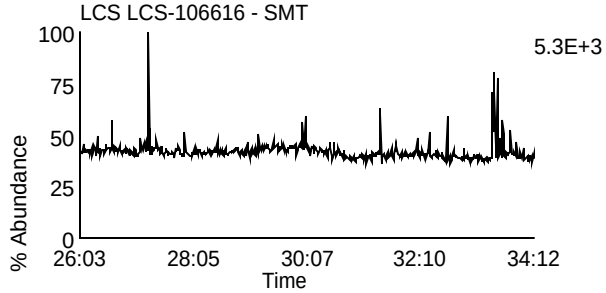
Data File: U230608B_06 G2 C5 - 353.8969
LCS LCS-106616 - SMT



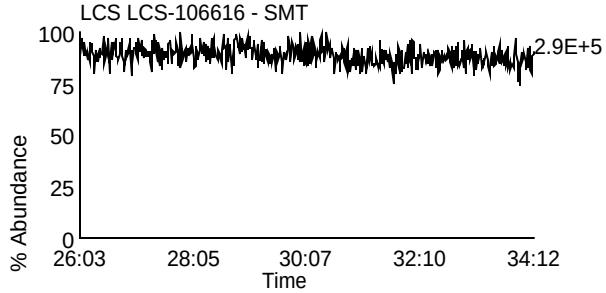
Data File: U230608B_06 G2 C11 - 369.8918
LCS LCS-106616 - SMT



Data File: U230608B_06 G2 C12 - 409.7974
LCS LCS-106616 - SMT



Data File: U230608B_06 G2 C6 - 354.9792
LCS LCS-106616 - SMT

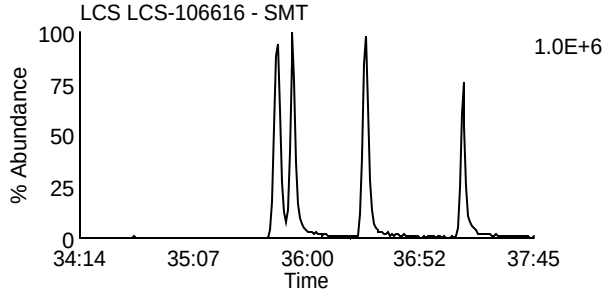


Homologue Group: Hexas

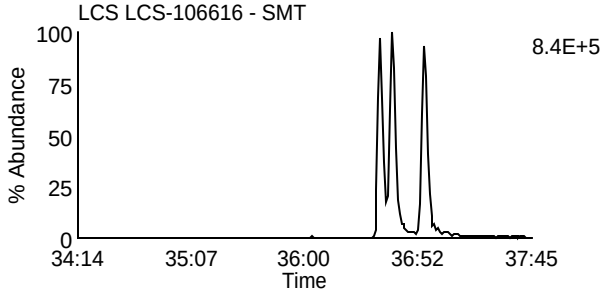
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

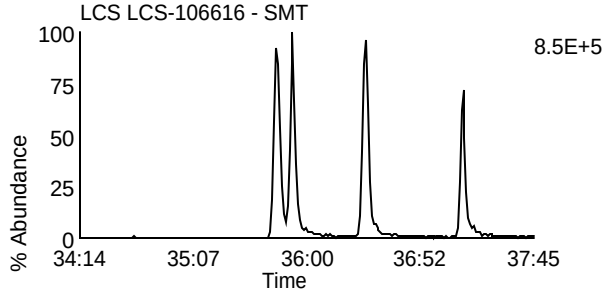
Data File: U230608B_06 G3 C1 - 373.8207
LCS LCS-106616 - SMT



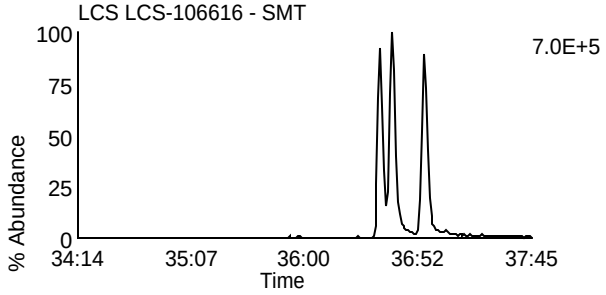
Data File: U230608B_06 G3 C7 - 389.8156
LCS LCS-106616 - SMT



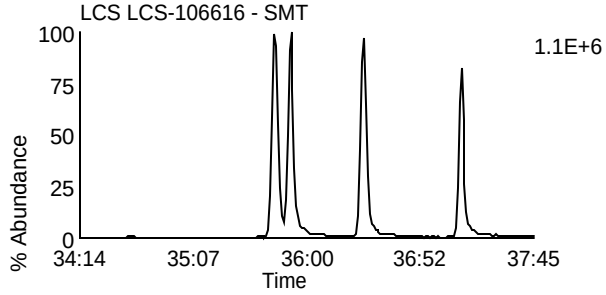
Data File: U230608B_06 G3 C2 - 375.8178
LCS LCS-106616 - SMT



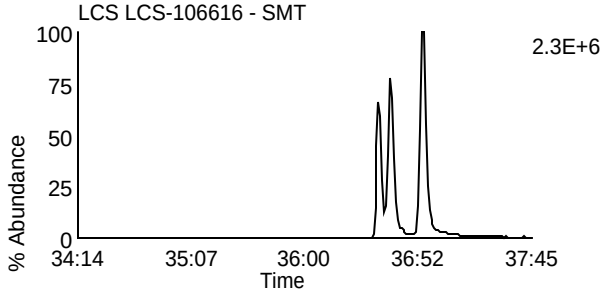
Data File: U230608B_06 G3 C8 - 391.8127
LCS LCS-106616 - SMT



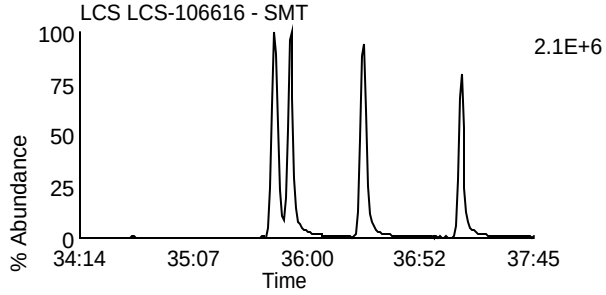
Data File: U230608B_06 G3 C5 - 383.8639
LCS LCS-106616 - SMT



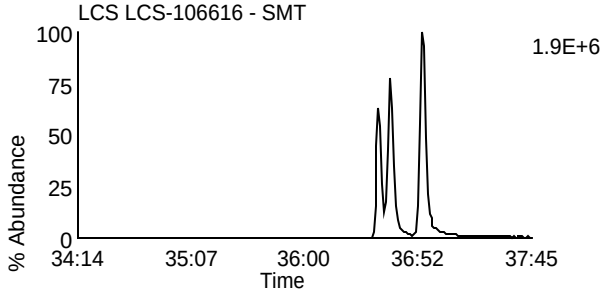
Data File: U230608B_06 G3 C9 - 401.8559
LCS LCS-106616 - SMT



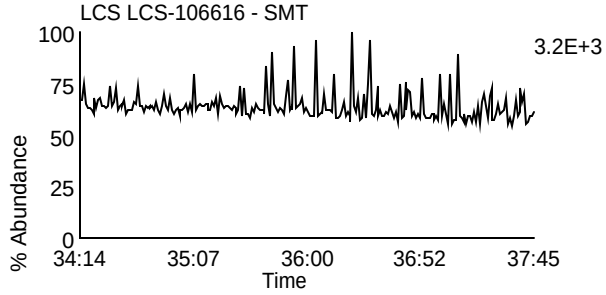
Data File: U230608B_06 G3 C6 - 385.861
LCS LCS-106616 - SMT



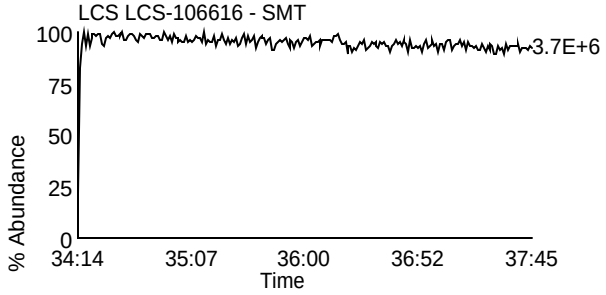
Data File: U230608B_06 G3 C10 - 403.8529
LCS LCS-106616 - SMT



Data File: U230608B_06 G3 C11 - 445.7555
LCS LCS-106616 - SMT



Data File: U230608B_06 G3 C3 - 380.976
LCS LCS-106616 - SMT

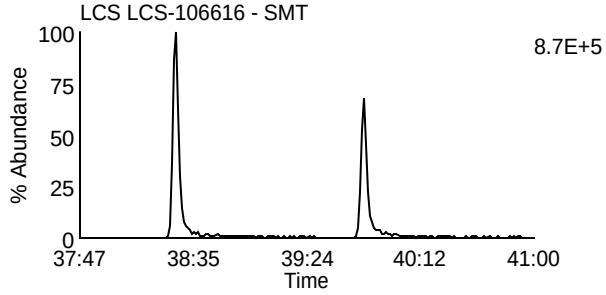


Homologue Group: Heptas

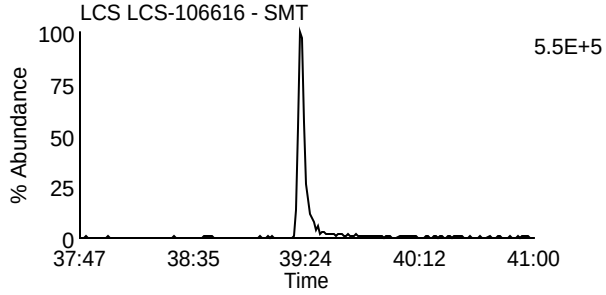
Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

Data File: U230608B_06 G4 C3 - 407.7818
LCS LCS-106616 - SMT



Data File: U230608B_06 G4 C8 - 423.7767
LCS LCS-106616 - SMT



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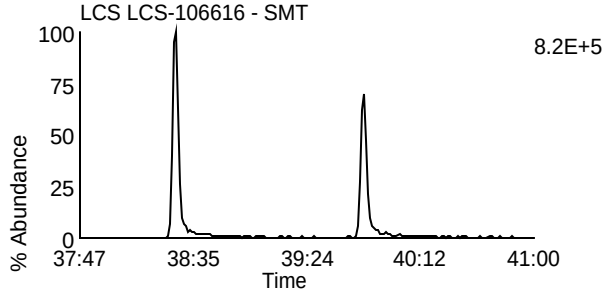
LCS LCS-106616 - SMT



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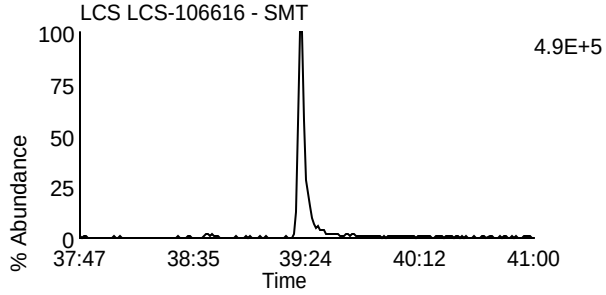
LCS LCS-106616 - SMT



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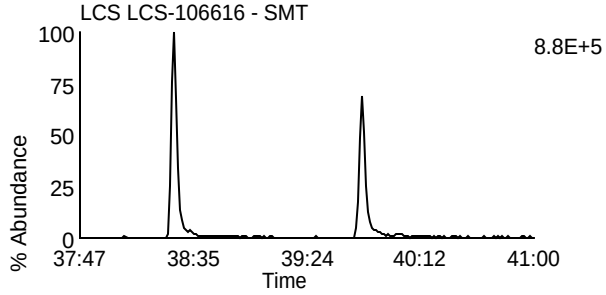
LCS LCS-106616 - SMT



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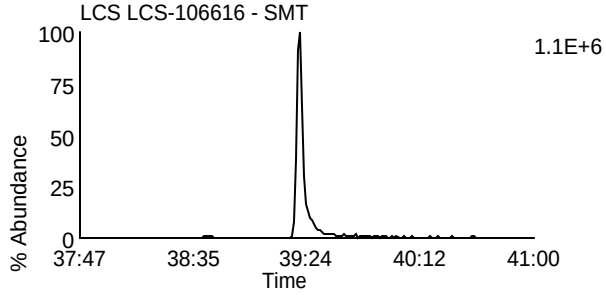
LCS LCS-106616 - SMT



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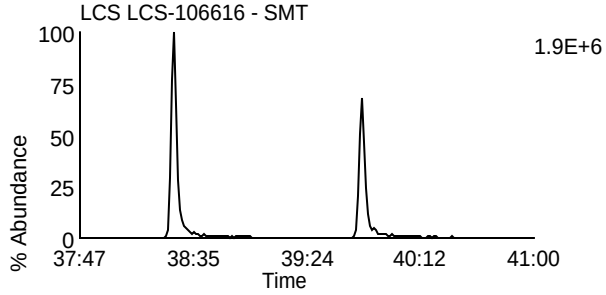
LCS LCS-106616 - SMT



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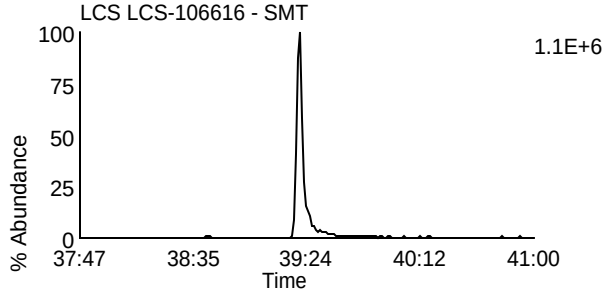
LCS LCS-106616 - SMT



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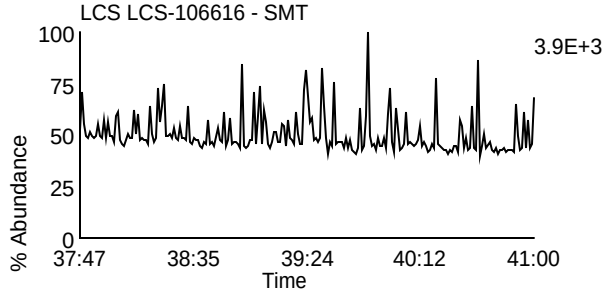

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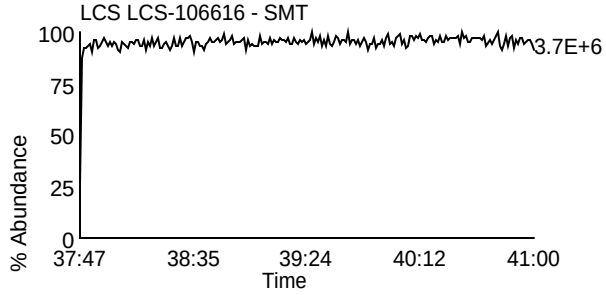
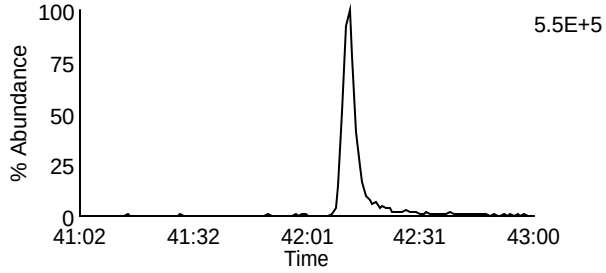


Homologue Group: Octas

Data File Name: U230608B_06
Date Acquired: 6/9/2023
Sample Description: LCS LCS-106616 - SMT

Lab Sample ID: LCS-106616
Client Sample ID: DLCSSD
Instrument: 10MSHR06 (U)

Data File: U230608B_06 G5 C4 - 441.7428
LCS LCS-106616 - SMT



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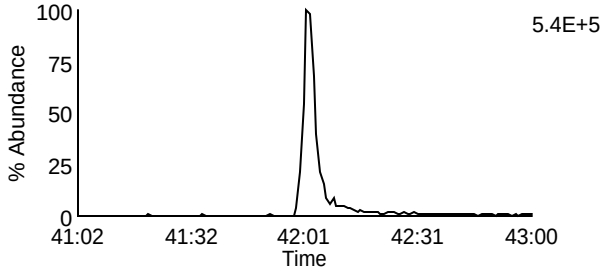
LCS LCS-106616 - SMT



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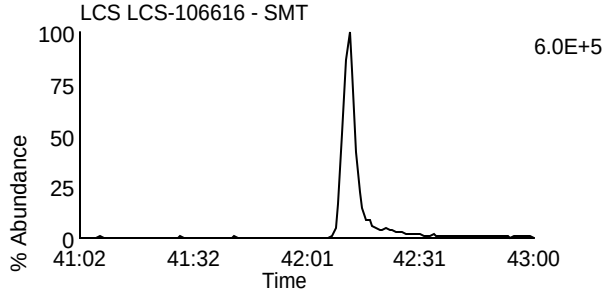
LCS LCS-106616 - SMT



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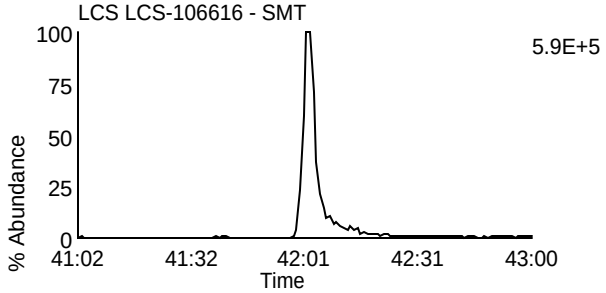
LCS LCS-106616 - SMT



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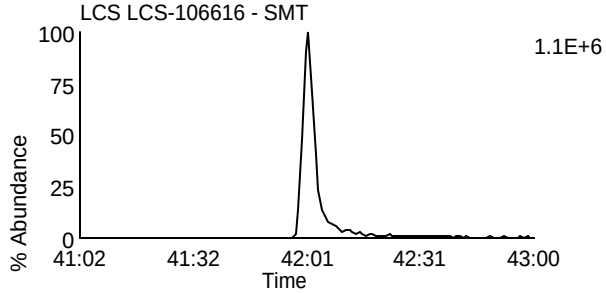
LCS LCS-106616 - SMT



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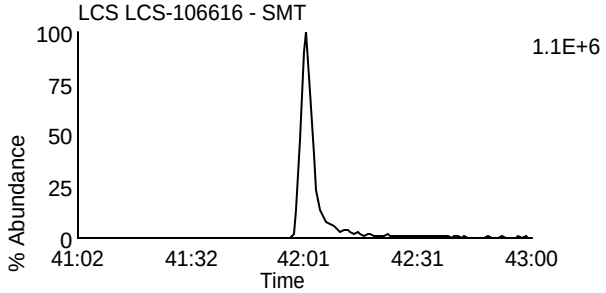

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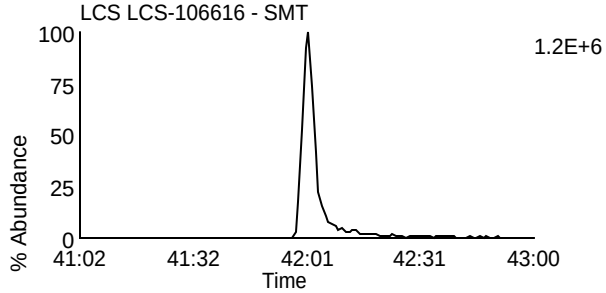
LCS LCS-106616 - SMT



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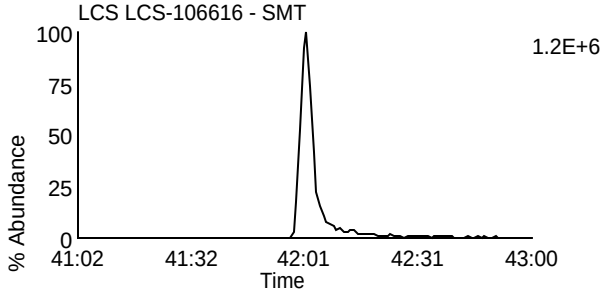
LCS LCS-106616 - SMT



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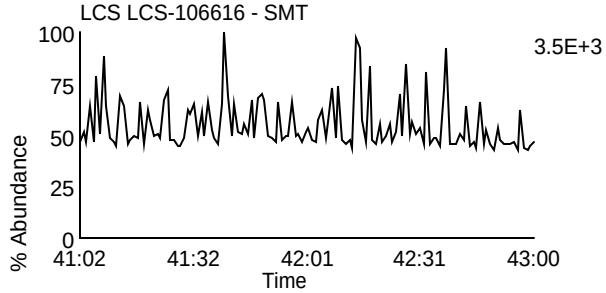

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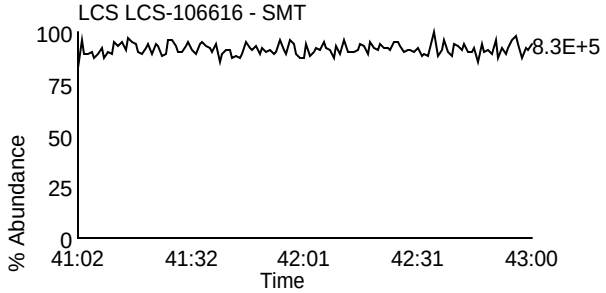

Pace Analytical Services, LLC
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Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy_____ Date _____

Client ID	DFBLKTO	Injected By	SMT
Lab ID	BLANK-106604	Instrument ID	10MSHR06 (U)
Filename	U230608A_04	GC Column ID	US1246423H
Analyzed	06/08/2023 04:57	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:04	1.22e7	1.57e7	1.82e6	2.30e6	3.792e3	2.293e3	0.78	
2,3,7,8-TCDF	22:06	ND	ND	ND	ND	3.389e2	4.452e2		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:18	1.23e7	1.56e7	1.81e6	2.33e6	2.075e3	2.289e3	0.79	
2,3,7,8-TCDD-13C	23:16	6.47e6	8.08e6	9.10e5	1.09e6	2.102e3	3.064e3	0.80	
2,3,7,8-TCDD-37Cl4	23:18	1.19e6		1.62e5		5.796e2	-----		
2,3,7,8-TCDD	23:18	ND	ND	ND	ND	3.622e2	2.888e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	1.32e7	8.64e6	2.00e6	1.32e6	6.415e3	4.718e3	1.52	
2,3,4,7,8-PeCDF-13C	32:17	1.35e7	8.79e6	2.80e6	1.78e6	1.261e4	1.263e4	1.53	
1,2,3,7,8-PeCDF	30:42	ND	ND	ND	ND	3.322e2	3.451e2		
2,3,4,7,8-PeCDF	32:19	ND	ND	ND	ND	4.412e2	3.217e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:42	1.12e7	7.03e6	2.44e6	1.63e6	1.918e3	3.029e3	1.59	
1,2,3,7,8-PeCDD	32:44	ND	ND	ND	ND	3.038e2	4.714e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	5.63e6	1.03e7	1.72e6	3.29e6	1.263e4	1.001e3	0.55	
1,2,3,6,7,8-HxCDF-13C	35:53	5.98e6	1.22e7	1.67e6	3.31e6	2.771e2	8.573e2	0.49	
2,3,4,6,7,8-HxCDF-13C	36:26	5.52e6	1.02e7	1.70e6	3.19e6	1.193e3	2.450e2	0.54	
1,2,3,7,8,9-HxCDF-13C	37:12	4.28e6	8.55e6	1.36e6	2.72e6	3.336e3	6.047e3	0.50	
1,2,3,4,7,8-HxCDF	35:46	ND	ND	ND	ND	7.428e2	4.723e2		
1,2,3,6,7,8-HxCDF	35:54	ND	ND	ND	ND	8.033e2	3.066e2		
2,3,4,6,7,8-HxCDF	36:27	ND	ND	ND	ND	8.399e2	3.066e2		
1,2,3,7,8,9-HxCDF	37:12	ND	ND	ND	ND	5.708e2	3.559e2		

REPORT OF LABORATORY ANALYSIS

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Fax: 612- 607-6444

Client ID	DFBLKTO	Injected By	SMT
Lab ID	BLANK-106604	Instrument ID	10MSHR06 (U)
Filename	U230608A_04	GC Column ID	US1246423H
Analyzed	06/08/2023 04:57	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	(M)7.03e6	5.58e6	2.54e6	2.13e6	1.543e3	2.234e3	1.26	
1,2,3,6,7,8-HxCDD-13C	36:40	(M)9.36e6	7.40e6	2.61e6	2.18e6	1.226e3	1.511e3	1.27	
1,2,3,7,8,9-HxCDD-13C	36:54	(M)1.05e7	8.49e6	3.13e6	2.51e6	6.795e3	6.926e3	1.24	
1,2,3,4,7,8-HxCDD	36:34	(M)1.03e4	(M)6.71e3	2.26e3	1.82e3	6.349e2	4.542e2	1.53	I
1,2,3,6,7,8-HxCDD	36:41	ND	ND	ND	ND	5.714e2	6.104e2		
1,2,3,7,8,9-HxCDD	36:55	ND	ND	ND	ND	4.181e2	6.152e2		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:28	(M)4.33e6	9.93e6	1.46e6	3.16e6	2.919e2	7.250e2	0.44	
1,2,3,4,7,8,9-HpCDF-13C	39:48	(M)3.05e6	6.79e6	9.33e5	2.00e6	4.318e3	3.125e3	0.45	
1,2,3,4,6,7,8-HpCDF	38:29	ND	ND	ND	ND	1.687e3	8.780e2		
1,2,3,4,7,8,9-HpCDF	39:49	ND	ND	ND	ND	1.815e3	1.174e3		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:22	6.38e6	6.08e6	1.91e6	1.71e6	1.131e4	4.590e3	1.05	
1,2,3,4,6,7,8-HpCDD	39:23	(M)9.98e3	(M)9.80e3	3.38e3	3.87e3	5.284e2	6.347e2	1.02	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:11	(M)4.30e3	(M)4.32e3	1.16e3	1.91e3	3.392e2	5.555e2	1.00	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:03	7.14e6	8.21e6	1.79e6	2.01e6	3.531e2	3.854e2	0.87	
OCDD	42:03	(M)4.78e4	(M)5.35e4	1.64e4	1.41e4	1.035e3	1.071e3	0.89	

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID	DFBLKTS	Injected By	SMT
Lab ID	BLANK-106615	Instrument ID	10MSHR06 (U)
Filename	U230608B_10	GC Column ID	US1246423H
Analyzed	06/09/2023 04:58	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:03	7.49e6	9.27e6	1.19e6	1.41e6	3.721e3	1.931e3	0.81	
2,3,7,8-TCDF	22:05	ND	ND	ND	ND	2.102e2	1.825e2		

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:18	7.23e6	8.95e6	1.09e6	1.37e6	1.824e3	1.587e3	0.81	
2,3,7,8-TCDD-13C	23:15	5.22e6	6.48e6	7.68e5	9.30e5	1.592e3	2.529e3	0.81	
2,3,7,8-TCDD-37Cl4	23:17	1.11e6		1.45e5		7.204e2	-----		
2,3,7,8-TCDD	23:16	ND	ND	ND	ND	2.683e2	2.140e2		

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	8.21e6	5.26e6	1.29e6	8.53e5	1.006e3	3.769e2	1.56	
2,3,4,7,8-PeCDF-13C	32:16	8.18e6	5.24e6	1.65e6	1.07e6	4.414e3	4.406e3	1.56	
1,2,3,7,8-PeCDF	30:42	ND	ND	ND	ND	3.174e2	2.301e2		
2,3,4,7,8-PeCDF	32:18	ND	ND	ND	ND	2.649e2	2.366e2		

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	6.33e6	4.12e6	1.33e6	9.01e5	7.664e3	3.561e3	1.53	
1,2,3,7,8-PeCDD	32:43	ND	ND	ND	ND	2.846e2	1.927e2		

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	3.52e6	6.71e6	1.11e6	2.14e6	6.824e2	5.003e2	0.52	
1,2,3,6,7,8-HxCDF-13C	35:52	4.05e6	7.65e6	1.25e6	2.38e6	4.044e2	5.003e2	0.53	
2,3,4,6,7,8-HxCDF-13C	36:26	3.58e6	6.94e6	1.18e6	2.23e6	3.473e2	5.920e3	0.52	
1,2,3,7,8,9-HxCDF-13C	37:11	2.85e6	5.32e6	8.73e5	1.70e6	4.157e3	3.619e3	0.54	
1,2,3,4,7,8-HxCDF	35:46	ND	ND	ND	ND	2.099e2	2.215e2		
1,2,3,6,7,8-HxCDF	35:54	ND	ND	ND	ND	2.501e2	2.215e2		
2,3,4,6,7,8-HxCDF	36:27	ND	ND	ND	ND	1.864e2	2.215e2		
1,2,3,7,8,9-HxCDF	37:12	ND	ND	ND	ND	2.534e2	2.592e2		

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Minneapolis, MN 55414

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Fax: 612- 607-6444

Client ID	DFBLKTS	Injected By	SMT
Lab ID	BLANK-106615	Instrument ID	10MSHR06 (U)
Filename	U230608B_10	GC Column ID	US1246423H
Analyzed	06/09/2023 04:58	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:35	4.59e6	3.64e6	1.47e6	1.16e6	1.372e3	1.160e3	1.26	
1,2,3,6,7,8-HxCDD-13C	36:40	5.72e6	4.54e6	1.79e6	1.38e6	6.847e2	1.160e3	1.26	
1,2,3,7,8,9-HxCDD-13C	36:54	6.45e6	5.60e6	2.05e6	1.67e6	5.455e3	9.839e3	1.15	
1,2,3,4,7,8-HxCDD	36:35	ND	ND	ND	ND	3.291e2	3.427e2		
1,2,3,6,7,8-HxCDD	36:41	ND	ND	ND	ND	5.487e2	4.725e2		
1,2,3,7,8,9-HxCDD	36:55	ND	ND	ND	ND	4.249e2	4.007e2		

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	2.77e6	(M)5.75e6	8.96e5	1.98e6	2.329e3	2.933e3	0.48	
1,2,3,4,7,8,9-HpCDF-13C	39:47	1.93e6	4.17e6	5.94e5	1.26e6	2.735e3	3.842e3	0.46	
1,2,3,4,6,7,8-HpCDF	38:28	ND	ND	ND	ND	5.643e2	4.192e2		
1,2,3,4,7,8,9-HpCDF	39:48	ND	ND	ND	ND	6.111e2	5.354e2		

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	(M)3.79e6	(M)3.50e6	1.17e6	1.04e6	8.409e2	3.943e3	1.08	
1,2,3,4,6,7,8-HpCDD	39:22	ND	ND	ND	ND	3.924e2	3.467e2		

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	ND	ND	ND	ND	2.119e2	2.661e2		

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	4.25e6	4.76e6	1.02e6	1.17e6	6.942e3	5.636e3	0.89	
OCDD	42:03	ND	ND	ND	ND	3.726e2	5.909e2		

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID	DLCSRW	Injected By	SMT
Lab ID	LCS-106605	Instrument ID	10MSHR06 (U)
Filename	U230608A_02	GC Column ID	US1246423H
Analyzed	06/08/2023 03:25	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:03	1.32e7	1.66e7	2.08e6	2.48e6	-----	-----	0.79	
2,3,7,8-TCDF	22:04	1.12e6	1.49e6	1.67e5	2.35e5	-----	-----	0.75	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:17	1.26e7	1.57e7	1.86e6	2.30e6	-----	-----	0.80	
2,3,7,8-TCDD-13C	23:15	4.47e6	5.81e6	6.32e5	7.87e5	-----	-----	0.77	
2,3,7,8-TCDD-37Cl4	23:16	8.16e5		1.06e5		-----	-----		
2,3,7,8-TCDD	23:16	4.08e5	5.65e5	5.52e4	7.98e4	-----	-----	0.72	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	1.42e7	9.28e6	2.18e6	1.43e6	-----	-----	1.53	
2,3,4,7,8-PeCDF-13C	32:16	1.42e7	9.52e6	3.08e6	2.03e6	-----	-----	1.49	
1,2,3,7,8-PeCDF	30:42	5.92e6	3.90e6	9.11e5	5.94e5	-----	-----	1.52	
2,3,4,7,8-PeCDF	32:17	6.62e6	4.12e6	1.43e6	8.96e5	-----	-----	1.61	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:42	1.17e7	7.79e6	2.49e6	1.66e6	-----	-----	1.51	
1,2,3,7,8-PeCDD	32:43	2.93e6	4.75e6	6.84e5	1.05e6	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:45	6.00e6	1.17e7	1.73e6	3.40e6	-----	-----	0.51	
1,2,3,6,7,8-HxCDF-13C	35:52	6.83e6	1.34e7	1.97e6	3.54e6	-----	-----	0.51	
2,3,4,6,7,8-HxCDF-13C	36:26	6.17e6	1.13e7	1.91e6	3.54e6	-----	-----	0.54	
1,2,3,7,8,9-HxCDF-13C	37:11	4.70e6	8.80e6	1.46e6	2.73e6	-----	-----	0.53	
1,2,3,4,7,8-HxCDF	35:46	5.05e6	3.97e6	1.49e6	1.22e6	-----	-----	1.27	
1,2,3,6,7,8-HxCDF	35:53	5.77e6	4.38e6	1.57e6	1.29e6	-----	-----	1.32	
2,3,4,6,7,8-HxCDF	36:27	4.94e6	4.24e6	1.61e6	1.33e6	-----	-----	1.16	
1,2,3,7,8,9-HxCDF	37:12	3.79e6	3.07e6	1.18e6	9.62e5	-----	-----	1.24	

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Client ID	DLCSRW	Injected By	SMT
Lab ID	LCS-106605	Instrument ID	10MSHR06 (U)
Filename	U230608A_02	GC Column ID	US1246423H
Analyzed	06/08/2023 03:25	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	7.61e6	6.03e6	2.67e6	2.08e6	-----	-----	1.26	
1,2,3,6,7,8-HxCDD-13C	36:40	1.02e7	8.17e6	2.83e6	2.23e6	-----	-----	1.25	
1,2,3,7,8,9-HxCDD-13C	36:54	1.08e7	9.01e6	3.19e6	2.62e6	-----	-----	1.19	
1,2,3,4,7,8-HxCDD	36:34	3.66e6	2.96e6	1.26e6	9.96e5	-----	-----	1.24	
1,2,3,6,7,8-HxCDD	36:40	4.40e6	3.72e6	1.21e6	1.04e6	-----	-----	1.18	
1,2,3,7,8,9-HxCDD	36:54	4.11e6	3.42e6	1.15e6	9.53e5	-----	-----	1.20	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	4.70e6	9.94e6	1.54e6	3.33e6	-----	-----	0.47	
1,2,3,4,7,8,9-HpCDF-13C	39:47	3.18e6	7.06e6	9.12e5	2.14e6	-----	-----	0.45	
1,2,3,4,6,7,8-HpCDF	38:28	4.51e6	4.33e6	1.41e6	1.38e6	-----	-----	1.04	
1,2,3,4,7,8,9-HpCDF	39:48	3.20e6	3.08e6	9.71e5	9.18e5	-----	-----	1.04	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	6.81e6	6.34e6	2.08e6	1.97e6	-----	-----	1.08	
1,2,3,4,6,7,8-HpCDD	39:22	2.93e6	3.12e6	9.60e5	9.27e5	-----	-----	0.94	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	3.63e6	3.96e6	8.99e5	9.61e5	-----	-----	0.92	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	7.62e6	8.56e6	1.87e6	2.12e6	-----	-----	0.89	
OCDD	42:03	3.61e6	4.05e6	9.30e5	10.00e5	-----	-----	0.89	

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PCDD/PCDF Detected Peak List

Prepared By _____ Date _____

ReviewedBy _____ Date _____

Client ID	DLCSSD	Injected By	SMT
Lab ID	LCS-106616	Instrument ID	10MSHR06 (U)
Filename	U230608B_06	GC Column ID	US1246423H
Analyzed	06/09/2023 01:53	ICAL ID	U230524

Tetra-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
2,3,7,8-TCDF-13C	22:03	7.75e6	9.88e6	1.10e6	1.43e6	-----	-----	0.78	
2,3,7,8-TCDF	22:05	7.40e5	9.62e5	1.21e5	1.53e5	-----	-----	0.77	

Tetra-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4-TCDD-13C	22:18	8.55e6	1.05e7	1.25e6	1.53e6	-----	-----	0.81	
2,3,7,8-TCDD-13C	23:15	6.17e6	7.55e6	8.36e5	1.01e6	-----	-----	0.82	
2,3,7,8-TCDD-37Cl4	23:17	1.18e6		1.71e5		-----	-----		
2,3,7,8-TCDD	23:18	6.46e5	8.09e5	9.55e4	1.19e5	-----	-----	0.80	

Penta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDF-13C	30:41	8.49e6	5.54e6	1.28e6	8.25e5	-----	-----	1.53	
2,3,4,7,8-PeCDF-13C	32:16	8.41e6	5.36e6	1.81e6	1.18e6	-----	-----	1.57	
1,2,3,7,8-PeCDF	30:42	3.83e6	2.53e6	6.20e5	4.13e5	-----	-----	1.51	
2,3,4,7,8-PeCDF	32:17	4.21e6	2.73e6	8.78e5	5.90e5	-----	-----	1.54	

Penta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,7,8-PeCDD-13C	32:43	6.70e6	4.26e6	1.43e6	9.00e5	-----	-----	1.57	
1,2,3,7,8-PeCDD	32:43	1.82e6	2.93e6	4.05e5	6.80e5	-----	-----	0.62	

Hexa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDF-13C	35:44	3.54e6	6.81e6	1.09e6	2.09e6	-----	-----	0.52	
1,2,3,6,7,8-HxCDF-13C	35:52	4.02e6	7.49e6	1.11e6	2.09e6	-----	-----	0.54	
2,3,4,6,7,8-HxCDF-13C	36:26	3.45e6	6.72e6	1.07e6	1.97e6	-----	-----	0.51	
1,2,3,7,8,9-HxCDF-13C	37:11	2.78e6	5.37e6	9.06e5	1.67e6	-----	-----	0.52	
1,2,3,4,7,8-HxCDF	35:46	3.20e6	2.48e6	9.70e5	7.75e5	-----	-----	1.29	
1,2,3,6,7,8-HxCDF	35:53	3.65e6	2.77e6	1.03e6	8.39e5	-----	-----	1.32	
2,3,4,6,7,8-HxCDF	36:27	3.07e6	2.49e6	1.00e6	8.08e5	-----	-----	1.23	
1,2,3,7,8,9-HxCDF	37:12	2.44e6	1.96e6	7.79e5	6.04e5	-----	-----	1.24	

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Tel: 612-607-1700
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Client ID	DLCSSD	Injected By	SMT
Lab ID	LCS-106616	Instrument ID	10MSHR06 (U)
Filename	U230608B_06	GC Column ID	US1246423H
Analyzed	06/09/2023 01:53	ICAL ID	U230524

Hexa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,7,8-HxCDD-13C	36:34	4.37e6	3.50e6	1.52e6	1.19e6	-----	-----	1.25	
1,2,3,6,7,8-HxCDD-13C	36:39	5.69e6	4.60e6	1.78e6	1.48e6	-----	-----	1.24	
1,2,3,7,8,9-HxCDD-13C	36:54	7.77e6	6.06e6	2.28e6	1.89e6	-----	-----	1.28	
1,2,3,4,7,8-HxCDD	36:35	2.20e6	1.78e6	8.14e5	6.45e5	-----	-----	1.23	
1,2,3,6,7,8-HxCDD	36:40	2.71e6	2.28e6	8.40e5	7.01e5	-----	-----	1.19	
1,2,3,7,8,9-HxCDD	36:54	2.47e6	2.03e6	7.79e5	6.27e5	-----	-----	1.22	

Hepta-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDF-13C	38:27	2.67e6	5.41e6	8.75e5	1.88e6	-----	-----	0.49	
1,2,3,4,7,8,9-HpCDF-13C	39:47	1.97e6	4.05e6	6.02e5	1.28e6	-----	-----	0.49	
1,2,3,4,6,7,8-HpCDF	38:28	2.69e6	2.61e6	8.62e5	8.14e5	-----	-----	1.03	
1,2,3,4,7,8,9-HpCDF	39:48	1.81e6	1.84e6	5.85e5	5.62e5	-----	-----	0.98	

Hepta-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
1,2,3,4,6,7,8-HpCDD-13C	39:21	3.56e6	3.40e6	1.08e6	1.05e6	-----	-----	1.05	
1,2,3,4,6,7,8-HpCDD	39:21	1.80e6	1.74e6	5.42e5	4.83e5	-----	-----	1.03	

Octa-Furans:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDF	42:12	2.19e6	2.34e6	5.45e5	5.98e5	-----	-----	0.94	

Octa-Dioxins:	RT	Area 1	Area 2	Height 1	Height 2	Noise 1	Noise 2	Ratio	Code
OCDD-13C	42:02	4.35e6	4.60e6	1.13e6	1.17e6	-----	-----	0.95	
OCDD	42:02	2.21e6	2.39e6	5.34e5	5.88e5	-----	-----	0.92	

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DATA QUALITY ASSURANCE REVIEW

SITE NAME	San Jacinto Southern Impoundment		
WORK ORDER NUMBER	20600.012.001.1431.01	TDD NUMBER	0001/22-431
PROJECT NUMBER		SDG NUMBER	L1619390

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20600.012.001.1431.01, SDG L1619390, San Jacinto Southern Impoundment. Three soil samples were analyzed for dioxins/furans by Pace Analytical Services, Inc., Minneapolis, MN (subcontract laboratory of Pace Analytical National, Mount Juliet, TN). Sample numbers are listed below.

SAMPLE NUMBERS

12599404-042423-S-NE-Release-1	12599404-042423-S-NE-Release-2	12599404-042423-S-NE-Release-3

This data package was validated to determine if Quality Control (QC) specifications were achieved following USEPA Contract Laboratory Program *National Functional Guidelines for High Resolution Superfund Method Data Review* (November 2020), *EPA SW-846 Method Specific Quality Assurance/Quality Control Guidance,* and/or *EPA SW-846 Chapter Four, Organic Analytes* which includes *Recommended Sample Containers, Preservation Techniques and Holding Times* (December 2018). All samples identified above were validated according to Stage 2B protocol, as described in EPA *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Specific data qualifications are listed in the following discussion.

REVIEWER	Kelly Luck	DATE	08/02/2023
QA REVIEWER	Tara Johnson	DATE	08/03/2023

Data Qualifiers

U The analyte was analyzed for but was not detected. The associated numerical value is the method reporting limit (RL) or detection limit (MDL), which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution, or other analysis-specific parameters.

UJ The analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific QC criteria.

J The analyte was positively identified, and the quantity is estimated because of discrepancies in meeting certain analyte-specific QC criteria; or, the analyte was positively identified, but the associated concentration is estimated because it is greater than or equal to the MDL and below the RL.

R QC criteria indicate that the data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary to confirm or deny the presence of the analyte.

PCDD / PCDF FRACTION EVALUATION

1. Analytical Method:

Samples were prepared and analyzed using the procedures specified in **SW-846 Method 1613B**.

2. Holding Time:

All samples were extracted and analyzed within the recommended holding time of one year. Samples were maintained at <4 °C. No qualifications were required.

3. Mass Calibration and Mass Spectrometer Resolution:

The laboratory provided chromatograms to show that mass spectrometer resolving power was within required method limits. No qualifications were required.

4. Window Defining Resolution Checks:

Window defining check of the mass spectrometer and gas chromatograph was conducted using a column performing mix at the required frequency and results showed maximum 14% valley between 2,3,7,8-TCDD and its closest eluting isomer. In addition, the results demonstrated instrument monitoring of first to last eluting isomers of each congener group. No qualifications were required.

5. Initial Calibration:

All isomer mean response factors for the initial calibration were greater than the 0.05 control limit. All percent relative standard deviations were within the control limits of <20% for the unlabeled standards and <35% for the labeled reference compounds.

The ion abundance ratios were within the control limits specified within the method. No qualifications were required.

6. Calibration Verification:

All continuing calibration standard criteria were met. The calibration verification standard was analyzed at the required frequency. The concentrations found and the ion abundance ratios were within method-specified control limits. No qualifications were required.

7. Blanks:

A. Laboratory Blanks:

A method blank was prepared at the required frequency of every time samples were extracted for each matrix or every 20 samples, whichever is greater. Target analytes were not detected in the associated blanks. No qualifications were required.

B. Field Blanks:

No field blank samples were submitted with this data set.

8. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

Samples from outside this sample set underwent MS/MSD analysis.

9. Duplicates:

A. Laboratory Duplicate Analysis:

No laboratory duplicate analyses were conducted with this sample set.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this sample set.

10. Laboratory Control Sample (LCS):

The laboratory analyzed two LCSs with the sample set and recoveries for these analyses were within the control limits provided. No qualifications were required.

11. Labeled Compounds (Internal Standards):

All recoveries for the labeled compounds were within the method-required control limits, with the exception noted below.

SAMPLE	LABELED COMPOUND	RECOVERY	REQUIRED RECOVERY LIMITS	QUALIFIER
12599404-042423-S-NE-RELEASE-1	2,3,7,8-TCDD-$^{37}Cl_4$	34%	35-197%	J; 2,3,7,8-TCDD and Total TCDD

12. Target Analyte Identification:

For 2,3,7,8-TCDD in sample 12599404-042423-S-NE-RELEASE-2, the laboratory noted that the isotope ratio was out of specification by qualifying the result with an "I". Therefore, the result was reported as an Estimated Maximum Possible Concentration (EMPC). The data validator removed the "I" qualifier and added a "J" qualifier to indicate that the result is estimated.

13. Target Analyte Quantitation:

Results for OCDD in two samples were qualified as "E" by the laboratory, indicating that the results exceeded the calibration range. The data validator removed the "E" qualifier and added a "J" qualifier to indicate that the results are estimated.

All results were reported on a dry-weight basis.

14. Laboratory Contact:

No laboratory contact was required.

15. Overall Assessment:

One analyte in one sample had an ion ratio outside of control limits. The result was qualified as estimated (J).

For one analyte in two samples, the results exceeded the calibration range. The results were qualified as estimated (J).

The analytical data are acceptable for use with the qualifications listed above.

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Tel: 612-607-1700
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Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-1		
Lab Sample ID	10654728001		
Filename	L230610A_18		
Injected By	CVS		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	2.4	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	04/24/2023 11:20
ICAL ID	L230610	Received	05/25/2023 08:50
CCal Filename(s)	L230610A_06	Extracted	06/02/2023 15:12
Method Blank ID	BLANK-106604	Analyzed	06/10/2023 23:53

Native Isomers	Conc ng/Kg		EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	7.6		-----	1.0		2,3,7,8-TCDF-13C	2.00	84	
Total TCDF	13		-----	1.0		2,3,7,8-TCDD-13C	2.00	38	
						1,2,3,7,8-PeCDF-13C	2.00	99	
2,3,7,8-TCDD	2.0	J	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	98	
Total TCDD	3.6	J	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	97	
						1,2,3,4,7,8-HxCDF-13C	2.00	92	
1,2,3,7,8-PeCDF	ND		-----	5.0		1,2,3,6,7,8-HxCDF-13C	2.00	91	
2,3,4,7,8-PeCDF	ND		-----	5.0		2,3,4,6,7,8-HxCDF-13C	2.00	91	
Total PeCDF	7.1		-----	5.0		1,2,3,7,8,9-HxCDF-13C	2.00	97	
						1,2,3,4,7,8-HxCDD-13C	2.00	82	
1,2,3,7,8-PeCDD	ND		-----	5.0		1,2,3,6,7,8-HxCDD-13C	2.00	85	
Total PeCDD	ND		-----	5.0		1,2,3,4,6,7,8-HpCDF-13C	2.00	68	
						1,2,3,4,7,8,9-HpCDF-13C	2.00	76	
1,2,3,4,7,8-HxCDF	ND		-----	5.0		1,2,3,4,6,7,8-HpCDD-13C	2.00	77	
1,2,3,6,7,8-HxCDF	ND		-----	5.0		OCDD-13C	4.00	76	
2,3,4,6,7,8-HxCDF	ND		-----	5.0					
1,2,3,7,8,9-HxCDF	ND		-----	5.0		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	ND		-----	5.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	ND		-----	5.0		2,3,7,8-TCDD-37Cl4	0.20	34	R
1,2,3,6,7,8-HxCDD	ND		-----	5.0					
1,2,3,7,8,9-HxCDD	ND		-----	5.0					
Total HxCDD	19		-----	5.0					
1,2,3,4,6,7,8-HpCDF	8.6		-----	5.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND		-----	5.0		Equivalence: 5.4 ng/Kg			
Total HpCDF	19		-----	5.0		(Lower-bound - Using 2005 WHO Factors)			
1,2,3,4,6,7,8-HpCDD	66		-----	5.0					
Total HpCDD	220		-----	5.0					
OCDF	19		-----	10					
OCDD	6200	J	-----	10	~~E~~				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
R = Recovery outside target range
E = Exceeds calibration range

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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KAL 08/02/2023

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-2		
Lab Sample ID	10654728002		
Filename	L230610A_19		
Injected By	CVS		
Total Amount Extracted	10.1 g	Matrix	Solid
% Moisture	2.2	Dilution	NA
Dry Weight Extracted	9.89 g	Collected	04/24/2023 14:20
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 00:38

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.2	-----	1.0	2,3,7,8-TCDF-13C	2.00	82
Total TCDF	12	-----	1.0	2,3,7,8-TCDD-13C	2.00	70
				1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	-----	2.0 J	1.0 ~~I~~	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	97
				1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	7.0	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	88
				1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	78
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	66
				1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	73
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	23	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.9	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 6.1 ng/Kg		
Total HpCDF	18	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	85	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	8200 J	-----	10 ~~E~~			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
E = Exceeds calibration range
I = Isotope ratio out of specification

REPORT OF LABORATORY ANALYSIS

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KAL 08/02/2023

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1613B Sample Analysis Results

Client - Pace Analytical National

Client's Sample ID	12599404-042423-S-NE-RELEASE-3		
Lab Sample ID	10654728003		
Filename	L230610A_20		
Injected By	CVS		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	2.1	Dilution	NA
Dry Weight Extracted	9.97 g	Collected	04/24/2023 16:50
ICAL ID	L230610	Received	05/25/2023 14:07
CCal Filename(s)	L230610A_06	Extracted	06/05/2023 14:25
Method Blank ID	BLANK-106615	Analyzed	06/11/2023 01:24

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	7.5	-----	1.0	2,3,7,8-TCDF-13C	2.00	73
Total TCDF	11	-----	1.0	2,3,7,8-TCDD-13C	2.00	62
				1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	2.0	-----	1.0	2,3,4,7,8-PeCDF-13C	2.00	80
Total TCDD	3.2	-----	1.0	1,2,3,7,8-PeCDD-13C	2.00	83
				1,2,3,4,7,8-HxCDF-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	5.0	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	ND	-----	5.0	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF	6.6	-----	5.0	1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	67
1,2,3,7,8-PeCDD	ND	-----	5.0	1,2,3,6,7,8-HxCDD-13C	2.00	68
Total PeCDD	ND	-----	5.0	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	5.0	1,2,3,4,6,7,8-HpCDD-13C	2.00	67
1,2,3,6,7,8-HxCDF	ND	-----	5.0	OCDD-13C	4.00	59
2,3,4,6,7,8-HxCDF	ND	-----	5.0			
1,2,3,7,8,9-HxCDF	ND	-----	5.0	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	5.0	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	5.0	2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	ND	-----	5.0			
1,2,3,7,8,9-HxCDD	ND	-----	5.0			
Total HxCDD	21	-----	5.0			
1,2,3,4,6,7,8-HpCDF	6.6	-----	5.0	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.0	Equivalence: 5.3 ng/Kg		
Total HpCDF	16	-----	5.0	(Lower-bound - Using 2005 WHO Factors)		
1,2,3,4,6,7,8-HpCDD	70	-----	5.0			
Total HpCDD	270	-----	5.0			
OCDF	21	-----	10			
OCDD	6100	-----	10			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

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KAL 08/02/2023

Appendix K

Building and Concrete Pad Drawings/Documentation

ERECTION NOTES

1. All bracing shown and provided by the Metal Building Provider (MBP) for this building is required and shall be installed by the erector as a permanent part of the structure ("Code of Standard Practice for Steel Buildings" in the ANSI/AISC 303–16; Section 7.10).
2. Temporary supports, such as guys, braces, falsework, cribbing or other elements required for the erection operation shall be determined and furnished by the erector ("Code of Standard Practice for Steel Buildings and Bridges " in the ANSI/AISC 303–16; Section 7.10.3).
3. Normal erection operations include the correction of minor misfits by moderate amounts of reaming, grinding, welding or cutting, and the drawing of elements into line through use of drift pins. Errors which require major changes in the member configuration are to be reported immediately to the Metal Building Provider by the customer to enable whoever is responsible either to correct the error or to approve the most efficient and economic method of correction to be used by others ("Code of Standard Practice for Steel Buildings and Bridges "in the ANSI/AISC 303–16; Section 7.14).
4. Erection tolerances are set forth in the "Code of Standard Practice for Steel Buildings and Bridges "in the ANSI/AISC 303–16; Section 7.13 note that individual members are considered plump, level and aligned if the deviation does not exceed 1:500. Variations in finished overall dimensions of structure steel framing are deemed within the limits of good practice when they do not exceed the cumulative effect of rolling, fabricating, and erection tolerances.
   - 4.1. When crane support systems are part of the metal building system erection tolerances Section 6.8, Erection Tolerances, 2018 MBMA Metal Building Systems manual shall apply. To achieve the required tolerances grouting of the columns and shimming of the runway beams may be required. The customer shall provide grout if required. The contractor erecting the runway beams is responsible for shimming, plumbing, and leveling of the runway system. When aligning the runway beams the alignment shall be with respect to the beam webs so that the center of the aligned rail is over the runway web.
5. As a general rule field welding is not used to assemble a metal building system. In cases where the drawings indicate field welding and in cases where approved corrections are to be made by field welding the following requirements shall be met;
   - 5.1. welders must be qualified by an independent testing agency, with suitable documentation to AWS D1.1 Structural Welding Code – Steel or AWS D1.3 Structural Welding Code – Sheet as applicable, for the processes, positions, and materials involved.
   - 5.2. All welds must be made in conformance to a documented and approved Welding Procedure Specification (WPS). All joints which are not prequalified must be supported by a certified Procedure Qualification Record (PQR) by an independent testing agency.
6. All documentation and records shall be the responsibility of the customer.
7. Any claims or shortages by buyer must be made to the Metal Building Provider within seven (7) working days after delivery, or such claims will be considered to have been waived by the customer and disallowed. All claims should be directed to the Metal Building Provider's Customer Service Department.
8. Claims for correction of alleged misfits will be disallowed unless the Metal Building Provider shall have received prior notice thereof and allowed reasonable inspection of such misfits. Ordinary inaccuracies of shop work shall not be construed as misfits. No part of the building may be returned or charges assessed for alleged misfits without prior approval from the Metal Building Provider.
9. Neither the Metal Building Provider nor the customer will cut, drill or otherwise after their work, or the work of other trades to accommodate other trades unless such work is clearly specified in the contract documents. Whenever such work is specified the customer is responsible for furnishing complete information as to materials, size, location, and number of alterations prior to preparation of shop drawings ("Code of Standard Practice for Steel Buildings and Bridges "in the ANSI/AISC 303–16, Section 7.15).
10. The Metal Building Provider Field Modifications Policy:
    - 10.1. The Metal Building Provider will only be responsible for the field–modified parts designed and approved by the Metal Building Provider's Customer Service Department.
    - 10.2. Any field modifications designed by third parties may not be approved by the Metal Building Provider and may limit the Metal Building Provider's warranty and liability.
    - 10.3. The Metal Building Provider makes no warranty and hereby disclaims any responsibility with respect to the design, engineering, or construction of any field–modified parts performed by third parties.
11. WARNING – SOME PANELS AND TRIM PARTS ARE FURNISHED WITH A PROTECTIVE PEEL–OFF FILM. PARTS PROVIDED WITH THIS FILM CANNOT BE EXPOSED TO SUNLIGHT WITHOUT FIRST REMOVING THE FILM. THIS FILM MUST BE REMOVED PRIOR TO INSTALLATION. FILM MUST ALSO BE REMOVED FROM ALL NON EXPOSED PARTS WITHIN SIX MONTHS FROM FILM APPLICATION OR IRREPARABLE DAMAGE WILL OCCUR TO THE SURFACE CLAIMS WILL NOT BE ACCEPTED FOR THIS ISSUE.

RESPONSIBILITIES

1. The Metal Building Provider Customer, hereafter referred to as the "customer, " obtains and pays for all building permits, licenses, public assessments, paving or utility pro rata, utility connections, occupancy fees and other fees required by any governmental authority or utility in connection with the work provided for in the Contract Documents. The customer provides at his expense all plans and specifications required to obtain a building permit. it is the customer's responsibility to ensure that all plans and specifications comply with the applicable requirements of any governing building authorities.
2. The customer is responsible for identifying all applicable building codes, zoning codes, or other regulations applicable to the Construction Project, including the Metal Building system.
3. It is the responsibility of the customer to interpret all aspects of the End User's specifications and incorporate the appropriate specifications, design criteria, and design loads into the Order Documents submitted to the Metal Building Provider.
4. It is the responsibility of the Metal Building Provider to furnish the metal building system to meet the specifications including the design criteria and design loads incorporated by the Contractor into the Order Documents. The Metal Building Provider is not responsible for making an independent determination of any local codes or any other requirements not part of the Order Document.
5. The Metal Building Provider's standard specifications apply unless stipulated otherwise in the Contract Documents. The Metal Building Provider design, fabrication, quality criteria, standards, practice, methods and tolerances shall govern the work any other interpretations to the contrary not with standing. it is understood by both parties that the customer is responsible for clarifications of inclusions or exclusions from the Architectural plans.
6. In case of discrepancies between the Metal Building Provider's structural steel plans and plans for other trades, the Metal Building Provider's shall govern ("Code of Standard Practice for Steel Buildings and Bridges" in the AISC 303–16; Section 3.3).
7. The customer is responsible for overall project coordination. All interface, compatibility and design considerations concerning any materials not furnished by the Metal Building Provider and the Metal Building Provider's steel system are to be considered and coordinated by the customer. Specific design criteria concerning this interface between materials must be furnished by the customer before release for fabrication or the Metal Building Provider's assumptions will govern.
8. Foundations, anchor rods, and anchor rod embedment are designed, furnished, and set by the customer in accordance with an approved drawing. Dimensional accuracy shall satisfy the requirements of Section 7.5 1 of "Code of Standard Practice for Steel Buildings and Bridges" in the AISC 303–16.
9. All other embedded items or connection materials between the structural steel and the work of other trades are located and set by the customer in accordance with approved location on erection drawings. Accuracy of these items must satisfy the erection tolerance requirements.
10. The Metal Building Provider does not investigate the influence of the metal building system on existing buildings or structures. The End Customer assures that such buildings and structures are adequate to resist snow drifts, wind loads, or other conditions as a result of the presence of the metal building system.

GENERAL SPECIFICATIONS

1. Wall and liner panels are an integral part of the structural system. Unauthorized removal of panels or cutting panels for framed openings not shown is prohibited.
2. Oil–canning, a perceived waviness inherent to light gauge metal, may exist. This condition does not affect the structural integrity or the finish of the panel, and therefor is not a cause for rejection.
3. The Metal Building Provider's red–oxide and gray–oxide primer are designed for short term field protection from exposure to ordinary atmospheric conditions. Primed steel which is stored in the field pending erection should be kept free of the ground, and so positioned as to minimize water–holding pockets, dust, mud, and other contamination of the primer film. Repairs of damage to primed surfaces and/or removal of foreign material due to transportation (e.g. road salt, de–icing chemicals and other substances encountered during transportation that may accelerate deterioration of the primer or corrosion of the underlying steel), improper field storage, or site conditions are not the responsibility of the Metal Building Provider. (MBMA, 2018 MBSM, Section 4.2.4)
4. All bolts are 1/2" x 1–1/4" A307 unless noted. Refer to the erection drawings for specific framing connections and the cross–section(s) for main frame connections.
5. Unless noted otherwise on the frame cross section(s), all bolted joints with ASTM F3125 Grade A325 bolts are specified as snug–tightened joints in accordance with the specification for Structural Joints Using High–Strength Bolts, June 11, 2020. Installation Inspection requirements for Snug–Tight Bolts (Specification for Structural joints, Section 9.1) is suggested.
6. Unless noted otherwise, all bolted connections are designed as bearing type connections with bolt threads not excluded from the shear plane.
7. Any type of suspended or load inducing system(s) is prohibited if zero collateral and zero sprinkler loads are designated on the contract. This would include lights, duct work, piping, and insulation types other than 3" standard duty fiberglass blanket insulation, etc.

BUILDING DESIGN CODES

Building Code:	IBC 15
Hot–rolled version:	AISC 360–10
Cold–formed version:	AISI S100–12

GENERAL LOADS

Dead Load:	2.00 psf	
Roof Collateral Load:	1.00 psf	(Lts)
Sprinkler Load:	0.00 psf	
Roof Live Load:	20.00 psf	
Tributary Live Load Reduction:	YES	
Rainfall Intensity:	10.00 in/hr	(5–minute duration 5–year recurrence)
Wind–Borne Debris Region:	YES	

WIND LOAD

Wind Load (3–sec gust) Vult:	140 mph
Vasd:	108 mph
V service:	77 mph
Exposure Factor:	B
Wind Condition:	OPEN
Internal Pressure Coefficient :	0.00
Edge Zone Width:	3.00 Ft

SNOW LOAD

Ground Snow Load :	0.00 psf

DEFLECTION CRITERIA

Main Frames Horizontal:	H/60	Roof Panels:	L/60
Main Frames Vertical:	L/180	Purlins:	L/150
Bearing Frame Rafter:	L/180	Wall Panels:	L/60
Endwall Columns:	L/120	Girts:	L/90
Wind Frame Horizontal :	H/60		

For components,claddings and MWFRS, deflections involving wind are based on 10 year serviceability wind pressures.

SEISMIC LOAD

Risk Category:	II – Normal
Seismic Importance Factor :	1.0000
Structural Response Acceleration (Ss):	0.0710
Structural Response Acceleration(S1):	0.0380
Site Class:	D
Design Spectral Response (Sds):	0.0757
Design Spectral Response (Sd1):	0.0608
Seismic Design Category:	A

ROOF PANEL

Profile: Super Span X Gauge: 26 Color: Galvalume Plus
UL580 Class 90: Yes
Clip Type if Standing Seam: NO

WALL PANEL

Profile: N/A Gauge: N/A Color: N/A

PRIMARY FRAMING

Built–Up & Hot–Rolled: Gray Oxide Primer

SECONDARY FRAMING

Purlins, Eave Struts:	Pre–Galvanized
Girts, Light Gage Columns:	Pre–Galvanized
Light Gage Jambs & Headers:	Pre–Galvanized
Base Angle Finish:	N/A

Hot–Dip Galvanizing conforms to the ASTM A123 specification.
Pre–Galvanized members conform to the ASTM A653, Grade 50, Coating G–90 specification.

The rigid frames at line 1 & 3 are designed as a non–expandable rigid frame. Corresponding frame reactions are calculated based upon actual tributary area.

This metal building system has been designed as open with obstructed flow in accordance with the building code. The addition of wall framing or sheeting on any portion or all the walls will require that the building be reviewed by a licensed design professional for structural adequacy.

APPROVAL SPECIFICATIONS

1. Approval of the Metal Building Provider drawings and/or calculations indicate that the Metal Building Provider has correctly interpreted the contact requirements. This approval constitutes the customer acceptance of the Metal Building Provider design, concepts, assumptions, and loadings.
2. Failure to respond to clouded areas and areas to verify may result in additional costs and/or schedule delays for which the Metal Building Provider will not be responsible.
3. Any changes made after the Metal Building Provider's customer has signed and returned the Metal Building Provider drawings and/or calculations and the project is released for fabrication shall be billed to the Metal Building Provider customer including material, engineering, and other costs. An additional fee may be charged if the project must be moved in the fabrication and/or the shipping schedule.
4. It is the responsibility of the customer to field verify all existing conditions prior to fabrication.
5. It is imperative that any changes to these drawings:
   - 5.1. Be made in contrasting ink.
   - 5.2. Be legible and unambiguous.
   - 5.3. Have all instances of changes clearly indicated.
6. A dated signature, in the designated areas, is required on all pages. The signature must be from the person authorized on the contract or a person authorized, in writing, by the Metal Building Provider customer.
7. The Metal Building Provider reserves the right to resubmit drawings with extensive or complex changes required to avoid misfabrication. This may impact the delivery schedule.
8. Any changes noted on the drawings not in conformance with the terms and requirements of the contract between the Metal Building Provider and its customer are not binding on the Metal Building Provider unless subsequently acknowledged and agreed to in writing by change order or separate documentation.
9. Waiving the approval process by designating the order "For Production" supercedes notes 1,2,5,6, and 8 in this section, and constitutes the customer acceptance of the Metal Building Provider's design, concepts, assumptions, and loadings.

DRAWING SCHEDULE

DWG NO.	ISSUE	DATE	DESCRIPTION
C1	P1	11.04.23	COVER SHEET
F1	0	11.04.23	ANCHOR BOLT PLAN & DETAILS
F2	0	11.04.23	ANCHOR BOLT REACTIONS
P1	P1	11.04.23	RIGID FRAME ELEVATION
P2	P1	11.04.23	RIGID FRAME ELEVATION
P3	P1	11.04.23	RIGID FRAME ELEVATION
W1	P1	11.04.23	PORTAL FRAME ELEVATION
W2	P1	11.04.23	PORTAL FRAME ELEVATION
E1	P1	11.04.23	ROOF FRAMING PLAN
E2	P1	11.04.23	ROOF SHEETING PLAN
E3	P1	11.04.23	ENDWALL FRAME & SHEETING ELEVATION
E4	P1	11.04.23	ENDWALL FRAME & SHEETING ELEVATION
E5	P1	11.04.23	SIDEWALL FRAME & SHEETING ELEVATION
E6	P1	11.04.23	SIDEWALL FRAME & SHEETING ELEVATION
E7	P1	11.04.23	BUILDING SECTIONS
D1	P1	11.04.23	STANDARD DETAILS PAGE
D2	P1	11.04.23	STANDARD DETAILS PAGE

TRIM COLOR:

SHADOW GUTTER:	Galvalume Plus	GAUGE: 26
SHADOW RAKE:	Galvalume Plus	GAUGE: 26
SHADOW EAVE:	Galvalume Plus	GAUGE: 26
CORNER:	N/A	GAUGE: N/A
ACCESSORY:	N/A	GAUGE: N/A
DOWNSPOUT:	Galvalume Plus	GAUGE: 26

CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

☐ FOR APPROVAL:
These drawings, being for approval, are by definition not final and are for conceptual representation only. Their purpose is to confirm the proper interpretation of the project documents. Only drawings issued "For Erector Installation" can be considered complete.

☒ FOR CONSTRUCTION PERMIT:
These drawings, being for permit, are by definition not final. Only drawings issued "For Erector Installation" can be considered complete.

☐ FOR ERECTOR INSTALLATION:
Final drawings for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280 HOUSTON, TX 77234
PH: 800–324–9992 FAX: 832–553–4600
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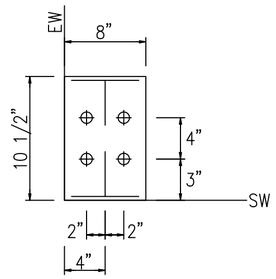
ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

SHEET DESCRIPTION: COVER SHEET					BLDG SIZE: 25'–0" x 35'–0" x 14'–0"/16'–1"	
CUSTOMER: INDUSTRIAL SERVICES					CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION						
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805–33079	DWG NO: C1	ISSUE: P1

The Engineer whose seal and signature appear on these documents represents Whirlwind Steel Buildings, Inc., and is not the Engineer of Record for the overall project. The Engineer's responsibility is limited to material designed and manufactured by Whirlwind Steel Buildings, Inc., and excludes part such as doors, windows, foundation design, and erection of the building.

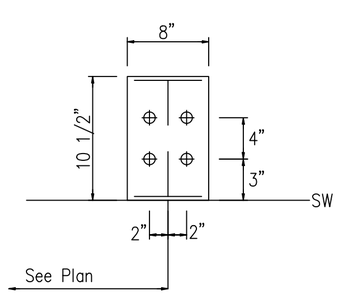
WHIRLWIND STEEL
STATE OF TEXAS
MUSTAPHA I. CHREEIDE
114220
LICENSED
PROFESSIONAL ENGINEER
F-12081
11/8/2023

Dia= 3/4"



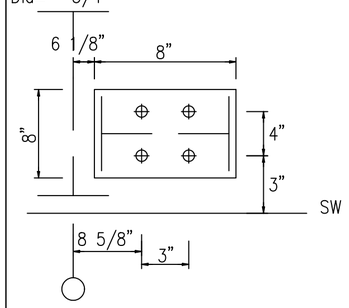
DETAIL A

Dia= 3/4"



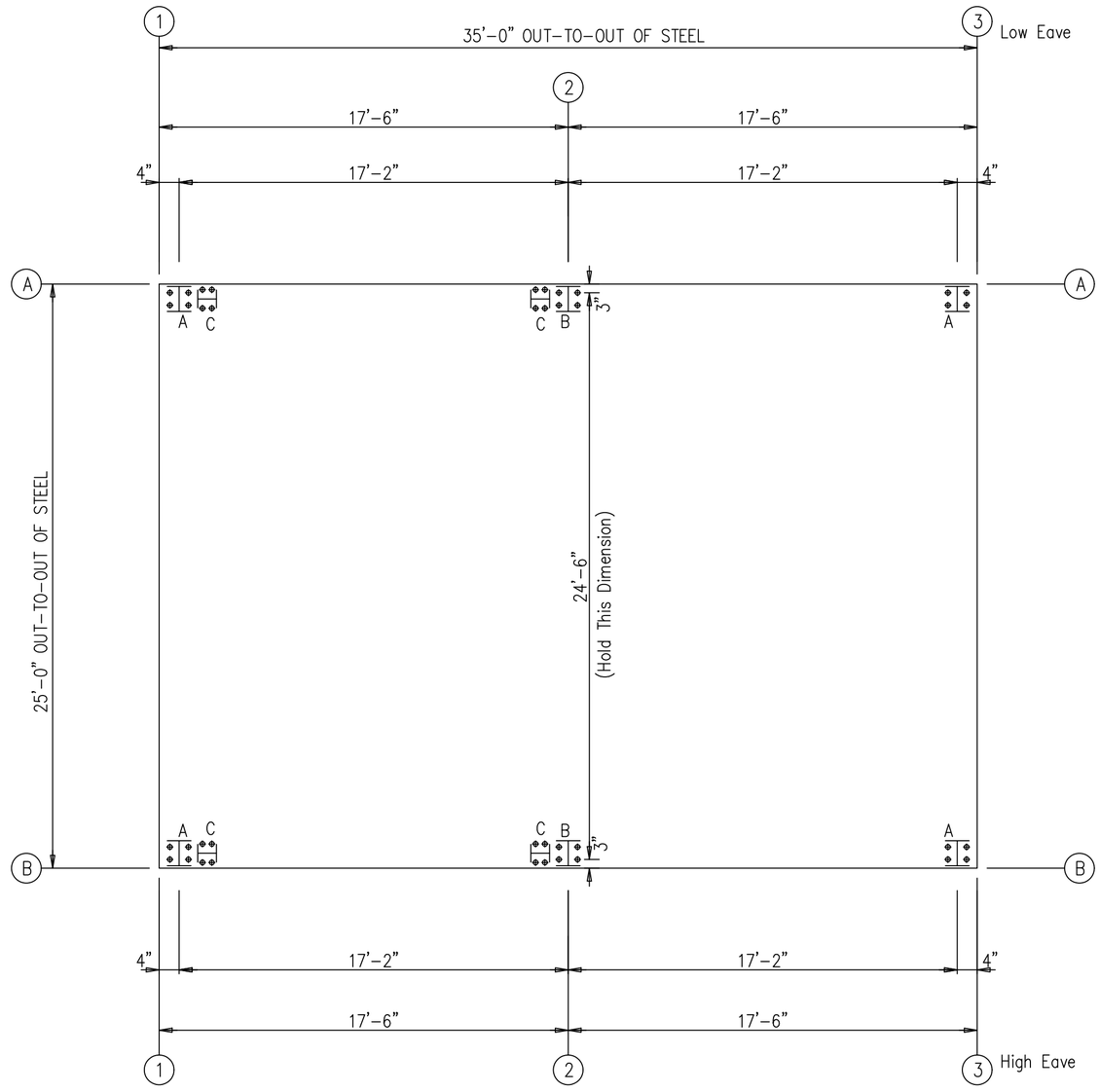
DETAIL B

Dia= 3/4"



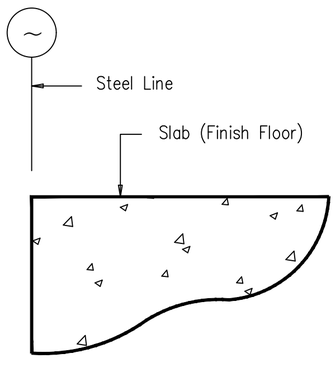
DETAIL C

Dia= 3/4"



ANCHOR BOLT PLAN

NOTE: All Base Plates @ Finished Floor (U.N.)



OPEN CONDITION

BASE DETAIL

CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

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☒ FOR ERECTOR INSTALLATION:
Final drawings for construction.

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FAX: 832-553-4600

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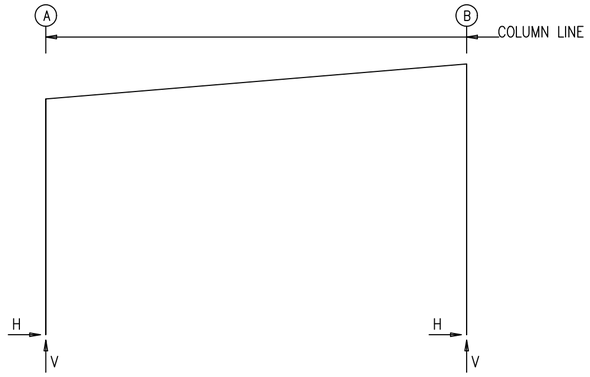
ISSUE	DATE	DESCRIPTION	BY	CHK
0	11.04.23	FOR ERECTOR INSTALLATION	PND	PNC

SHEET DESCRIPTION: ANCHOR BOLT PLAN & DETAILS					BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"
CUSTOMER: INDUSTRIAL SERVICES					CUSTOMER LOCATION: LA PORTE, TX. 77571
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION					
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079	DWG NO: F1 / ISSUE: 0

WHIRLWIND STEEL
STATE OF TEXAS
MUSTAPHA I. CHREEIDE
114220
LICENSED
PROFESSIONAL ENGINEER
F-12081

11/8/2023

FRAME LINES: 1 2 3



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
1	A	2	0.6	1.3	5	−0.5	−1.4	4	0.750	8.000	10.50	0.375	0.0
		3	0.5	2.9	7	−0.2	−1.5						
1	B	6	0.7	−1.7	3	−0.6	3.1	4	0.750	8.000	10.50	0.375	0.0
		3	−0.6	3.1	7	0.5	−1.9						

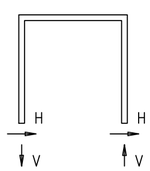
RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
2	A	1	1.1	5.3	5	−0.7	−3.5	4	0.750	8.000	10.50	0.375	0.0
		3	1.0	5.7									
2	B	4	1.3	−2.9	3	−1.3	6.1	4	0.750	8.000	10.50	0.375	0.0
		3	−1.3	6.1	6	1.3	−4.2						

RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frm Line	Col Line	Column_Reactions(k) Load Id	Hmax H	V Vmax	Load Id	Hmin H	V Vmin	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick	Elev. (in)
3	A	2	0.6	1.3	5	−0.5	−1.4	4	0.750	8.000	10.50	0.375	0.0
		3	0.5	2.9	7	−0.2	−1.5						
3	B	6	0.7	−1.7	3	−0.6	3.1	4	0.750	8.000	10.50	0.375	0.0
		3	−0.6	3.1	7	0.5	−1.9						

PORTAL FRAME REACTIONS

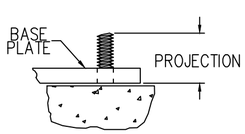


Wall Loc	Wall Line	Col Line	± Reactions Wind(k) Horz	Wind(k) Vert	Seismic(k) Horz	Seismic(k) Vert	Bolt(in) Qty	Dia	Base_Plate(in) Width	Length	Thick
F_SW	B	1	1.2	2.3	0.0	0.1	4	0.750	8.000	8.000	0.375
F_SW	B	2	1.2	2.3	0.0	0.1	4	0.750	8.000	8.000	0.375
B_SW	A	2	1.1	1.8	0.0	0.0	4	0.750	8.000	8.000	0.375
B_SW	A	1	1.1	1.8	0.0	0.0	4	0.750	8.000	8.000	0.375

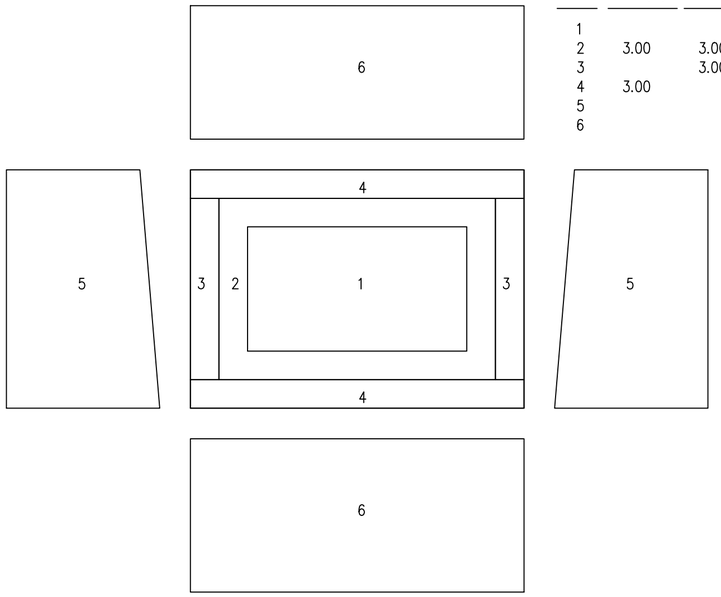
GENERAL NOTES

1. All anchor bolts (by others) to have nuts and flat washers.
2. All anchor bolts are designed to full S.A.E. diameters with cut threads. No substitutions are allowed.
3. The Metal Building Provider is not responsible for the design, materials and workmanship of the foundation. Anchor bolt plans prepared by the Metal Building Provider are intended to show only location, diameter, and projection of anchor bolts required to attach the Metal Building System to the foundation. The Metal Building Provider is responsible for providing to the Builder the loads imposed by the Metal Building System on the foundation. It is the responsibility of the End Customer to ensure that adequate provisions are made for specifying bolt embedment, bearing angles, tie rods, and/or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. This is typically the responsibility of the Design Professional or Engineer of Record, which is another reason that their involvement in the Construction Project from the outset is highly recommended. (2012 MBMA Metal Building Systems Manual, Section 3.2.2)
4. The projection is based from the bottom of the base plate. Adjustments must be made for grout and/or leveling plates.

THREADED ANCHOR BOLT



NOTE: PROJECTION BASED FROM BOTTOM OF BASE PLATE. ADJUSTMENTS SHOULD BE MADE FOR GROUT AND/OR LEVELING PLATES.



Components & Cladding

Zone	Width (ft)	Length (ft)	Pressure(psf) Member	Pressure(psf) Panel	Suction(psf) Member	Suction(psf) Panel
1			17.52	17.52	−38.51	−38.51
2	3.00	3.00	28.03	26.28	−58.92	−59.31
3		3.00	28.03	35.04	−58.92	−115.5
4	3.00		28.03	35.04	−58.92	−115.5
5			0.00	0.00	0.00	0.00
6			20.70	26.90	−23.40	−29.60

(+) wind towards surface
(−) wind away from surface

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert	Wind_Left2 Horiz	Wind_Left2 Vert
1	A	0.1	0.5	0.0	0.1	0.5	2.2	−1.0	−2.1	0.4	−2.3	−1.0	−3.0
1	B	−0.1	0.6	0.0	0.1	−0.5	2.2	0.0	−2.8	1.3	−2.6	0.0	−1.9
2	A	0.1	0.9	0.1	0.3	0.9	4.1	−1.4	−4.5	0.0	−6.2	−1.4	−6.6
2	B	−0.1	0.9	−0.1	0.3	−0.9	4.2	1.0	−7.4	2.3	−5.7	1.0	−5.2
3	A	0.1	0.5	0.0	0.1	0.5	2.2	−1.0	−2.1	0.4	−2.3	−1.0	−3.0
3	B	−0.1	0.6	0.0	0.1	−0.5	2.2	0.0	−2.8	1.3	−2.6	0.0	−1.9

Frame Line	Column Line	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert	Wind_Left3 Horiz	Wind_Left3 Vert
1	A	0.4	−1.4	−0.4	−3.0	0.2	1.3	0.0	0.0	0.0	0.0	−0.7	−0.4
1	B	1.3	−3.5	1.0	−3.7	−0.4	1.6	0.0	0.0	0.0	0.0	−0.6	0.4
2	A	0.0	−4.0	−0.8	−6.3	0.4	3.1	−0.1	−0.1	0.1	0.1	−0.7	−0.4
2	B	2.3	−7.9	2.0	−7.8	−1.0	3.9	0.0	0.1	0.0	−0.1	−0.6	0.4
3	A	0.4	−1.4	−0.4	−3.0	0.2	1.3	0.0	0.0	0.0	0.0	−0.7	−0.4
3	B	1.3	−3.5	1.0	−3.7	−0.4	1.6	0.0	0.0	0.0	0.0	−0.6	0.4

Frame Line	Column Line	Wind_Right3 Horiz	Wind_Right3 Vert	Wind_Left4 Horiz	Wind_Left4 Vert	Wind_Right4 Horiz	Wind_Right4 Vert
1	A	0.7	0.4	−0.7	−0.4	0.7	0.4
1	B	0.6	−0.4	−0.6	0.4	0.6	−0.4
2	A	0.7	0.4	−0.7	−0.4	0.7	0.4
2	B	0.6	−0.4	−0.6	0.4	0.6	−0.4
3	A	0.7	0.4	−0.7	−0.4	0.7	0.4
3	B	0.6	−0.4	−0.6	0.4	0.6	−0.4

NOTES FOR REACTIONS

1. All loading conditions are examined and only maximum/minimum H or V and the corresponding H or V are reported.
2. Positive reactions are as shown in the sketch. Foundation loads are in opposite directions.
3. Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
4. Loading conditions are:
   1 Dead+Collateral+Live
   2 Dead+Collateral+0.75Live+0.45Wind_Right1
   3 Dead+Collateral+0.75Live+0.45Wind_Long2R
   4 0.6Dead+0.6Wind_Right1
   5 0.6Dead+0.6Wind_Left2
   6 0.6Dead+0.6Wind_Right2
   7 0.6Dead+0.6Wind_Long1R

BUILDING BRACING REACTIONS

Wall Loc	Wall Line	Col Line	± Reactions Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear (lb/ft) Wind	Seis	Note
L_EW	1								(h)
F_SW	B	1,2							(a)
R_EW	3								(h)
B_SW	A	1,2							(a)

(a)Wind bent in bay
(h)Rigid frame at endwall

Reactions for seismic represent shear force, Eh

ANCHOR BOLT SUMMARY (GRADE 36)

Qty	Locate	Dia (in)	Type	Proj (in)
⊕ 24	Frame	3/4"	F1554	3.00
⊕ 16	Portal Frame	3/4"	F1554	3.00

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PH: 800-324-9992
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ISSUE	DATE	DESCRIPTION	BY	CHK
0	11.04.23	FOR ERECTOR INSTALLATION	PND	PNC

SHEET DESCRIPTION:	ANCHOR BOLT REACTIONS
BLDG SIZE:	25'-0" x 35'-0" x 14'-0"/16'-1"
CUSTOMER:	INDUSTRIAL SERVICES
CUSTOMER LOCATION:	LA PORTE, TX. 77571
PROJECT REFERENCE:	SAN JACINTO CHAIN PROTECTION
JOBSITE LOCATION:	HOUSTON, TX 77075
JOBSITE COUNTY:	HARRIS

DWN:	CHK:	DATE:	ENG:	JOB NO:	DWG NO:	ISSUE:
PND	PNC	11.04.23	NPK	11805-33079	F2	0

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114220
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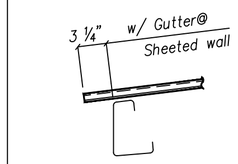
F-12081
11/8/2023

SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	3/4"	1 3/4"	6"	3/8"	1'-7"

FLANGE BRACE TABLE
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16
FRAME LINE: 1

▽ID	# SIDES	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	1	FB1A	2'-5 3/4"	2'-4"		

BASE PLATE TABLE			
Col Mark	Plate Size Width	Thick	Length
BP-1	8"	3/8"	10 1/2"

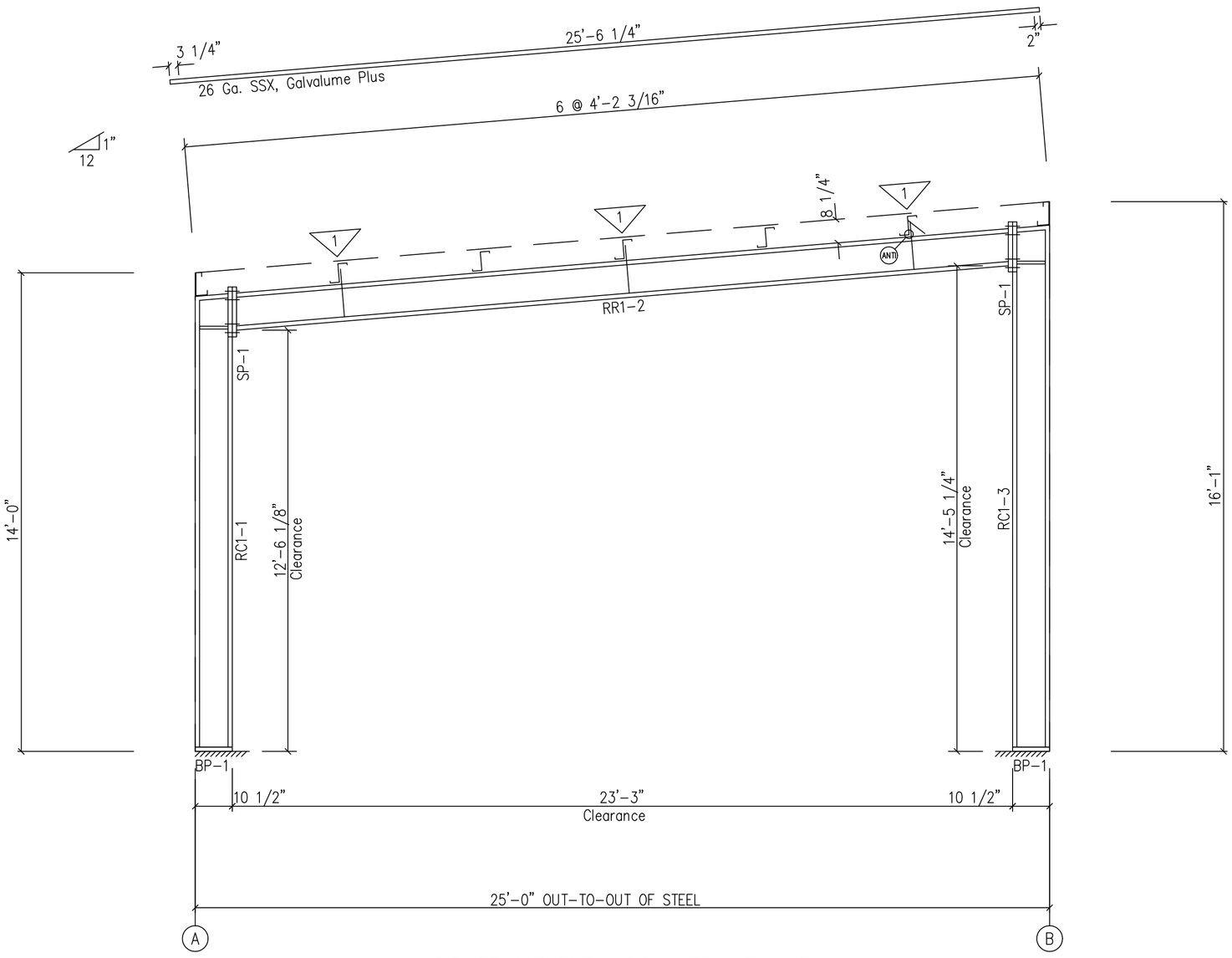


DETAIL @ PANEL END

DETAIL @ HIGH

MEMBER TABLE				
Mark	Web Depth Start/End	Web Plate Thick	Outside Flange W x Thk	Inside Flange W x Thk
RC1-1	10.0/10.0	0.135	5 x 1/4" 6 x 1/4"	5 x 1/4"
RR1-2	10.0/10.0	0.135	5 x 1/4"	5 x 1/4"
	10.0/10.0	0.135	5 x 1/4"	5 x 1/4"
RC1-3	10.0/10.0	0.135	6 x 1/4" 5 x 1/4"	5 x 1/4"

The rigid frames at line 1 is designed as a non-expandable rigid frame.
Corresponding frame reactions are calculated based upon actual tributary area.



RIGID FRAME ELEVATION: FRAME LINE 1

CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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SHEET DESCRIPTION: RIGID FRAME ELEVATION					BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"	
CUSTOMER: INDUSTRIAL SERVICES					CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION						
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079	DWG NO: P1	ISSUE: P1

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STATE OF TEXAS
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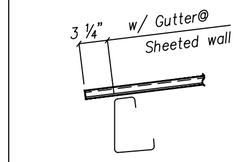
F-12081

11/8/2023

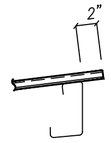
SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP–1	4	4	0	A325	3/4"	1 3/4"	6"	3/8"	1'–7"

FLANGE BRACE TABLE A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16 FRAME LINE: 2						
▽ ID	# SIDES	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	1	FB1A	2'–5 3/4"	2'–4"		

BASE PLATE TABLE			
Col Mark	Plate Size Width	Thick	Length
BP–1	8"	3/8"	10 1/2"



DETAIL @ PANEL END



DETAIL @ HIGH

MEMBER TABLE				
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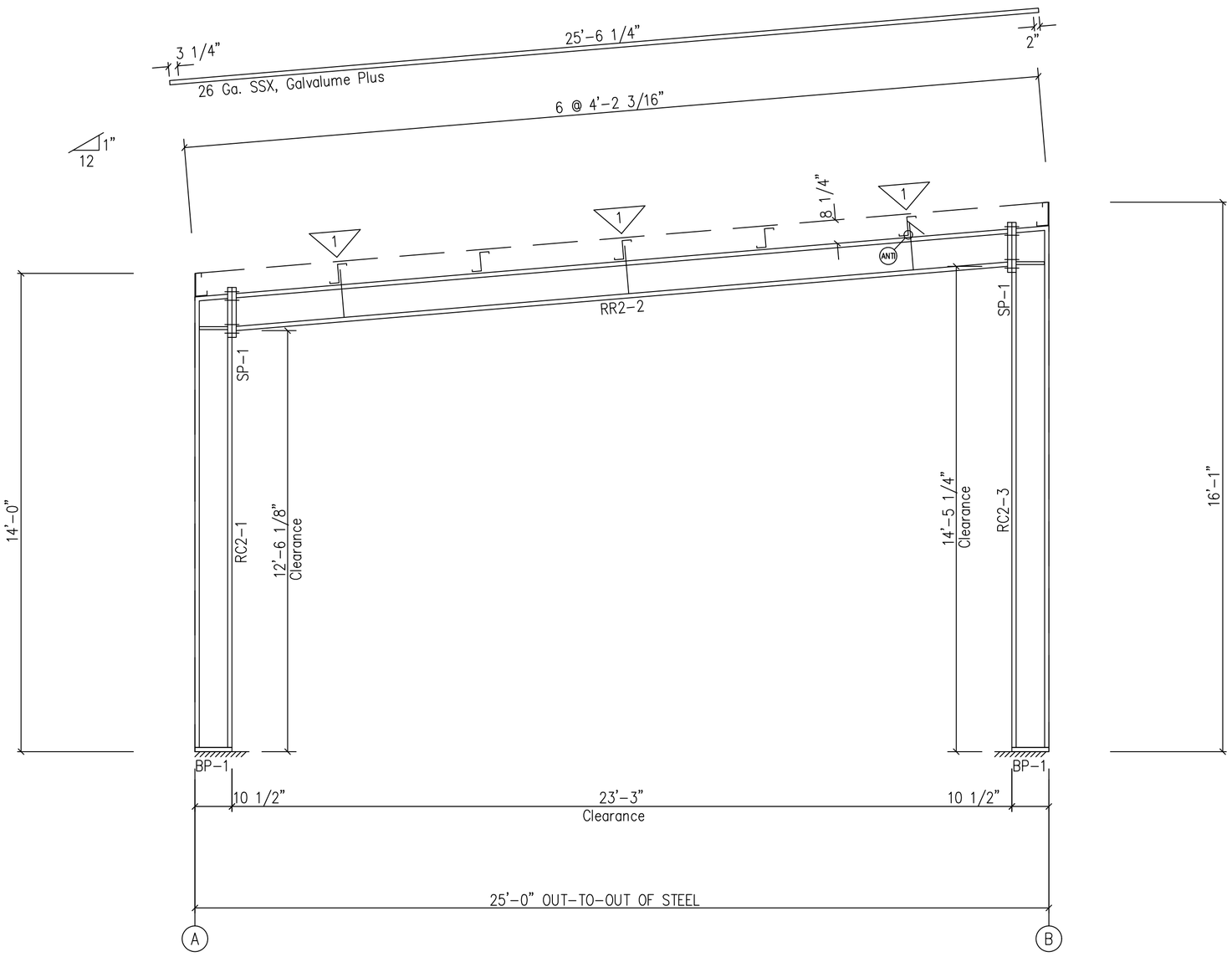
RC2–1	10.0/10.0	0.135	5 x 1/4" 6 x 1/4"	5 x 1/4"
RR2–2	10.0/10.0	0.135	5 x 1/4"	5 x 1/4"
	10.0/10.0	0.135	5 x 1/4"	5 x 1/4"
RC2–3	10.0/10.0	0.135	6 x 1/4" 5 x 1/4"	5 x 1/4"



RIGID FRAME ELEVATION: FRAME LINE 2

BOLT TIGHTENING (Snug–Tight)

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SHEET DESCRIPTION: RIGID FRAME ELEVATION					BLDG SIZE: 25'–0" x 35'–0" x 14'–0"/16'–1"
CUSTOMER: INDUSTRIAL SERVICES					CUSTOMER LOCATION: LA PORTE, TX. 77571
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION					
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805–33079	DWG NO: P2 / ISSUE: P1

WHIRLWIND STEEL
STATE OF TEXAS
MUSTAPHA I. CHREEIDE
114220
LICENSED
PROFESSIONAL ENGINEER
F-12081

11/8/2023

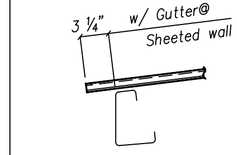
CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	3/4"	1 3/4"	6"	3/8"	1'-7"

FLANGE BRACE TABLE
A=L2x2x14GA B=L2x2x12GA C=L2x2x1/8 D=L3x3x3/16
FRAME LINE: 3

▽ ID	# SIDES	MARK	LENGTH	OFFSET	DETAIL	CLIP
1	1	FB1A	2'-5 3/4"	2'-4"		

BASE PLATE TABLE			
Col Mark	Plate Size Width	Thick	Length
BP-1	8"	3/8"	10 1/2"

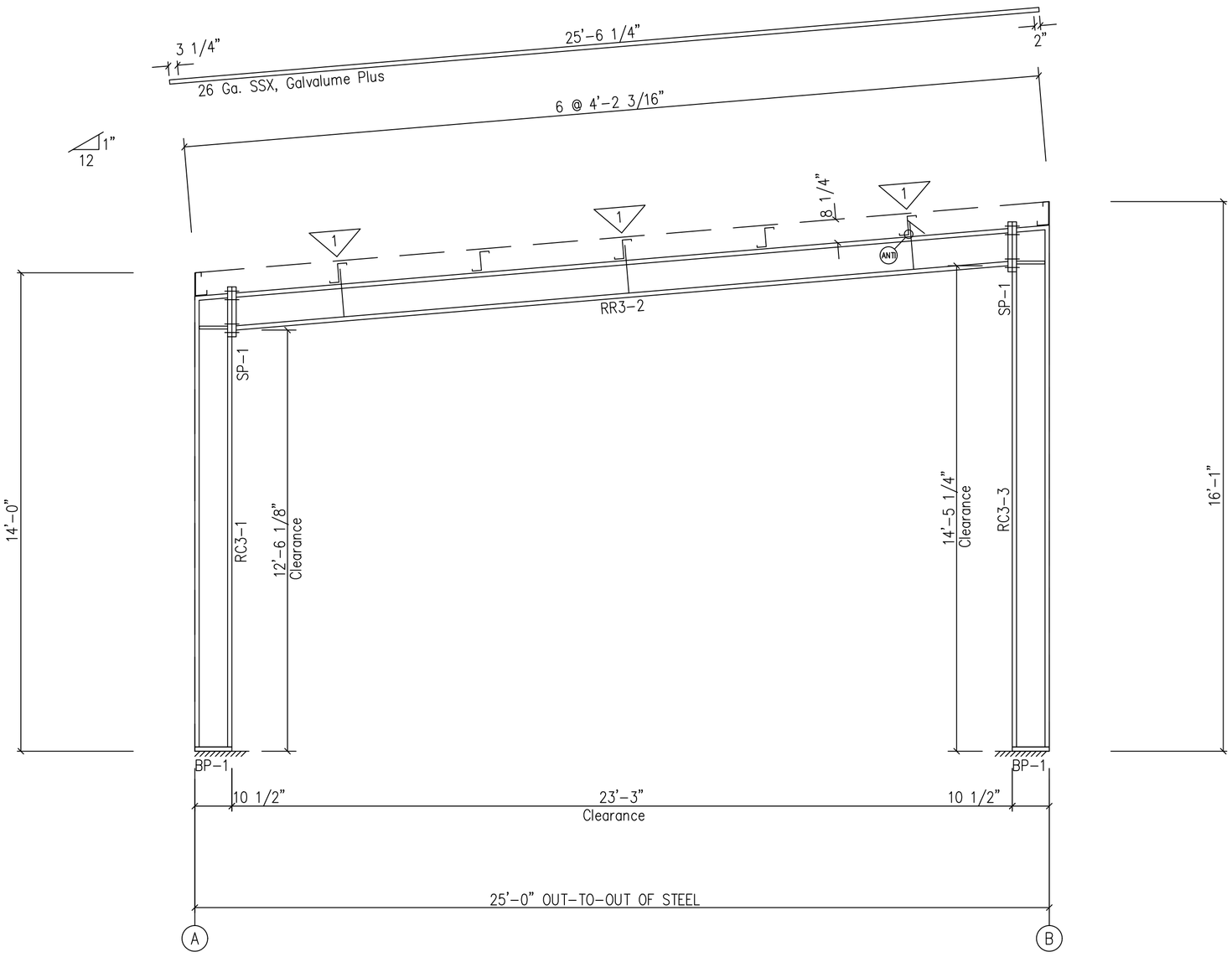


DETAIL @ PANEL END

DETAIL @ HIGH

MEMBER TABLE				
Mark	Web Depth Start/End	Web Plate Thick	Outside Flange W x Thk	Inside Flange W x Thk
RC3-1	10.0/10.0	0.135	5 x 1/4" 6 x 1/4"	5 x 1/4"
RR3-2	10.0/10.0	0.135	5 x 1/4"	5 x 1/4"
	10.0/10.0	0.135	5 x 1/4"	5 x 1/4"
RC3-3	10.0/10.0	0.135	6 x 1/4" 5 x 1/4"	5 x 1/4"

The rigid frames at line 3 is designed as a non-expandable rigid frame.
Corresponding frame reactions are calculated based upon actual tributary area.



RIGID FRAME ELEVATION: FRAME LINE 3

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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CUSTOMER: INDUSTRIAL SERVICES					CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION						
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079	DWG NO: P3	ISSUE: P1

WHIRLWIND STEEL
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MUSTAPHA I. CHREEIDE
114220
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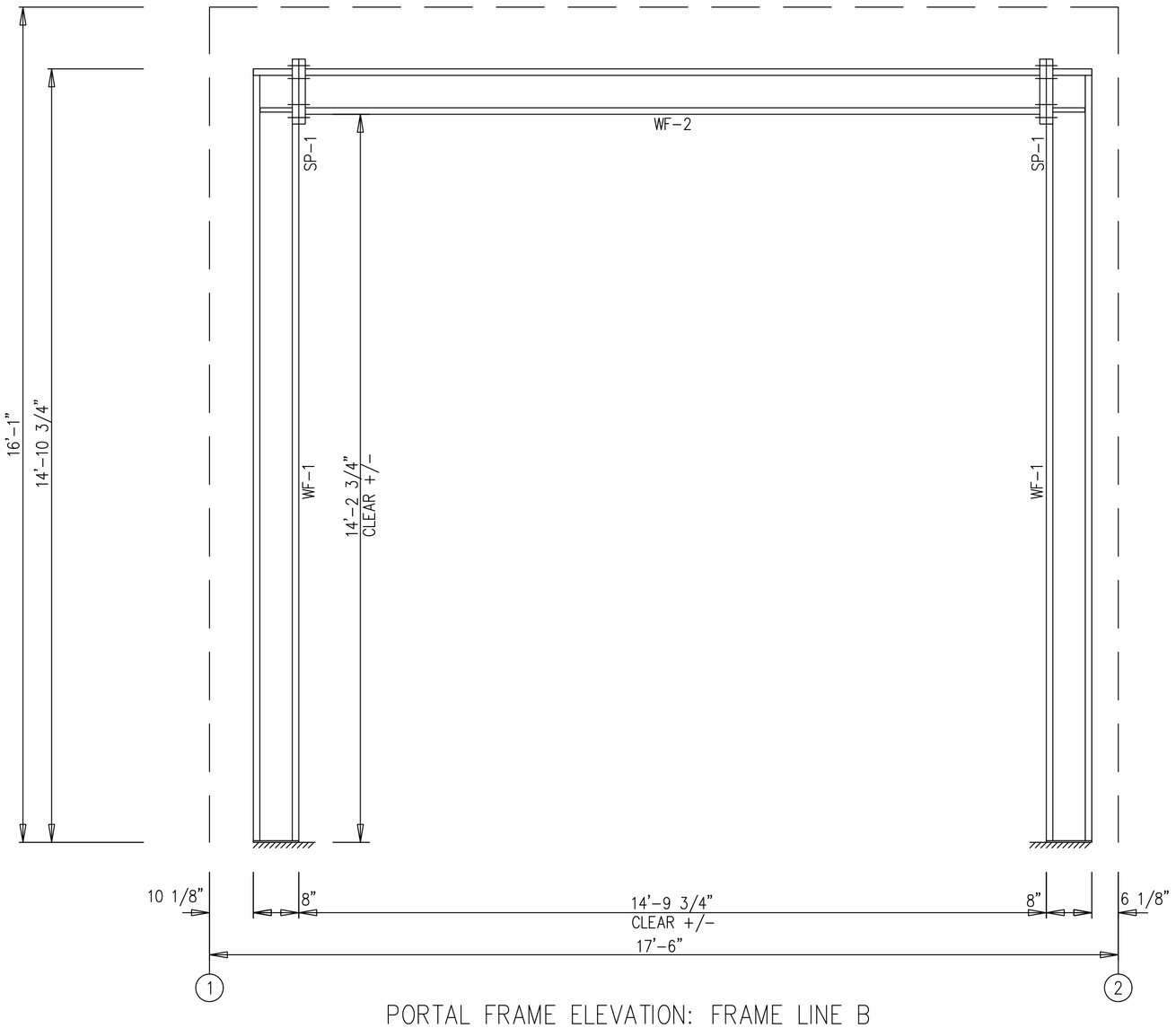
PROFESSIONAL ENGINEER
F-12081
11/8/2023

CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

SPLICE PLATES & BOLTS								
Splice Mark	Quan Top/	Bot	-----Bolt----- Type	Dia	Length	Plate Size Width	Thick	Length
SP- 1	4	4	A325	0.750	1.75	6"	3/8"	1'-4 1/4"

MEMBER SIZE TABLE	
MARK	MEMBER
WF-2	W8541
WF-1	W8541



PORTAL FRAME ELEVATION: FRAME LINE B

CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

BOLT TIGHTENING (Snug-Tight)

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Pretensioning methods, including Turn-of-Nut, calibrated wrench, twist-off tension control bolts or direct tension indicator are not required. Installation inspection requirements for Snug-Tight Bolt is found in Section 9.1 of the Specification.

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PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION						
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079	DWG NO: W1	ISSUE: P1

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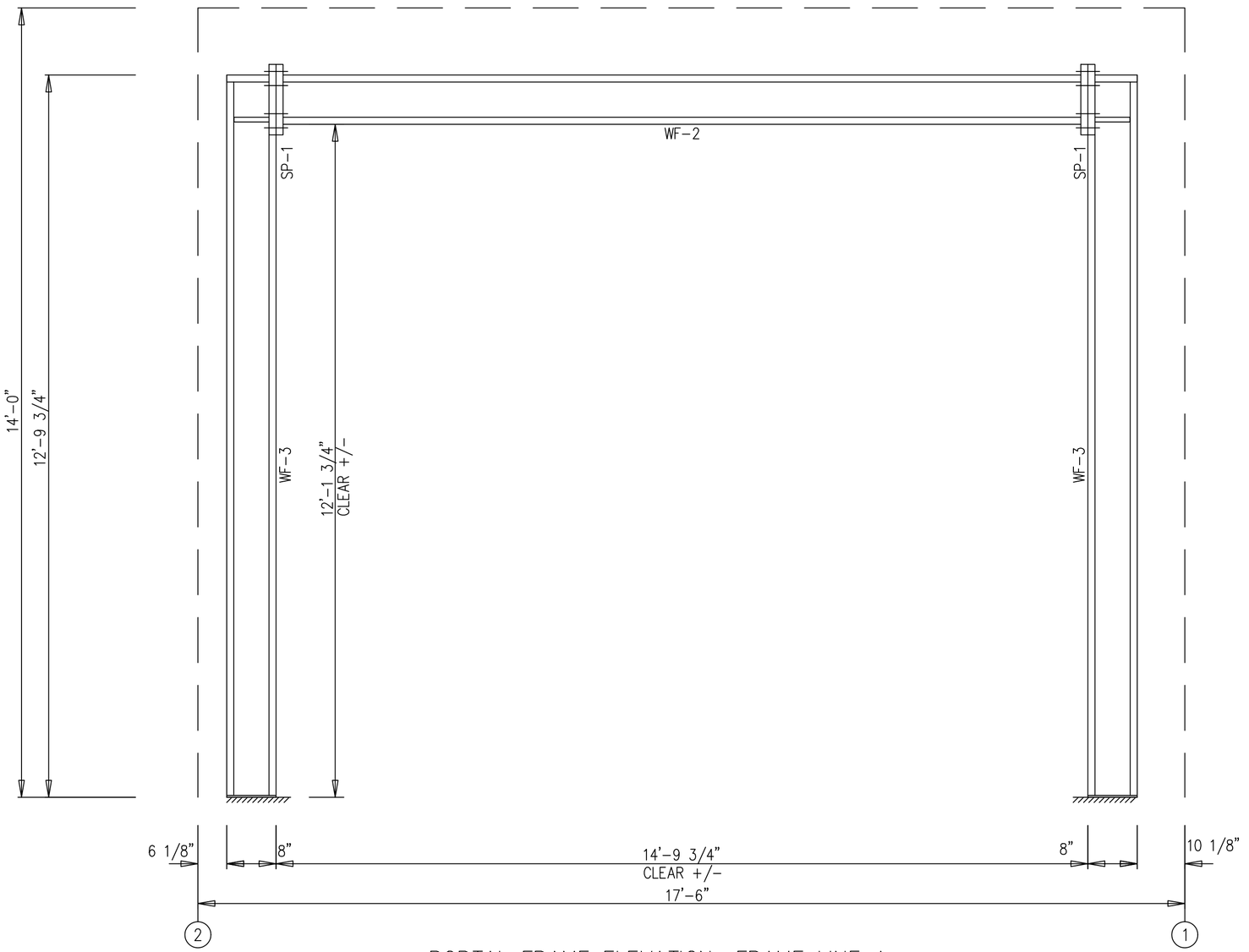
11/8/2023

SPLICE PLATES & BOLTS								
Splice Mark	Quan Top/	Bot	-----Bolt----- Type	Dia	Length	Plate Size Width	Thick	Length
SP- 1	4	4	A325	0.750	1.75	6"	3/8"	1'-4 1/4"

MEMBER SIZE TABLE	
MARK	MEMBER
WF-2	W8541
WF-3	W8541



PORTAL FRAME ELEVATION: FRAME LINE A

BOLT TIGHTENING (Snug-Tight)

All bolted joints with ASTM F3125 Grade A325 bolts are specified as Snug-Tightened Joints in accordance with the Specification of Structural Joints Using High-Strength Bolts, June 11, 2020, installation as given in Section 7.1 Washers are not required for Snug-Tightened Joints using standard standard size holes per Section 6.1 of the Specification

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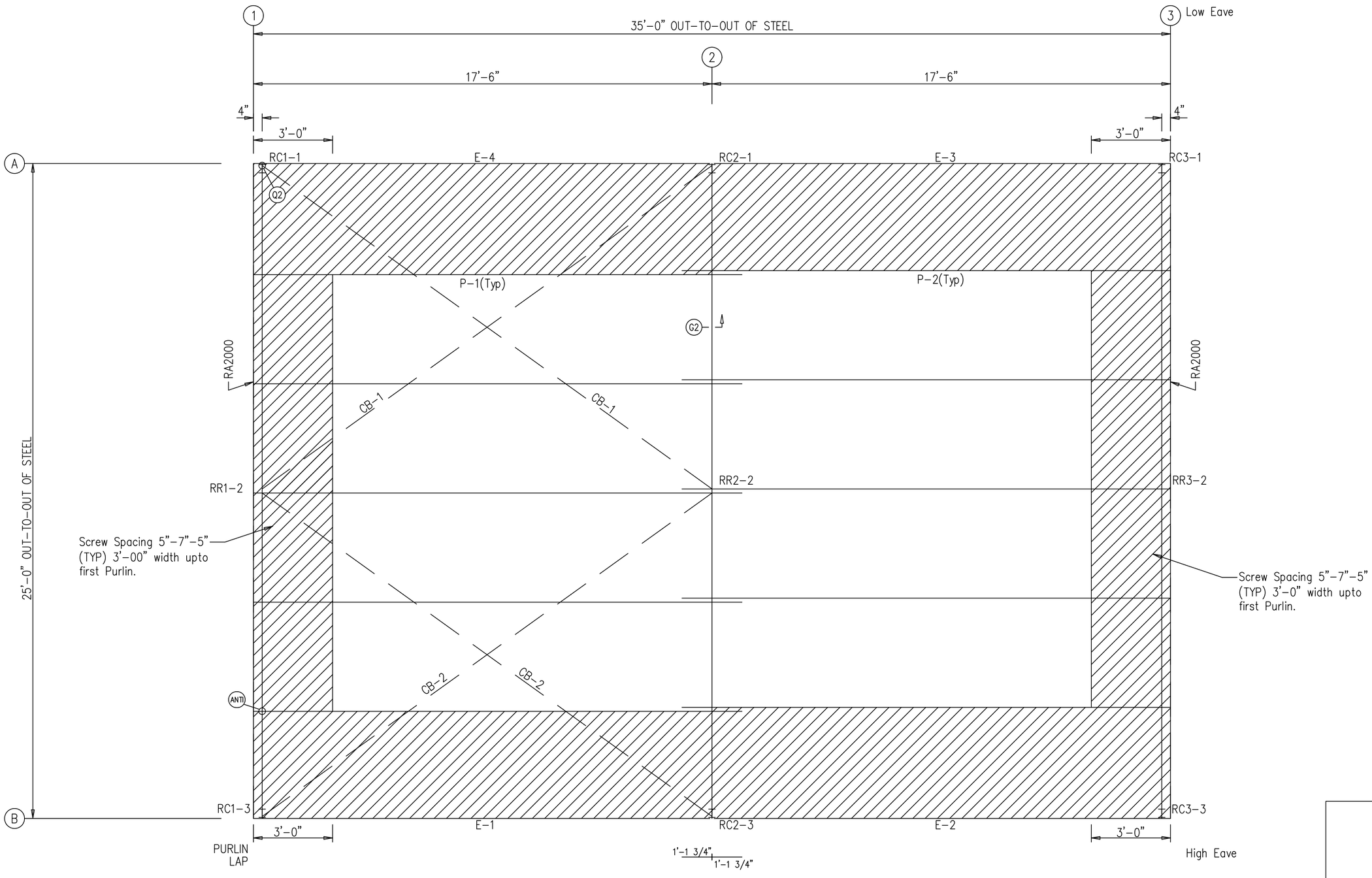
MEMBER TABLE ROOF PLAN	
MARK	PART
P-1	8X25Z16
P-2	8X25Z16
E-1	8HES141
E-2	8HES141
E-3	8ES141
E-4	8ES141
CB-1	0.25_CBL
CB-2	0.25_CBL



ROOF FRAMING PLAN

UL580, CLASS 90 CONST. NUMBER 167

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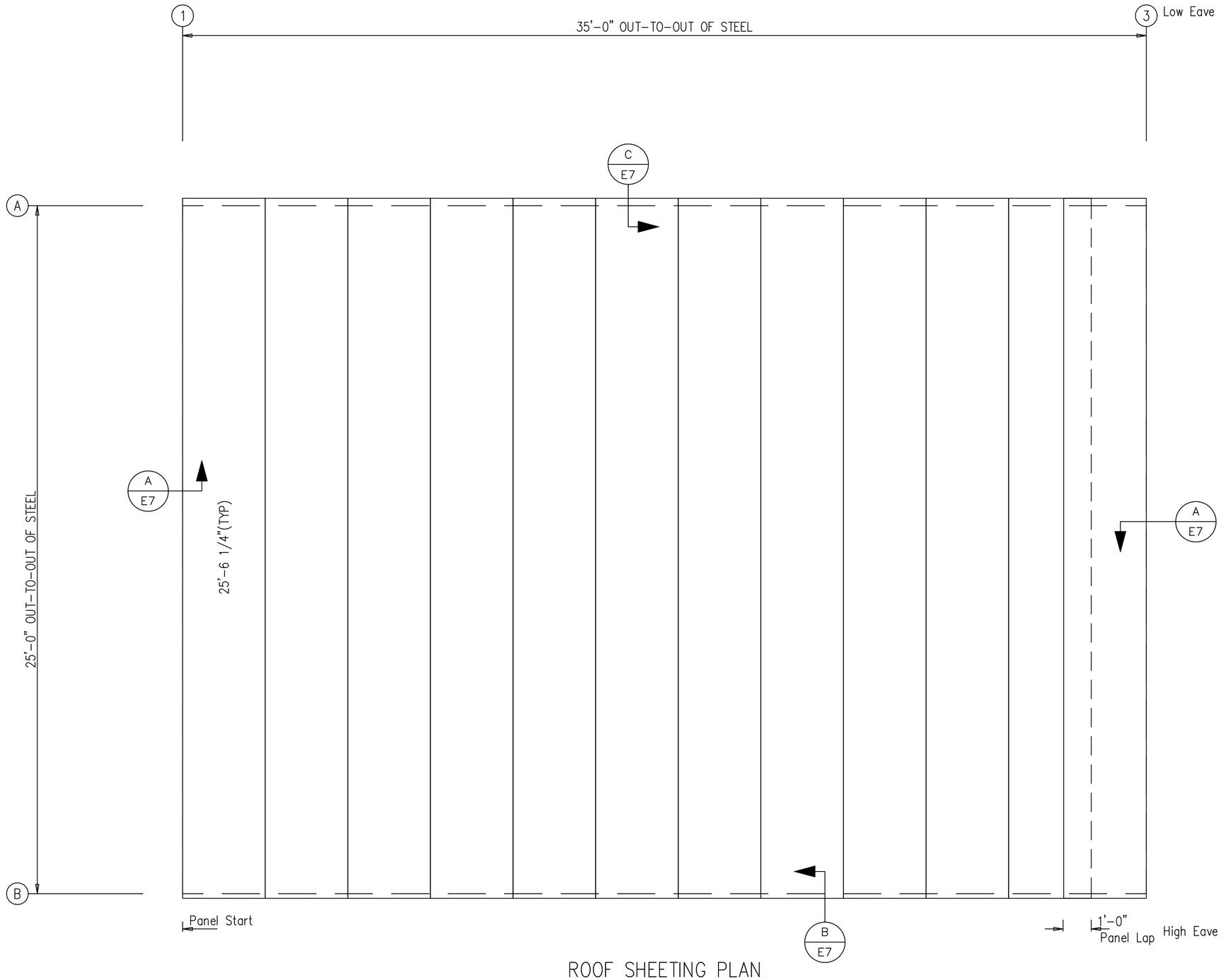

ROOF SHEETING PLAN

PANELS: 26 Ga. SSX – Galvalume Plus

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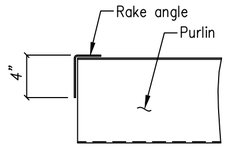
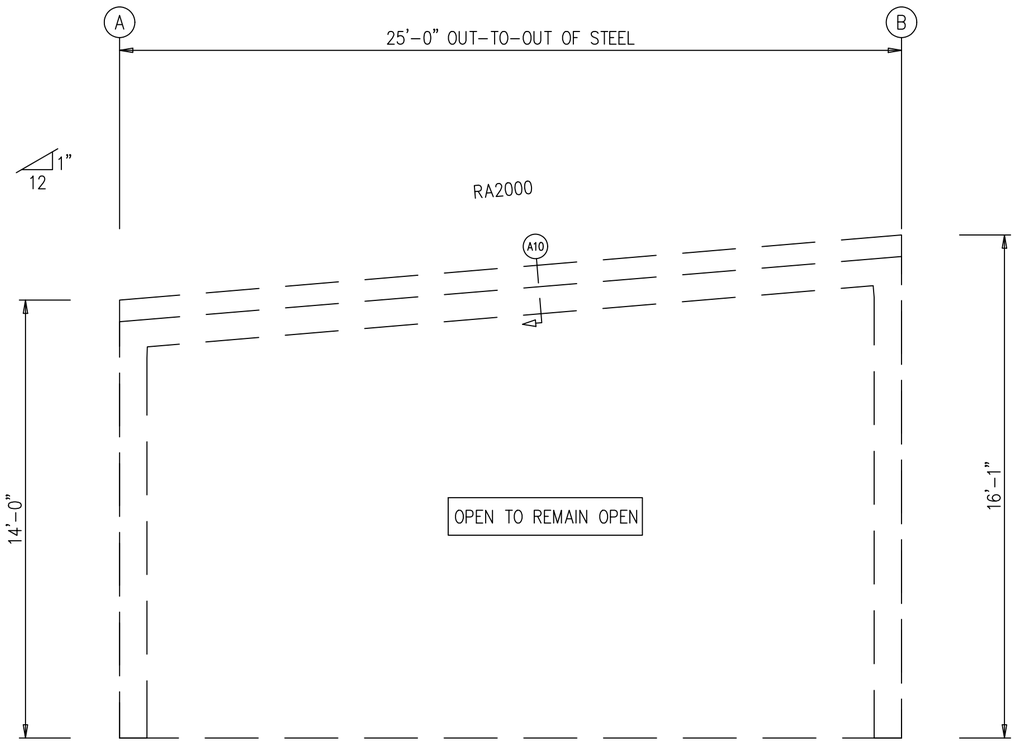
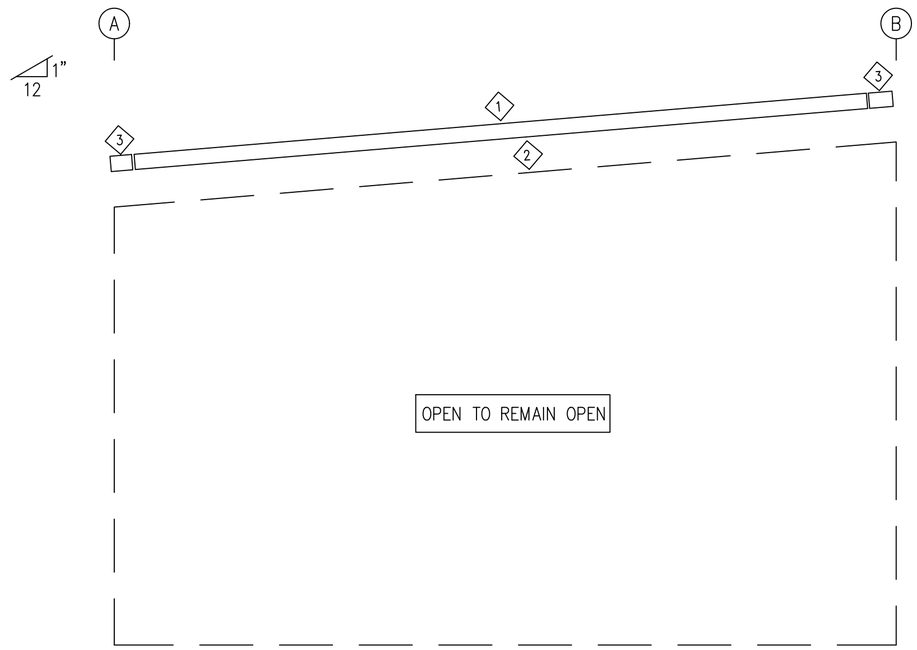


Detail at Rake Angle

TRIM TABLE – THIS WALL ONLY FRAME LINE – 1		
◇ID	PART	LENGTH
1	RT–101	15'–3"
2	CF–102	15'–3"
3	SCB	



ENDWALL FRAMING: FRAME LINE 1



ENDWALL TRIM: FRAME LINE 1

GENERAL SHEETING & TRIM NOTES

1. Refer to erection drawings for rake angle locations.
2. Roof member screws are at 12" o.c. Eave end lap and peak screws are as shown.
3. Wall member screws are at 6" o.c. at the base member and 12" o.c. at all remaining members.
4. Roof stitch screws are located at each member with two between members (20" max. spacing).
5. Wall stitch screws are located at each member with one between members (20" max. spacing).
6. Skylight stitch screws are at 6" o.c.
7. Start endwall panels at centerline of bldg. unless noted.
8. Gutter, rake, & eave trim lap 2". All other trims lap 1".
9. Field cut or lap panels as required to fit.
10. Field cut panels for all openings.
11. Pop rivet gutter counterflashing to wall panel on 3'–0 centers and caulk all laps.
12. Gutter support strap spacing: Super Span 3'–0, Super Seam 4'–0, Weather Lok–16 2'–8".
13. Corner and/or peak boxes are not furnished with special rake or gutter profiles. Field miter as req'd.
14. Downspout straps are located 6" from base and at every girt location.
15. Hot–rolled or built–up members must be pre–drilled before attaching members screws.
16. Metal shavings must be swept from the roof each day to avoid surface rusting.
17. Windows and louvers must be installed before sheeting the walls.
18. For clarity, tape sealant, closures, etc. may not be shown. Refer to the standing seam erection manual or standard pull out for screw–down type roof for additional installation instructions.

GENERAL FRAMING NOTES

1. Angles are marked by their length in feet and inches.
2. Field cut or lap angles as required to fit.
3. Flange braces are marked by their length in decimal inches.
4. Outside flange of girt turns down unless noted.
5. Endwall girts and eave struts do not lap.
6. Field cut and self–tap girts at walk doors.
7. Field slot girts for brace rods or cables.
8. Field locate windows and walk doors.
9. Field weld all splices at 14 gauge valley gutters.
10. Field bolt AK400 base clip to endwall columns:
    (2) 5/8" x 1–1/2" A325 bolts if (1) AK400 req'd
    (2) 5/8" x 1–3/4" A325 bolts if (2) AK400 req'd
11. Locate top of roof framed openings flush with the pan of the roof panel.
12. Some field drilling at framed openings may be required. Field drill 9/16" diameter holes.
13. For clarity, tape sealant, closures, etc. may not be shown. Refer to the standing seam erection manual or standard pull out for screw–down type roof for additional installation instructions.
14. Sub–jambs for overhead doors, if required, is not furnished by Metal Building Provider

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PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION					
JOBSITE LOCATION: HOUSTON, TX 77075				JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805–33079	DWG NO: E3	ISSUE: P1

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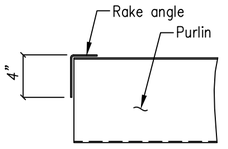
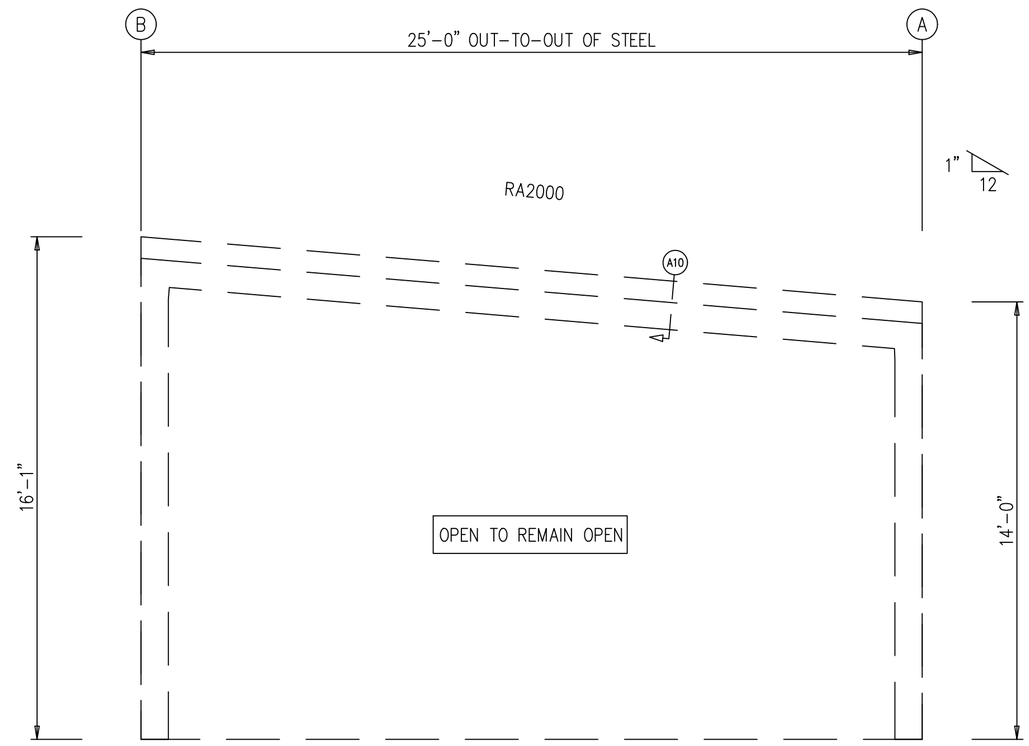
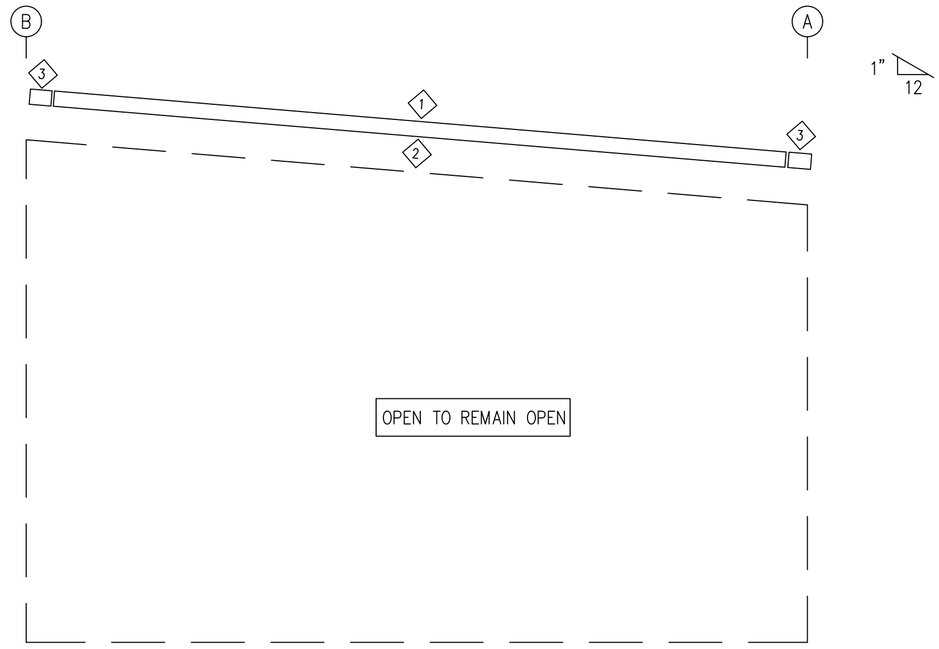


Detail at Rake Angle

TRIM TABLE – THIS WALL ONLY FRAME LINE – 3		
◇ID	PART	LENGTH
1	RT-101	15'-3"
2	CF-102	15'-3"
3	SCB	



ENDWALL FRAMING: FRAME LINE 3



ENDWALL TRIM: FRAME LINE 3

GENERAL SHEETING & TRIM NOTES

1. Refer to erection drawings for rake angle locations.
2. Roof member screws are at 12" o.c. Eave end lap and peak screws are as shown.
3. Wall member screws are at 6" o.c. at the base member and 12" o.c. at all remaining members.
4. Roof stitch screws are located at each member with two between members (20" max. spacing).
5. Wall stitch screws are located at each member with one between members (20" max. spacing).
6. Skylight stitch screws are at 6" o.c.
7. Start endwall panels at centerline of bldg. unless noted.
8. Gutter, rake, & eave trim lap 2". All other trims lap 1".
9. Field cut or lap panels as required to fit.
10. Field cut panels for all openings.
11. Pop rivet gutter counterflashing to wall panel on 3'-0 centers and caulk all laps.
12. Gutter support strap spacing: Super Span 3'-0, Super Seam 4'-0, Weather Lok-16 2'-8".
13. Corner and/or peak boxes are not furnished with special rake or gutter profiles. Field miter as req'd.
14. Downspout straps are located 6" from base and at every girt location.
15. Hot-rolled or built-up members must be pre-drilled before attaching members screws.
16. Metal shavings must be swept from the roof each day to avoid surface rusting.
17. Windows and louvers must be installed before sheeting the walls.
18. For clarity, tape sealant, closures, etc. may not be shown. Refer to the standing seam erection manual or standard pull out for screw-down type roof for additional installation instructions.

GENERAL FRAMING NOTES

1. Angles are marked by their length in feet and inches.
2. Field cut or lap angles as required to fit.
3. Flange braces are marked by their length in decimal inches.
4. Outside flange of girt turns down unless noted.
5. Endwall girts and eave struts do not lap.
6. Field cut and self-tap girts at walk doors.
7. Field slot girts for brace rods or cables.
8. Field locate windows and walk doors.
9. Field weld all splices at 14 gauge valley gutters.
10. Field bolt AK400 base clip to endwall columns:
    (2) 5/8" x 1-1/2" A325 bolts if (1) AK400 req'd
    (2) 5/8" x 1-3/4" A325 bolts if (2) AK400 req'd
11. Locate top of roof framed openings flush with the pan of the roof panel.
12. Some field drilling at framed openings may be required. Field drill 9/16" diameter holes.
13. For clarity, tape sealant, closures, etc. may not be shown. Refer to the standing seam erection manual or standard pull out for screw-down type roof for additional installation instructions.
14. Sub-jambs for overhead doors, if required, is not furnished by Metal Building Provider

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Final drawings for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280
HOUSTON, TX 77234
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ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

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SHEET DESCRIPTION: ENDWALL FRAME & SHEETING ELEVATION					BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"
CUSTOMER: INDUSTRIAL SERVICES					CUSTOMER LOCATION: LA PORTE, TX. 77571
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION					
JOBSITE LOCATION: HOUSTON, TX 77075					JOBSITE COUNTY: HARRIS
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079	DWG NO: E4 / ISSUE: P1

WHIRLWIND STEEL
STATE OF TEXAS
MUSTAPHA I. CHREEIDE
114220
LICENSED
PROFESSIONAL ENGINEER
F-12081
11/8/2023

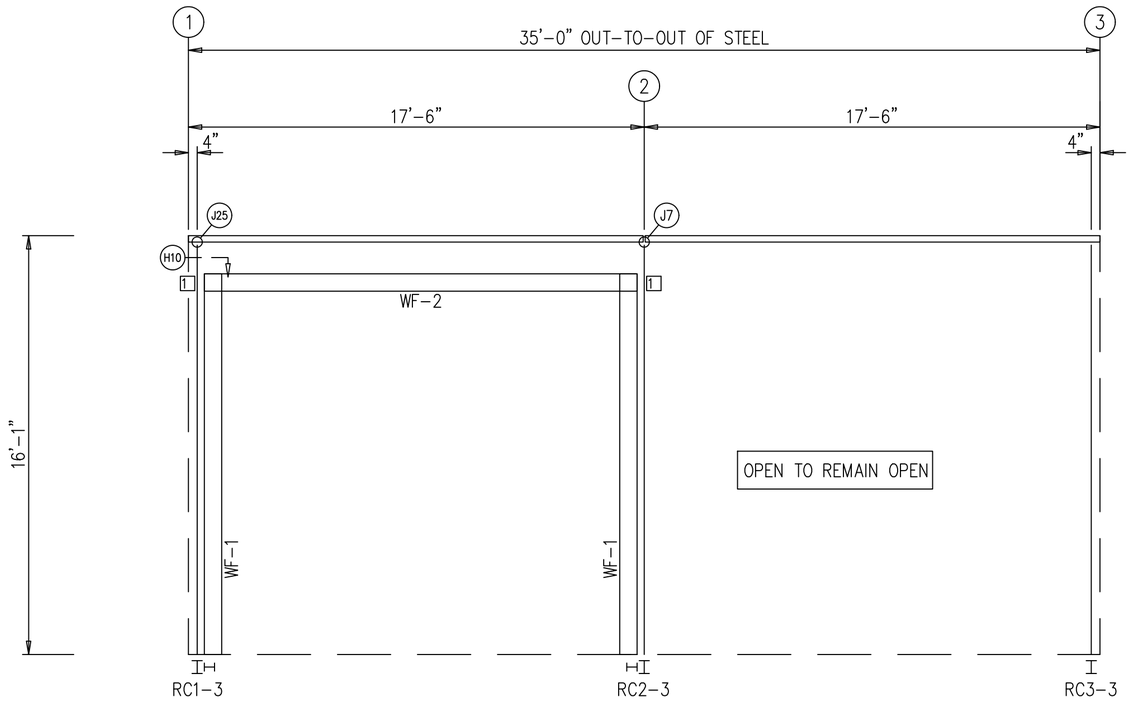
CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

BOLT TABLE FRAME LINE B				
LOCATION	QUAN	TYPE	DIA	LENGTH
WF-1 – WF-2	8	A325	3/4"	1 3/4"
WF-1 – RC1-3	8	A325	5/8"	1 3/4"
WF-1 – RC2-3	8	A325	5/8"	1 3/4"

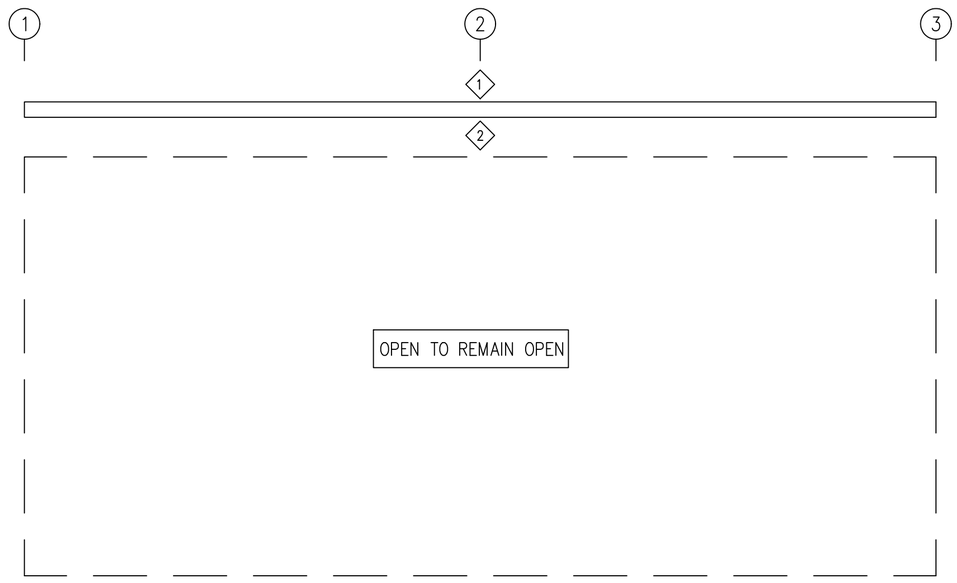
TRIM TABLE – THIS WALL ONLY FRAME LINE – B		
◇ID	PART	LENGTH
1	ET-151	20'-3"
2	CF-102	20'-3"

MEMBER TABLE FRAME LINE B	
MARK	PART
WF-1	W8541
WF-2	W8541

CONNECTION PLATES FRAME LINE B	
□ID	MARK/PART
1	AK508



SIDEWALL FRAMING: FRAME LINE B



SIDEWALL TRIM: FRAME LINE B

GENERAL SHEETING & TRIM NOTES

1. Refer to erection drawings for rake angle locations.
2. Roof member screws are at 12" o.c. Eave end lap and peak screws are as shown.
3. Wall member screws are at 6" o.c. at the base member and 12" o.c. at all remaining members.
4. Roof stitch screws are located at each member with two between members (20" max. spacing).
5. Wall stitch screws are located at each member with one between members (20" max. spacing).
6. Skylight stitch screws are at 6" o.c.
7. Start endwall panels at centerline of bldg. unless noted.
8. Gutter, rake, & eave trim lap 2". All other trims lap 1".
9. Field cut or lap panels as required to fit.
10. Field cut panels for all openings.
11. Pop rivet gutter counterflashing to wall panel on 3'-0 centers and caulk all laps.
12. Gutter support strap spacing: Super Span 3'-0, Super Seam 4'-0, Weather Lok-16 2'-8".
13. Corner and/or peak boxes are not furnished with special rake or gutter profiles. Field miter as req'd.
14. Downspout straps are located 6" from base and at every girt location.
15. Hot-rolled or built-up members must be pre-drilled before attaching members screws.
16. Metal shavings must be swept from the roof each day to avoid surface rusting.
17. Windows and louvers must be installed before sheeting the walls.
18. For clarity, tape sealant, closures, etc. may not be shown. Refer to the standing seam erection manual or standard pull out for screw-down type roof for additional installation instructions.

GENERAL FRAMING NOTES

1. Angles are marked by their length in feet and inches.
2. Field cut or lap angles as required to fit.
3. Flange braces are marked by their length in decimal inches.
4. Outside flange of girt turns down unless noted.
5. Endwall girts and eave struts do not lap.
6. Field cut and self-tap girts at walk doors.
7. Field slot girts for brace rods or cables.
8. Field locate windows and walk doors.
9. Field weld all splices at 14 gauge valley gutters.
10. Field bolt AK400 base clip to endwall columns:
    (2) 5/8" x 1-1/2" A325 bolts if (1) AK400 req'd
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ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

SHEET DESCRIPTION: SIDEWALL FRAME & SHEETING ELEVATION						BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"	
CUSTOMER: INDUSTRIAL SERVICES						CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION							
JOBSITE LOCATION: HOUSTON, TX 77075						JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079		DWG NO: E5	ISSUE: P1

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114220
LICENSED
PROFESSIONAL ENGINEER
F-12081
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CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

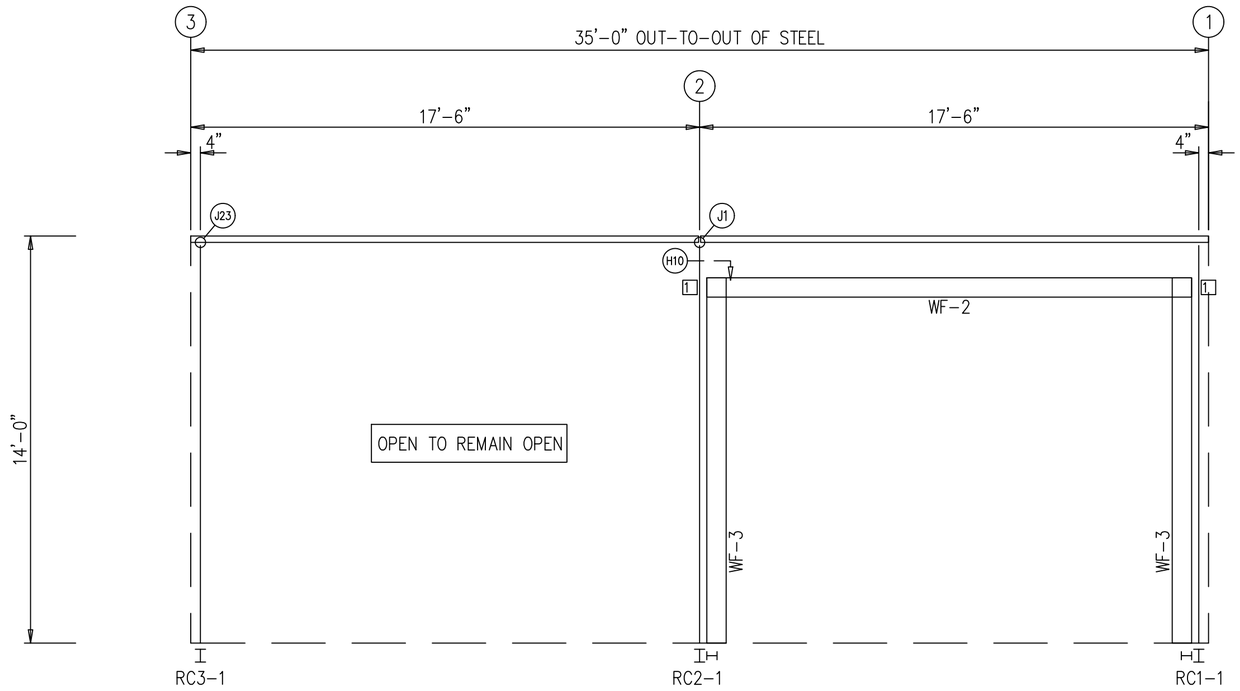
DOWNSPOUT LOCATIONS

BOLT TABLE FRAME LINE A				
LOCATION	QUAN	TYPE	DIA	LENGTH
WF-3 – WF-2	8	A325	3/4"	1 3/4"
WF-3 – RC2-1	8	A325	5/8"	1 3/4"
WF-3 – RC1-1	8	A325	5/8"	1 3/4"

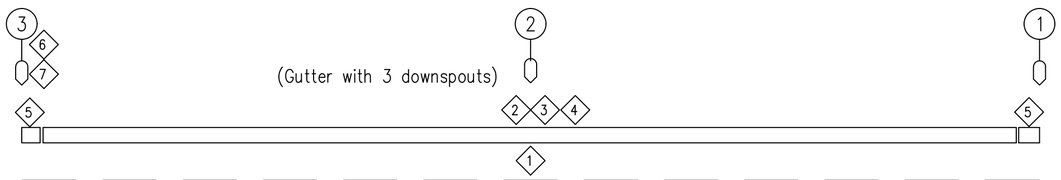
TRIM TABLE – THIS WALL ONLY FRAME LINE – A		
◇ID	PART	LENGTH
1	CF-102	20'-3"
2	GU-121	20'-3"
3	GS-121	
4	GC-101	10'-3"
5	EC-121	
6	DS-101	13'-8"
7	DS-105	

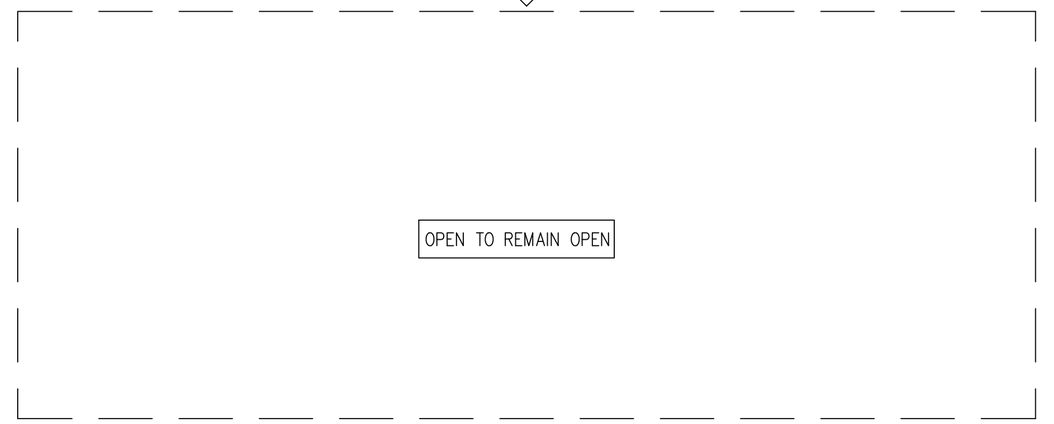
MEMBER TABLE FRAME LINE A	
MARK	PART
WF-2	W8541
WF-3	W8541

CONNECTION PLATES FRAME LINE A	
□ID	MARK/PART
1	AK508



SIDEWALL FRAMING: FRAME LINE A





SIDEWALL TRIM: FRAME LINE A

GENERAL SHEETING & TRIM NOTES

1. Refer to erection drawings for rake angle locations.
2. Roof member screws are at 12" o.c. Eave end lap and peak screws are as shown.
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ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

SHEET DESCRIPTION: SIDEWALL FRAME & SHEETING ELEVATION						BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"	
CUSTOMER: INDUSTRIAL SERVICES						CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION							
JOBSITE LOCATION: HOUSTON, TX 77075						JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079		DWG NO: E6	ISSUE: P1

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F-12081
11/8/2023

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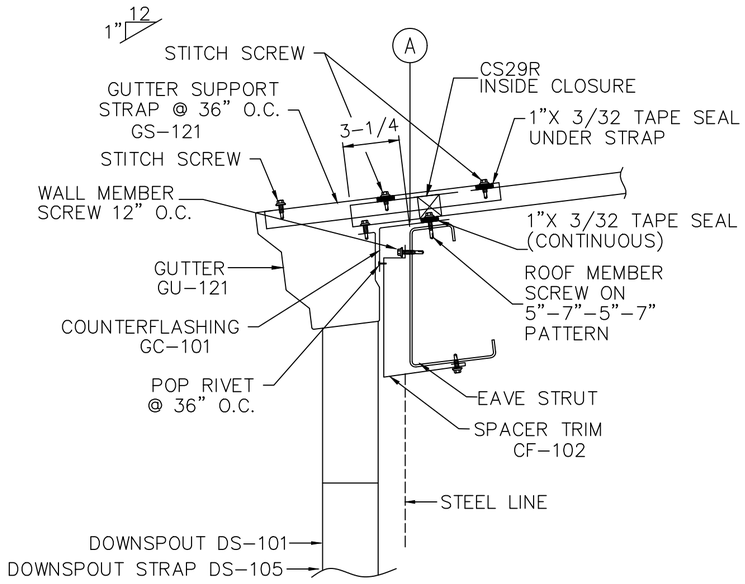
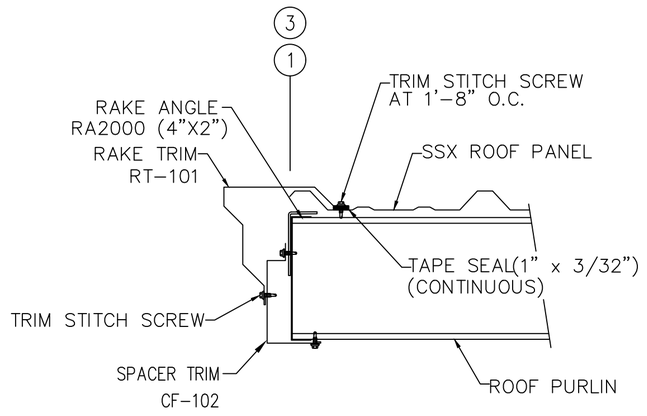


SECTION "C"



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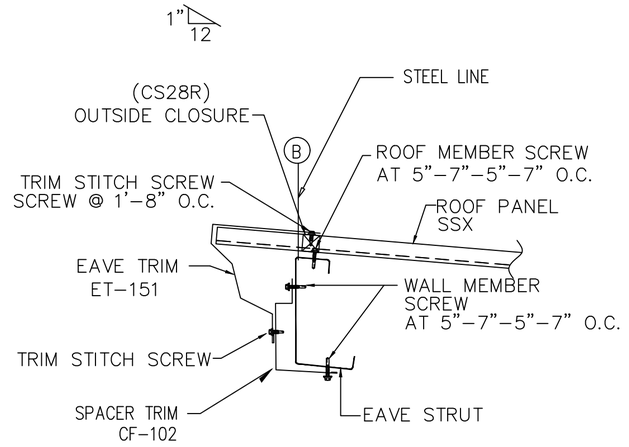

SECTION "B"

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ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

SHEET DESCRIPTION: BUILDING SECTIONS						BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"	
CUSTOMER: INDUSTRIAL SERVICES						CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION							
JOBSITE LOCATION: HOUSTON, TX 77075						JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079		DWG NO: E7	ISSUE: P1

WHIRLWIND STEEL
STATE OF TEXAS
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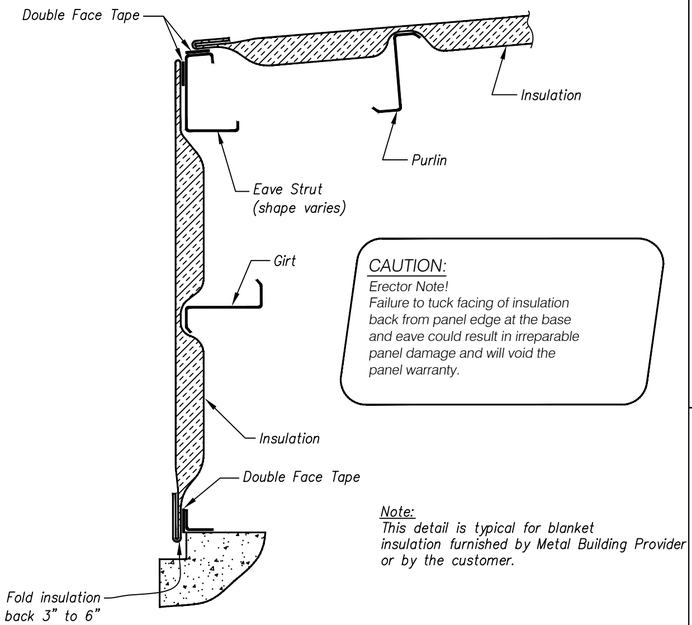
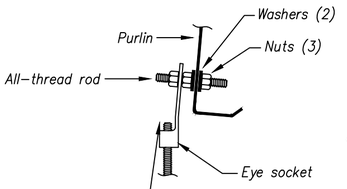
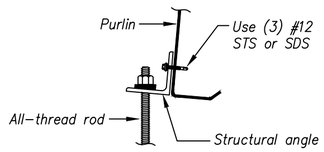


CAUTION:
Erector Note!
Failure to tuck facing of insulation back from panel edge at the base and eave could result in irreparable panel damage and will void the panel warranty.

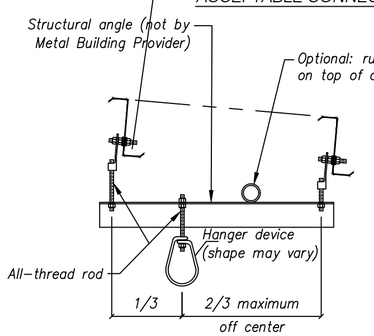
Note:
This detail is typical for blanket insulation furnished by Metal Building Provider or by the customer.

STANDARD DETAIL @ BLANKET INSULATION

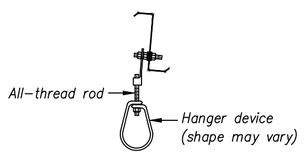




ACCEPTABLE CONNECTION METHODS

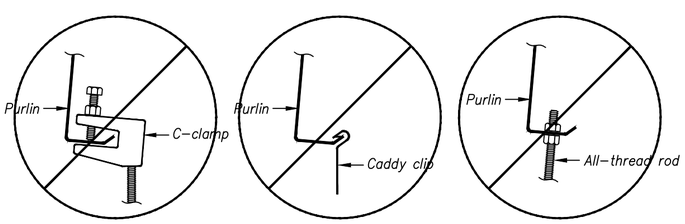


NOTE:
Metal Building Provider only provides the roof purlin. All other material and hardware is by others.



TRAPEZE HANGER ~ 4" MAX. PIPE

HANGER ~ 2-1/2" MAX. PIPE

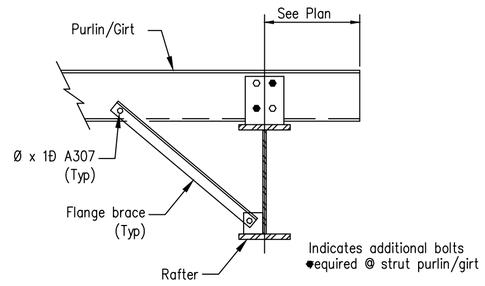


Flange C-Clamp is not an acceptable connection

Caddy clip attached to lip is not an acceptable connection

Connection through the flange is not acceptable

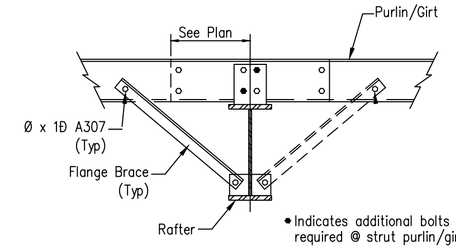
ACCEPTABLE CONNECTIONS FOR ALL COLLATERAL LOADS FOR HANGER ATTACHMENT



(6) 1/2" x 1-1/4 A-307 required at standard laps.
(8) 1/2" x 1-1/4 Required at strut members.
(A strut member is a purlin or girt at the bracing points. The struts continue across the length of the building.)
See E-drawing for exceptions to size and quantity of bolts.

END DETAIL

Note: Flange braces may be on one or both sides.
See frame cross-section for locations.



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(A strut member is a purlin or girt at the bracing points. The struts continue across the length of the building.)
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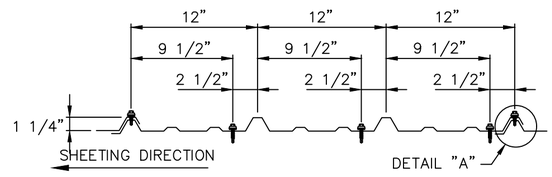
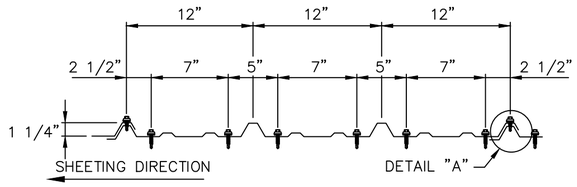
LAP DETAIL

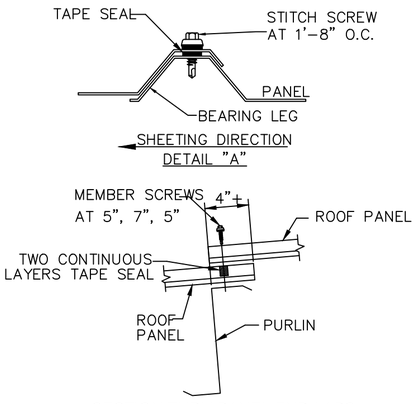


ALL ROOF MEMBERS EXCEPT AS NOTED BELOW



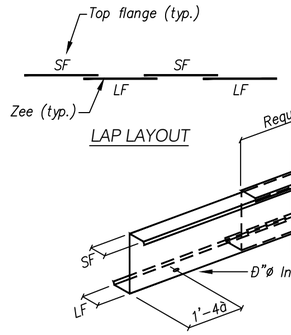
AT EAVE STRUT, PANEL END LAP, AND PEAK PURLIN

FASTENER LOCATION FOR "SUPER SPAN X" ROOF PANEL

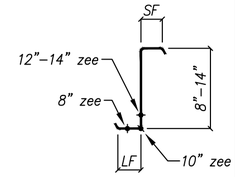


SECTION THRU PANEL END LAPS

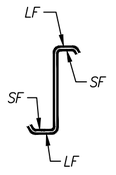
Notes:
1. Rotate each zee as required to alternate between long and short flanges.
2. The Ð"ø hole 1'-4à from each end is located nearest the long flange.
3. Lap connection bolts are omitted for clarity.



LAP LAYOUT



1/4" INDICATOR HOLE LOCATION

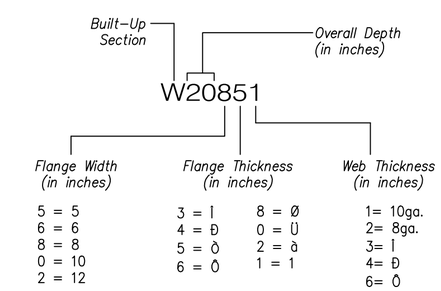


SECTION "X"

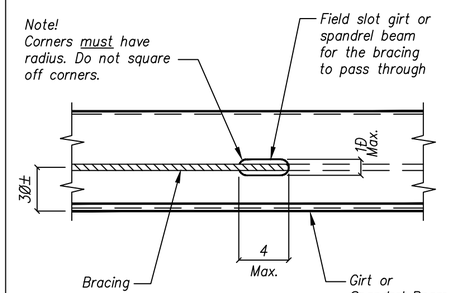
LF = Long Flange
SF = Short Flange

ZEE LAP DETAIL @ THE LONG AND SHORT FLANGES

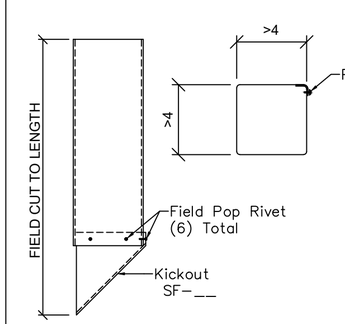
BUILT-UP SECTION LEGEND



Flange Width (in inches)	Flange Thickness (in inches)		Web Thickness (in inches)
5 = 5	3 = 3	8 = Ø	1= 10ga.
6 = 6	4 = Ð	0 = Ù	2= 8ga.
8 = 8	5 = ð	2 = à	3= 3
0 = 10	6 = Ñ	1 = 1	4= Ð
2 = 12			6= Ñ

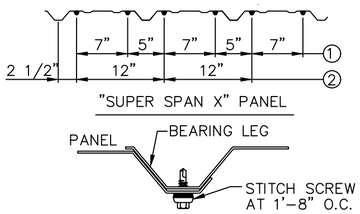


DETAIL @ FIELD LOCATED BRACING SLOT

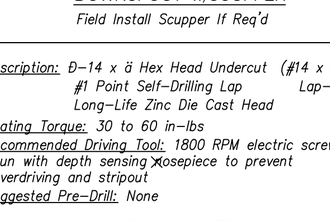


DOWNSPOUT w/SCUPPER

Field Install Scupper If Req'd



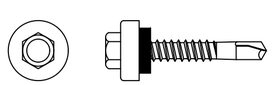
FASTENER LOCATION FOR WALL PANEL (SUPER SPAN X)



NOTES:
Seating Torque: 30 - 60 in-lbs
Recommended Driving Tool:
1800 RPM screw gun with depth sensing nosepiece to prevent overdriving and stripout

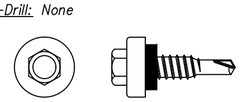
STANDARD FASTENERS MISCELLANEOUS

Description: *12-14 x 1Ð Hex Head Undercut (#12 x 1Ð Long-Life Zinc Die Cast Head #3 Long Pilot Point Self-Drilling Life S.D.S.)*
Seating Torque: *30 to 60 in-lbs*
Recommended Driving Tool: *1800 RPM electric screw gun with depth sensing nosepiece to prevent overdriving and stripout*
Suggested Pre-Drill: *None*



Actual Size

Description: *Ð-14 x ä Hex Head Undercut (#14 x ä Long-Life #1 Point Self-Drilling Lap Lap-Tek S.D.S.) Long-Life Zinc Die Cast Head*
Seating Torque: *30 to 60 in-lbs*
Recommended Driving Tool: *1800 RPM electric screw gun with depth sensing nosepiece to prevent overdriving and stripout*
Suggested Pre-Drill: *None*



Actual Size

- ☐ FOR APPROVAL: These drawings, being for approval, are by definition not final and are for conceptual representation only. Their purpose is to confirm the proper interpretation of the project documents. Only drawings issued "For Erector Installation" can be considered complete.
- ☒ FOR CONSTRUCTION PERMIT: These drawings, being for permit, are by definition not final. Only drawings issued "For Erector Installation" can be considered complete.
- ☐ FOR ERECTOR INSTALLATION: Final drawings for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280 PH: 800-324-9992
HOUSTON, TX 77234 FAX: 832-553-4600

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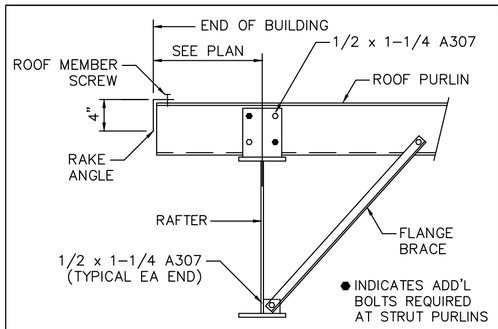
ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

SHEET DESCRIPTION: STANDARD DETAIL PAGE				BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"	
CUSTOMER: INDUSTRIAL SERVICES				CUSTOMER LOCATION: LA PORTE, TX. 77571	
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION					
JOBSITE LOCATION: HOUSTON, TX 77075				JOBSITE COUNTY: HARRIS	
DWN: PND	CHK: PNC	DATE: 11.04.23	ENG: NPK	JOB NO: 11805-33079	DWG NO: D1 ISSUE: P1

The Engineer whose seal and signature appear on these documents represents Whirlwind Steel Buildings, Inc., and is not the Engineer of Record for the overall project. The Engineer's responsibility is limited to material designed and manufactured by Whirlwind Steel Buildings, Inc., and excludes part such as doors, windows, foundation design, and erection of the building.

WHIRLWIND STEEL
STATE OF TEXAS
MUSTAPHA I. CHREEIDE
114220
LICENSED
PROFESSIONAL ENGINEER
F-12081
11/8/2023

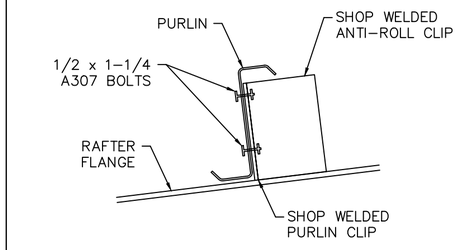
CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081



(2) 1/2 x 1-1/4 A307 REQUIRED AT STANDARD LAPS
(4) 1/2 x 1-1/4 A307 REQUIRED AT STRUT MEMBERS

A STRUT PURLIN IS A PURLIN LOCATED AT THE BRACE POINTS. SEE PLANS FOR EXCEPTION TO SIZE & QTY OF BOLTS.

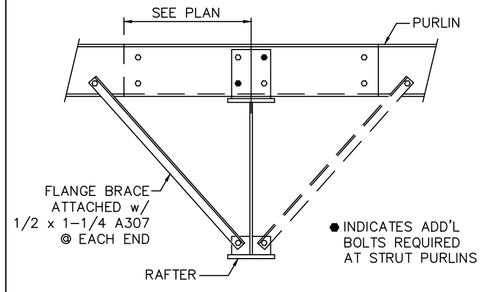
A10 ROOF PURLIN CONNECTION AT MAIN FRAME ENDWALL



SOME PURLIN CLIPS WILL HAVE AN ADDITIONAL ANTI-ROLL CLIP ATTACHED. THE QUANTITY AND SPACING OF THESE CLIPS IS DETERMINED BY THE DESIGN FOR EACH SPECIFIC BUILDING.

ANTI DETAIL AT ANTI-ROLL CLIP

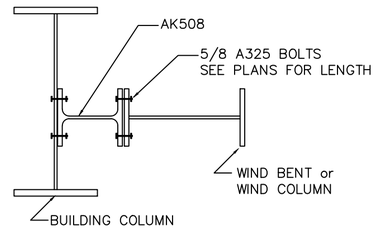
FLANGE BRACES MAY BE ON ONE OR BOTH SIDES
SEE FRAME CROSS-SECTION FOR LOCATIONS



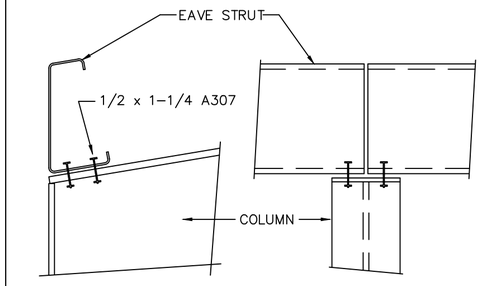
(6) 1/2 x 1-1/4 A307 REQUIRED AT STANDARD LAPS
(8) 1/2 x 1-1/4 REQUIRED AT STRUT MEMBERS

A STRUT MEMBER IS A PURLIN LOCATED AT THE BRACE POINTS. SEE PLANS FOR EXCEPTIONS TO SIZE & QTY OF BOLTS.

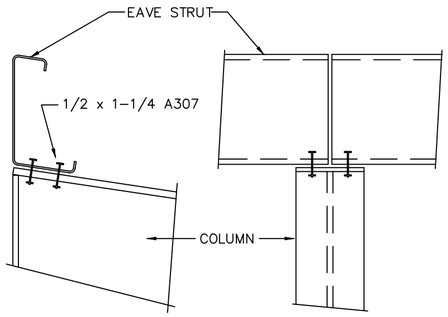
G2 ROOF PURLIN TO INTERIOR FRAME RAFTER



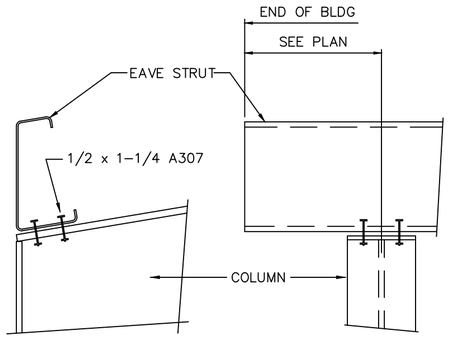
H10 WIND BENT OR WIND COLUMN TO BUILDING COLUMN



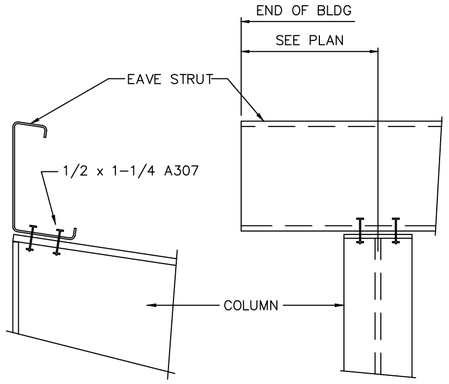
J1 EAVE STRUT TO RIGID FRAME



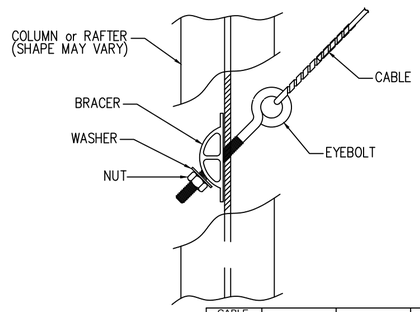
J7 EAVE STRUT TO RIGID FRAME



J23 EAVE STRUT TO RIGID FRAME

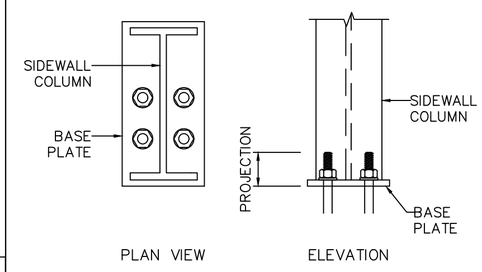


J25 EAVE STRUT TO RIGID FRAME



CABLE SIZE	BRACER	WASHER	NUT
1/4"	BRACER #1	F844 1/2"	A563 1/2"
5/16"	BRACER #1	F844 5/8"	A563 5/8"
3/8"	BRACER #2	F844 3/4"	A563 3/4"
1/2"	BRACER #2	F844 7/8"	A563 7/8"

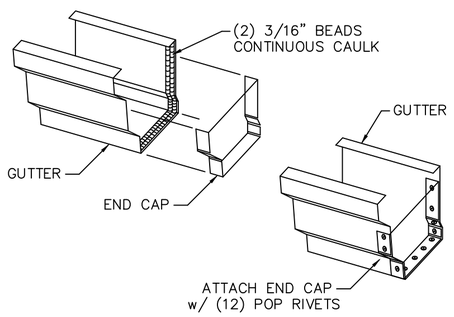
Q2 DIAGONAL CABLE BRACING INSTALLATION



- ALL ANCHOR RODS (BY OTHERS) TO HAVE NUTS AND FLAT WASHERS.
- SEE BOLT SETTING PLAN FOR ACTUAL BOLT QTY.

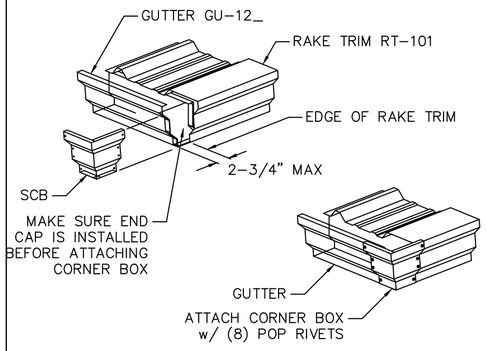
R2 ANCHOR RODS AT SIDEWALL COLUMN

SEE PLANS FOR PART MARKS



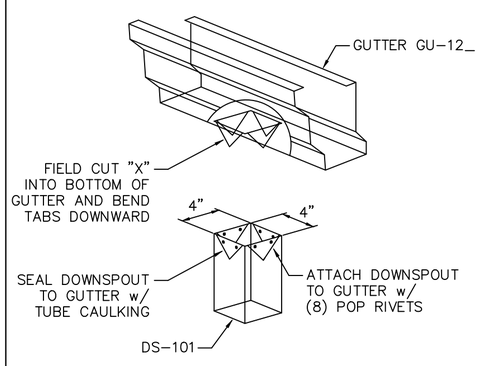
MAKE SURE THE END OF THE GUTTER IS FLUSH WITH THE OUTSIDE FACE OF THE FINISHED END WALL AND THERE ARE NO BREAKS IN THE BEADS OF CAULK

TRIM_4 GUTTER END CAP ATTACHMENT

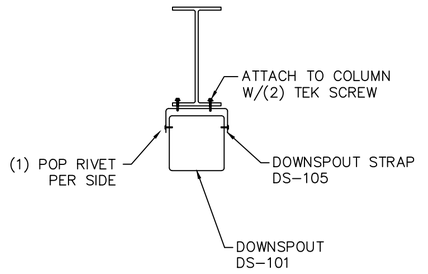


MAKE SURE THE END OF THE GUTTER IS FLUSH WITH THE OUTSIDE FACE OF THE FINISHED END WALL

TRIM_5 CORNER BOX ATTACHMENT



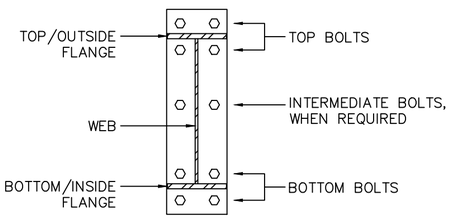
TRIM_6 DOWNSPOUT ATTACHMENT @ GUTTER



ATTACH ONE DS-105 STRAP AT THE BASE OF THE DOWNSPOUT THEN APPROXIMATELY 5'-0" CENTERS (8'-0" MAX.)

TRIM_7X DOWNSPOUT STRAP ATTACHMENT

REFER TO FRAME CROSS-SECTION FOR BOLT SIZE & QTY.



U3 BOLTS FOR RAFTER TO COLUMN CONNECTION

CITY OF HOUSTON REGISTRATION NO. 165 / STATE OF TEXAS FIRM NO. 12081

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☒ FOR CONSTRUCTION PERMIT:
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☐ FOR ERECTOR INSTALLATION:
Final drawings for construction.

WHIRLWIND STEEL BUILDINGS
P.O. BOX 75280 HOUSTON, TX 77234
PH: 800-324-9992 FAX: 832-553-4600
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ISSUE	DATE	DESCRIPTION	BY	CHK
P1	11.04.23	FOR CONSTRUCTION PERMIT	PND	PNC

SHEET DESCRIPTION: STANDARD DETAIL PAGE
BLDG SIZE: 25'-0" x 35'-0" x 14'-0"/16'-1"
CUSTOMER: INDUSTRIAL SERVICES
CUSTOMER LOCATION: LA PORTE, TX. 77571
PROJECT REFERENCE: SAN JACINTO CHAIN PROTECTION
JOBSITE LOCATION: HOUSTON, TX 77075
JOBSITE COUNTY: HARRIS

DWN:	CHK:	DATE:	ENG:	JOB NO:	DWG NO:	ISSUE:
PND	PNC	11.04.23	NPK	11805-33079	D2	P1

The Engineer whose seal and signature appear on these documents represents Whirlwind Steel Buildings, Inc., and is not the Engineer of Record for the overall project. The Engineer's responsibility is limited to material designed and manufactured by Whirlwind Steel Buildings, Inc., and excludes part such as doors, windows, foundation design, and erection of the building.

WHIRLWIND STEEL
STATE OF TEXAS
MUSTAPHA I. CHREEIDE
114220
LICENSED
PROFESSIONAL ENGINEER
F-12081
11/8/2023

October 30, 2023

Industrial Services
11804 W. Fairmont Pkwy.
La Porte, TX 77571

Re: Whirlwind Job No.: 11805-33079
San Jacinto Chain Protection
Houston, TX 77075
Harris

SSRF 25'-0" W x 35'-0" L x 14'-0"/16'-1" (LSEH/HSEH) Roof Slope 1.0:12

To whom it may concern:

In our professional opinion, the above referenced buildings have been designed to sustain no less than the requested design loads as listed on the order documents, applied per the **2015 International Building Code** specifically as follows:

Risk Category	II-Normal		
Dead Load	2.00 psf		
Collateral Load	1.00 psf	Lights	
Roof Live Load	20.00 psf	Reducible	
Rainfall Intensity	10.00 in/hr	5-year return period	5-minute duration
Ground Snow Load	0.00 psf	Exposure = B	
Wind Speed V_{ult} (3-sec gust)	140 mph		
Wind Speed V_{asd}	108 mph		
Serviceability Wind Speed	77 mph		
Internal Pressure Coefficient	0.00		
Wind-Borne Debris Region:	Yes		

Wind design is based on **an Open** building. All building envelope accessories (windows, doors, etc.) not provided by the metal building fabricator must be designed to sustain no less than the same wind criteria as the building.

For components, cladding, and MWFRS, deflections involving wind are based on 10-year serviceability wind pressures.

Seismic Importance Factor Ie = 1.0000

Spectral Response Acceleration, S_s = 0.0710	Design Spectral Response, S_{DS} = 0.0757
Spectral Response Acceleration, S_1 = 0.0380	Design Spectral Response, S_{D1} = 0.0608
Seismic Design Category = A	Site Class = D

8234 Hansen Road Houston, TX 77075
(800) 324 9992 toll free
(713) 946 7140
(832) 553 4992 fax

Other Loads: None

Design is in accordance with the ***AISI S100-12 North American Specification for the Design of Cold-Formed Steel Structural Members***, the ***AISC 360-10 Specification for Structural Steel Buildings***, the ***AWS D1.1-2020 Structural Welding Code - Steel***, the ***AWS D1.3-2018 Structural Welding Code - Sheet Steel***, and generally accepted engineering practices.

All structural components supplied by Whirlwind Building Systems for this project will be fabricated in Whirlwind's facility in Houston, Texas, or Tallapoosa, GA. These facilities have been accredited by the International Accreditation Service (IAS) to fulfill the general requirements of the AC472 Quality Certification Program.

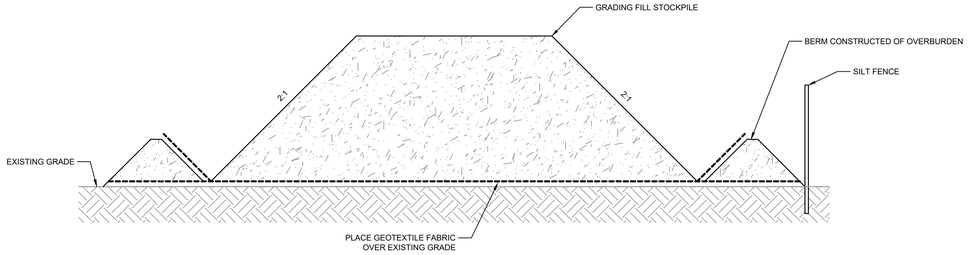
The engineer whose seal and signature appears on these documents represents Whirlwind Steel Buildings, Inc and is not the Engineer of Record (EOR) for the overall construction project. It is expressly noted that this letter of professional opinion includes only the steel building as designed and furnished by Whirlwind Steel Buildings, Inc. and specifically excludes all accessories, anchor rods, foundation, masonry, general contract work, or any field modifications deviating from the Whirlwind construction documents.

Sincerely,

11/8/2023

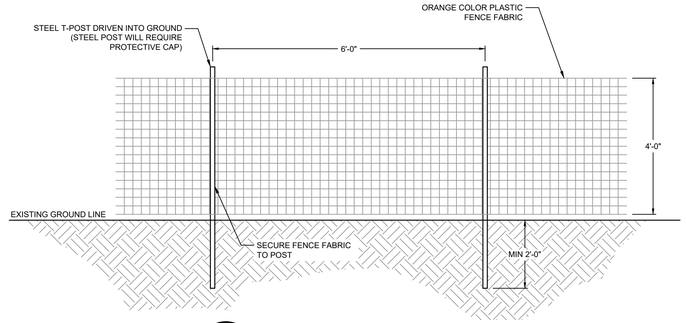
Mustapha Chreeide, PE
Whirlwind Steel Buildings, Inc

8234 Hansen Road Houston, TX 77075
(800) 324 9992 toll free
(713) 946 7140
(832) 553 4992 fax

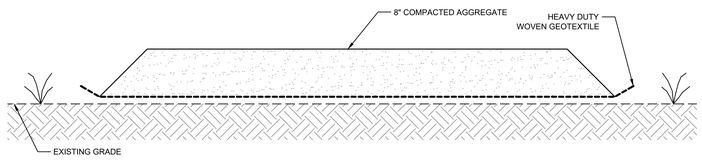


NOTE:
TEMPORARY OVERBURDEN STOCKPILE SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR TO PROVIDE SUBMITTAL PRIOR TO CONSTRUCTION THAT SHOULD MEET THE GENERAL INTENT OF THE CONTAINMENT AND COLLECTION OF WATER THAT SUITS THE NEEDS OF THE CONTRACTOR

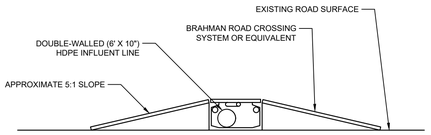
DETAIL 7 (C-03A, C-03B) TEMPORARY OVERBURDEN STOCKPILE
N.T.S.



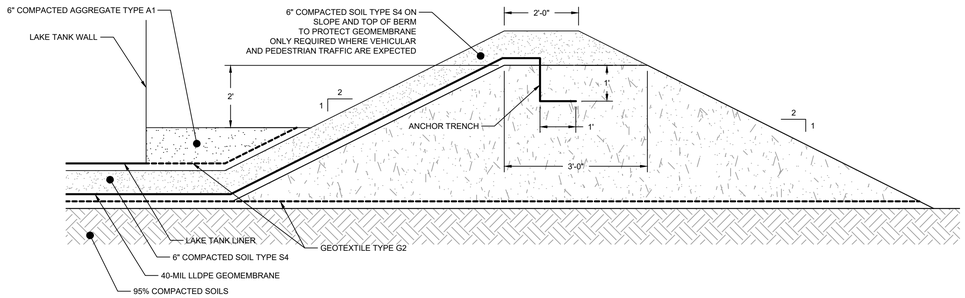
DETAIL 8 (C-03) TEMPORARY CONSTRUCTION FENCE AROUND EXCAVATIONS (TYP.)
N.T.S.



DETAIL 9 (C-03A, C-03B) TEMPORARY GRAVEL ACCESS ROAD
N.T.S.

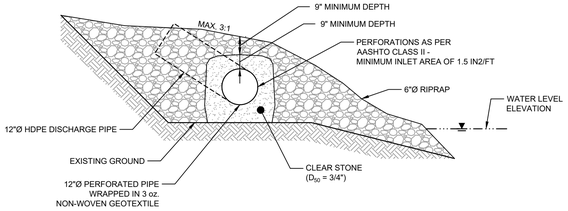


DETAIL 10 (C-03A, C-03B) TEMPORARY PIPE CROSSING PROTECTION
N.T.S.

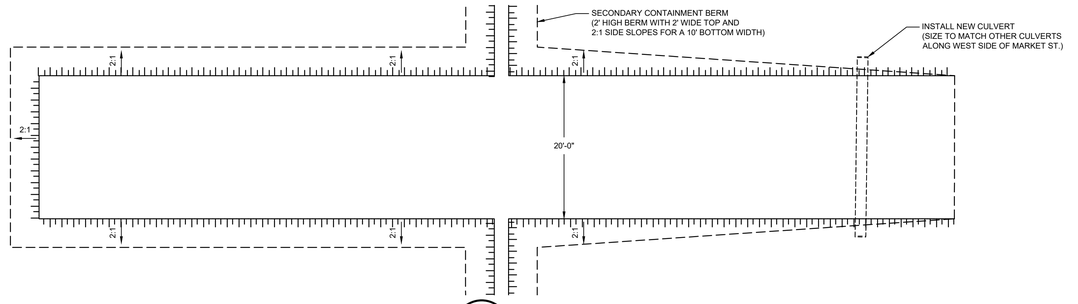


DETAIL 11 (C-03A, C-03B) SECONDARY CONTAINMENT BERM
N.T.S.

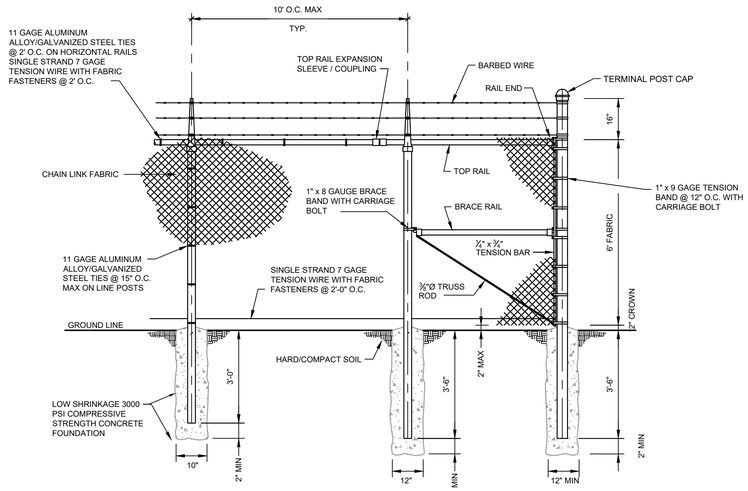
2



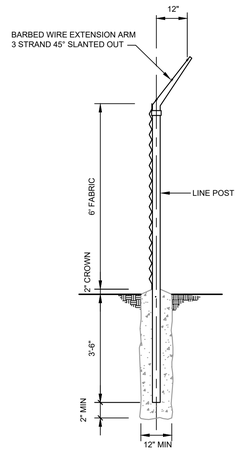
DETAIL 12 (C-03A, C-03B) RIVER DISCHARGE
N.T.S.

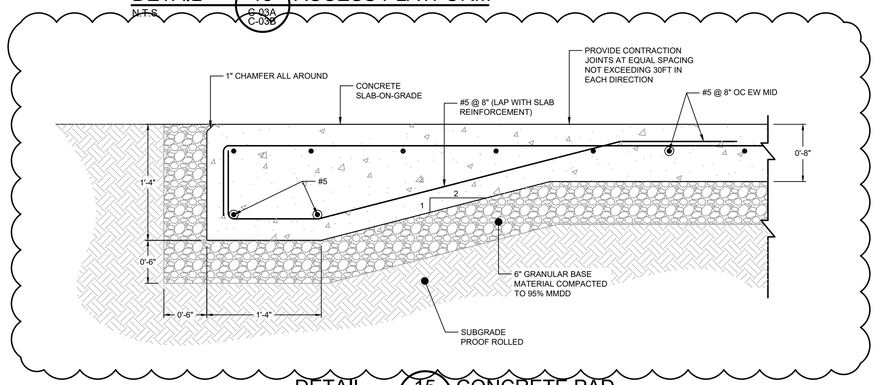


DETAIL 13 (C-03A, C-03B) ACCESS PLATFORM
N.T.S.



DETAIL 14 (C-03) CHAIN LINK FENCE
N.T.S.





3

DETAIL 15 (C-03) CONCRETE PAD
N.T.S.

GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
GHD TEXAS FIRM REGISTRATION NO. 276

ISSUED FOR CONSTRUCTION

GHD
5551 Corporate Boulevard Suite 200
Baton Rouge Louisiana USA
T 225 292 9007 F 225 952 2978 W www.ghd.com

STATE OF TEXAS
C. R. HOEKSTRA
147936
LICENSED
PROFESSIONAL ENGINEER
Oct 10/2023

Reuse of Documents
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Client
SAN JACINTO RIVER WASTE PITS

Project
REMEDIAL DESIGN SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date
3	FOR CONCRETE PAD	MW	RH	10/10/2023
	CONSTRUCTION			
2	FOR RFI 01	MW	RH	11/22/2022
1	FOR CONSTRUCTION	MW	WB	11/22/2022

Drawn	MW	Designer	RH
Drafting Check	JC	Design Check	WB/CN
Project Coordinator	CM	Date	Oct 10, 2023
This document shall not be used for construction unless signed and sealed for construction.		Scale	AS SHOWN
Original Size	Arch D	Bar is one inch on original size drawing	0 1"

Project No. 11215131

Title
TYPICAL DETAILS 3 OF 3

Sheet No.
C-44

Sheet 35 of 46

0 25 50 ft

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LEGEND

- PROPERTY BOUNDARY
- PROPERTY EASEMENT
- 620 EXISTING CONTOUR INTERVAL
- X FENCELINE
- SHORELINE
- TOP OF BANK
- TOE OF SLOPE
- OHL OVERHEAD ELECTRICAL
- GUARDRAIL
- UE UNDERGROUND CCTV LINE
- UG UNDERGROUND AT&T LINE
- SJSB002 PDI/RI BORING LOCATION
- MW MONITORING WELL
- P.P. POWER POLE
- L.P. LIGHT POLE
- WELL WELL
- ASPHALT
- CONCRETE
- GRAVEL
- 620 RESTORATION CONTOUR INTERVAL
- RESTORATION LIMIT
- SHEET PILE WALL ALIGNMENT

SOURCE:

TOPOGRAPHIC, HYDROGRAPHIC, & MAGNETOMETER SURVEY OF SAN JACINTO RIVER WASTE PITS, HARRIS COUNTY, TEXAS, MORRISON SURVEYING INC., 190608, JULY 8, 2019 TO AUGUST 2, 2019

PARCELS 1, 2 & 3 & PRIVATE ROAD SURVEYED FOR GHD SITUATED IN THE J. T. HARRELL SURVEY, A-330 HARRIS COUNTY, TEXAS HUTCHISON & ASSOCIATES - 20-6417 - 6417.bdry - 07-24-2020

GHD SERVICES INC.
JOB NO. 11215131 FILE NO. 02
GHD TEXAS FIRM REGISTRATION NO. 276

PRELIMINARY

Client
SAN JACINTO RIVER WASTE PITS

Project
REMEDIAL DESIGN SOUTHERN IMPOUNDMENT HARRIS COUNTY, TEXAS

No.	Issue	Drawn	Approved	Date

Drawn JC	Designer RH
Drafting Check MW	Design Check WB
Project Coordinator CM	Date Oct 2, 2023
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Original Size Arch D	Bar is one inch on original size drawing 0 1"
Project No. 11215131	

Title
SOUTHWEST EXCAVATION AREA RESTORATION PLAN

Sheet No.
FIGURE 1

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